County of Los Angeles

Final
Environmental Impact Report
SCH No. 2005051143
Volume I
Section 1.0 – 3.0

MISSION VILLAGE

Prepared for:

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

Prepared by:

IMPACT SCIENCES, INC.
803 Camarillo Springs Road, Suite A
Camarillo, California 93012
Phone: (805) 437-1900

NEWHALL RANCH
Newhall Ranch Company

May 2011

County of Los Angeles

Final Environmental Impact Report

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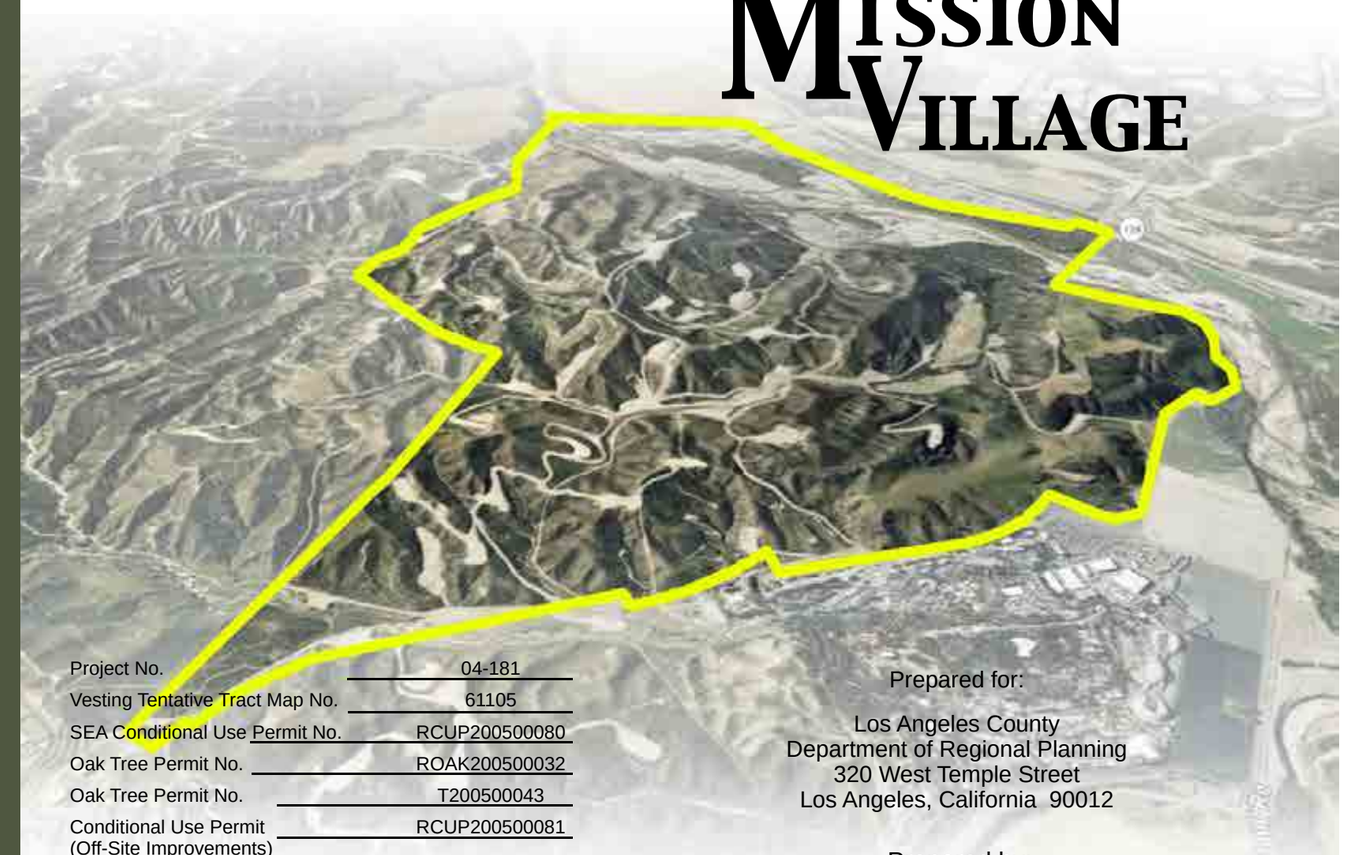

Project No.	04-181
Vesting Tentative Tract Map No.	61105
SEA Conditional Use Permit No.	RCUP200500080
Oak Tree Permit No.	ROAK200500032
Oak Tree Permit No.	T200500043
Conditional Use Permit (Off-Site Improvements)	RCUP200500081
Parking Permit	RPKT200500011
Substantial Conformance	201000001

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1.0 INTRODUCTION

In compliance with Section 15132 of the California Environmental Quality Act (*CEQA) Guidelines*, this document serves as the Final EIR for the proposed Mission Village project (County Project No. 04-181), which consists of the following discretionary project approvals:

(a) Vesting Tentative Tract Map No. 061105

(b) Significant Ecological Area (SEA) Conditional Use Permit No. RCUP200500080 for project-level development, including utilities within the Specific Plan's River Corridor Special Management Area (SMA)/SEA 23 boundaries

(c) Conditional Use Permit RCUP200500081 to authorize

(i) development of 73 second dwelling units;

(ii) care facilities associated with the proposed continued care retirement community;

(iii) grading associated with the extension of Westridge Parkway and Commerce Center Drive and the construction of off-site improvements, including the extension of Magic Mountain Parkway, a utility corridor, a water quality basin, an electrical substation, and water tanks; and

(iv) on-site grading and development of project related infrastructure (including water tanks and utilities.

(d) Oak Tree Permit No. ROAK200500032 (project site)

(e) Oak Tree Permit No. T200500043 (off-site extension of Magic Mountain Parkway)

(f) Parking Permit RPKT200500011 to authorize off-site and reciprocal parking across lot lines

As required, this document provides responses to written comments received on the Draft EIR and response to public testimony received at a public hearing before the County of Los Angeles Planning Commission on November 10, 2010. The initial public review and comment period for the Draft EIR was from September 28, 2010 to November 11, 2010 (45 days). The public comment period was subsequently extended by the Regional Planning Commission to January 4, 2011, providing an additional 54 days for review and comment. As a result, a total of 99 days were provided for public review and comment. To ensure public access to the Draft EIR, copies of the document were made available for review at four local libraries, as well as the Department of Regional Planning offices. In addition, the Draft EIR was made available on the Department of Regional Planning's website. Section 15132 of the *State CEQA Guidelines* requires that the Final EIR consist of the following elements:

(a) The Draft EIR or a revision of the draft.[1]

(b) Comments and recommendations received on the Draft EIR either verbatim or in summary.[2]

(c) A list of persons, organizations, and public agencies commenting on the Draft EIR.

(d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.

(e) Any other information added by the Lead Agency.

The Final EIR is organized in the following manner:

1.0 Introduction

2.0 Topical Responses, Comment Letters, and Responses to Comment Letters

3.0 Hearing Testimony and Responses

4.0 Revised Draft EIR Pages

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- F1.0 Introduction Support Documentation
- F4.1 Geotechnical and Soil Resources Documentation
- F4.2 Hydrology Documentation
- F4.3 Biota Documentation
- F4.5 Traffic/Access Documentation
- F4.8 Water Service Documentation
- F4.9 Wastewater Disposal Documentation
- F4.16 Agricultural Resource Documentation
- F4.19 Environmental Safety Documentation
- F4.20 Cultural/Paleontological Resources Documentation
- F4.22 Water Quality Documentation
- F4.23 Global Climate Change Documentation

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1 All references to the Draft EIR are to the Draft EIR for the Mission Village project, SCH No. 2005051143, released for public comment on September 28, 2010 to January 4, 2011 (99 days), and incorporated by reference into the Final EIR (*State CEQA Guidelines*, Sections 15132, 15150, and 15362).

2 Ibid.

A list of the persons, organizations, and public agencies commenting on the Draft EIR is presented in the Table of Contents. Comments received, in writing and orally, on the Draft EIR are presented and responded to in the sections entitled "Topical Responses, Comment Letters, and Responses to Comment Letters" and "Hearing Testimony and Responses." A revision of the Draft EIR is presented in the section entitled "Revised Draft EIR Pages." Lastly, "Appendix to the Final EIR" contains documents cited as an appendix to this Final EIR.

3.0 RESPONSES TO REGIONAL PLANNING COMMISSION TRANSCRIPT OF NOVEMBER 10, 2010

Lynne Plambeck – Santa Clarita Organization for Planning and the Environment

Comment 1

This comment consists of a request for a 120-day extension to the public review and comment period for the Draft EIR.

Response 1

Los Angeles County appreciates your comments and they will be made available to the decision makers prior to a final decision on the proposed project. The comment does not raise any specific issue regarding the adequacy of the analysis presented in the Draft EIR and no further response is required. The public comment period for the Draft EIR was originally from September 28, 2010 to November 11, 2010 for a comment period of 45 days. On November 10, the Los Angeles County Regional Planning Commission extended the Draft EIR public comment period to January 4, 2011, for a public review period of 99 days.

Comment 2

The commenter stated that Mission Village project should not be considered until the applicant has received its permits from the U.S. Army Corps of Engineers (USACE) and the California Department of Fish and Game (CDFG) relating to the Newhall Ranch Resource Management Development Plan and San Fernando Valley spineflower Conservation Plan (RMDP/SCP).

Response 2

With respect to the comment regarding the need to wait for the conclusion of the Army Corps of Engineer's permit process for the Newhall Ranch RMDP/SCP EIS/EIR, the County's review of the Mission Village project and EIR need not await the outcome of the USACE permitting process or completion of the EIS/EIR prepared by USACE and the CDFG. Please see Topical Response 2: Newhall Ranch RMDP/SCP Project and Associated EIS/EIR regarding the relationship between the Mission Village EIR and the USACE and CDFG permitting processes, and associated Newhall Ranch RMDP/SCP EIS/EIR.

Comment 3

The comment indicates that there is no immediate need for the project. There are already 40,000 approved dwelling units and graded lots in the Santa Clarita Valley, so there is no need to rush the review of the Mission Village project.

Response 3

Because the comment does not raise any specific issue regarding the analysis presented in the Draft EIR, no further response can be provided or is required. The comment will be made available to the decision makers prior to a final decision on the proposed project.

Comment 4

The comment is a statement asking for a longer review and comment period because of the numerous environment documents and thousands of pages the commenter must review.

Response 4

Because the comment does not raise any specific issue regarding the analysis presented in the Draft EIR, no further response can be provided or is required. The comment will be made available to the decision makers prior to a final decision on the proposed project. Please see Response 1 above regarding the request for additional review time.

Comment 5

The comment indicates that the County should review the mitigation monitoring plan for the Newhall Ranch Specific Plan to make sure that all mitigation measures are being completed.

Response 5

Because the comment does not raise any specific issue regarding the analysis presented in the Draft EIR, no further response can be provided or is required. The comment will be made available to the decision makers prior to a final decision on the proposed project.

Comment 6

The comment states that because the Newhall Ranch Water Reclamation Plant (WRP) will not be constructed in the first phase of development on Newhall Ranch, and wastewater will go to the Valencia WRP, the Draft EIR must analyze the project's impact relative to chloride levels in the Santa Clara River.

Response 6

The issue of wastewater treatment and disposal is addressed in the Draft EIR in Section 4.9, Wastewater Disposal. For responses to the issue raised in this comment, please see responses to the commenter's

other letters submitted on the Draft EIR (**Letter C14** dated January 2, 2011, **Responses 29** through **32**, and **Letter C22** dated March 16, 2011, **Responses 1** through **11**). For additional related information, please see **Topical Response 5: Chloride** and **Topical Response 6: Water Quality**.

Comment 7

The comment indicates that because the applicant is no longer the company it was before the bankruptcy, past performance cannot be used as an indication of the quality of development that will occur with the proposed project.

Response 7

Because the comment does not raise any specific issue regarding the analysis presented in the Draft EIR, no further response can be provided or is required. The comment will be made available to the decision makers prior to a final decision on the proposed project. Please also see **Topical Response No. 2: Bankruptcy-Related Comments** for additional information responsive to this comment**.**

County of Los Angeles

Final
Environmental Impact Report
SCH No. 2005051143
Volume II
Section 4.0 – 5.0

MISSION VILLAGE

Prepared for:

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

Prepared by:

IMPACT SCIENCES, INC.
803 Camarillo Springs Road, Suite A
Camarillo, California 93012
Phone: (805) 437-1900

NEWHALL RANCH
Newhall Ranch Company

May 2011

County of Los Angeles

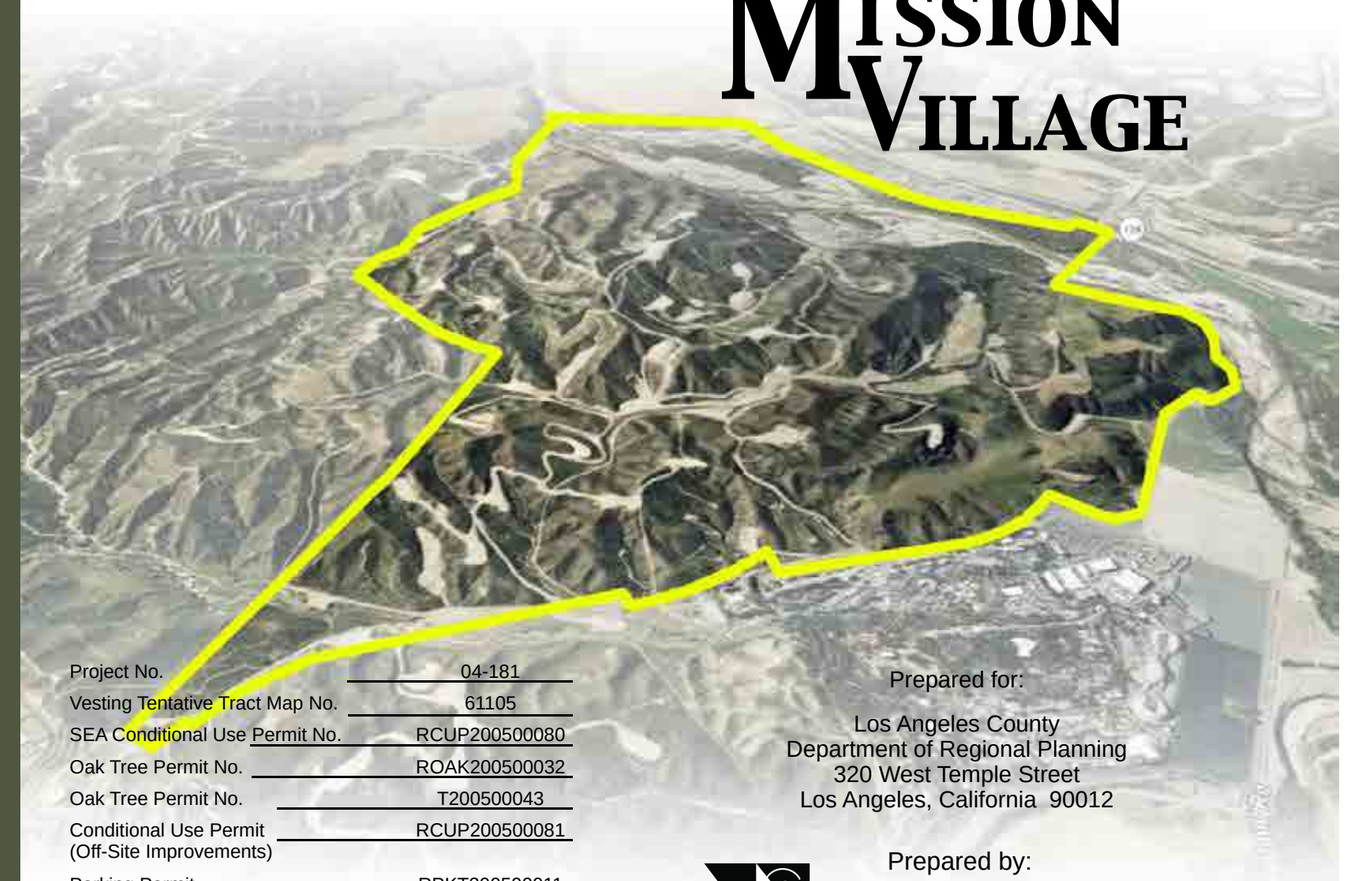
Final Environmental Impact Report

SCH No. 2005051143

Volume II

Section 4.0 – 5.0

MISSION VILLAGE



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Vesting Tentative Tract Map No.	61105
SEA Conditional Use Permit No.	RCUP200500080
Oak Tree Permit No.	ROAK200500032
Oak Tree Permit No.	T200500043
Conditional Use Permit (Off-Site Improvements)	RCUP200500081
Parking Permit	RPKT200500011
Substantial Conformance	201000001

Prepared for:

Los Angeles County
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320 West Temple Street
Los Angeles, California 90012

Prepared by:

IMPACT SCIENCES, INC.
803 Camarillo Springs Road, Suite A
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NEWHALL RANCH
Newhall Ranch Company

MAY 2011

FINAL
ENVIRONMENTAL IMPACT REPORT
for
MISSION VILLAGE

SCH No. 2005051143

County Project No. 04-181
Vesting Tentative Tract Map No. 61105
SEA Conditional Use Permit No. RCUP200500080
Oak Tree Permit No. ROAK200500032
Oak Tree Permit No. T200500043
Conditional Use Permit RCUP200500081
(Off-Site Improvements)
Parking Permit RPKT200500011

Volume II
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Prepared for:

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

Prepared by:

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

May 2011

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This section of the Final EIR presents pages from the Draft EIR that have been revised as a result of comments received during the public review process, or in the case of the project description, in response to revisions to the project. Text that has been added to the Draft EIR is presented in double-underline format, while text that has been removed is presented in ~~strike-out~~ format.

Draft EIR sections that contain revisions are indicated below. Unless otherwise noted, only those pages with revisions are reproduced in this Final EIR.

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1.0 Project Description

4.3 Biota (reproduced in its entirety)

4.5 Traffic/Access (reproduced in its entirety)

4.6 Noise

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4.11 Sheriff Services

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4.20 Cultural/Paleontological Resources

4.22 Water Quality (reproduced in its entirety)

EXECUTIVE SUMMARY

1. PURPOSE

The intent of the Executive Summary is to provide the reader with a clear and simple description of the proposed project and its potential environmental impacts. Section 15123 of the California Environmental Quality Act (CEQA) Guidelines *requires that the summary identify each significant effect, recommended mitigation measure(s), and alternatives that would minimize or avoid potential significant impacts. The summary is also required to identify areas of controversy known to the lead agency, including issues raised by agencies and the public and issues to be resolved, including the choice among alternatives and whether or how to mitigate significant effects. This section focuses on the major areas of the proposed project that are important to decision makers and utilizes non-technical language to promote understanding.*

2. BACKGROUND

In May 2003, the Board of Supervisors of the County of Los Angeles approved the Newhall Ranch Specific Plan and certified the Newhall Ranch Specific Plan Program Environmental Impact Report (EIR) as adequate under CEQA. The Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with development of the entire Newhall Ranch Specific Plan. The proposed Mission Village project is located within The Mesas Village area of the approved Specific Plan. This EIR has been prepared at the project level and tiers from the previously certified Specific Plan Program EIR, updating data and analysis where necessary and adding a level of detail appropriate for consideration of the Mission Village project.

3. SITE LOCATION AND DESCRIPTION

The Mission Village project site is located in unincorporated Los Angeles County within the Santa Clarita Valley Planning Area, and is within the approved Newhall Ranch Specific Plan boundary. The Santa Clarita Valley Planning Area is generally surrounded by the Los Padres and Angeles National Forest areas to the north; Agua Dulce and the Angeles National Forest to the east; the major ridgeline of the Santa Susana Mountains, which separates the Santa Clarita Valley from the San Fernando and Simi Valleys to the south; and the County of Ventura to the west. The tract map is located immediately southeast of the confluence of Castaic Creek and the Santa Clara River. The Santa Clara River forms the northern boundary of the project site with Travel Village RV Park, State Route (SR) 126, and Valencia Commerce Center off site and further to the north. The eastern site boundary abuts Six Flags Magic Mountain Theme Park and undeveloped land. Further to the east are an existing water reclamation plant (Valencia WRP); a California Highway Patrol station; and hotels, restaurants, and service stations

adjacent to Interstate 5 (I-5). The City of Santa Clarita is located further east of the project site, just beyond I-5. Undeveloped land outside of Newhall Ranch exists to the south of the site with the existing community of Westridge and the proposed Legacy Village (Stevenson Ranch Phase V) project further to the southeast and south, respectively. Undeveloped land within Newhall Ranch exists to the west of the project boundaries, with the proposed Landmark Village northwest of the confluence of Castaic Creek and the Santa Clara River.

4. PROJECT DESCRIPTION

a. Revised Project Summary

The Mission Village Draft EIR (October 2010) analyzed the potential environmental impacts associated with development of 4,412 dwelling units (382 single-family dwellings and 4,030 multi-family units) and 1.55 million square feet of mixed-use/commercial development on the proposed project site. Included within the proposed project as described was a 65.6-acre spineflower preserve.

Subsequent to circulation of the Draft EIR, the California Department of Fish and Game (CDFG) approved the Newhall Ranch Resource Management and Development Plan/Spineflower Conservation Plan (RMDP/SCP), which includes the Mission Village project area within its boundaries. As approved by CDFG, the RMDP/SCP designates 85.8 acres of spineflower preserve on the Mission Village site; this represents an increase of 20.2 acres over the amount designated in the Draft EIR.

As a result of the increased spineflower acreage, the development component of the proposed Mission Village project has been reduced in size, consistent with the approved RMDP/SCP. Specifically, as revised, the proposed project now includes a total of 4,055 dwelling units (351 single-family dwellings and 3,704 multi-family units); the 1.55 million square feet of mixed-use commercial development is unchanged.

With the exception of the water quality analysis, this section, nor any other section, has not been revised to reflect the revised project. Instead, the environmental effects of the proposed revised project are addressed in **Topical Response 4: Revised Project Design.**

b. Draft EIR Project Summary

The Mission Village tract map project is proposed on 1,261.8 acres of property located primarily within the boundaries of the Newhall Ranch Specific Plan (of the 1,261.8 acre tract map, approximately 39.1 acres are located outside the Specific Plan boundaries). The project site is located within the northeastern corner of Newhall Ranch in western unincorporated Los Angeles County, south of the Santa Clara River

and SR-126, and west of I-5. An additional approximately 592.8 acres that also is part of the proposed project is outside the tract boundary and would be developed to provide several off-site project-related improvements. If the County grants the requested Project Approvals, 4,412 residences (382 single-family homes, and 4,030 multi-family units, including attached and detached condominiums, age qualified and apartment units),[1] 1,555,100 square feet of commercial/mixed-uses, an 9.5-acre elementary school, fire station, public library, bus transfer station, parks, p~~ublic and~~ private recreational facilities, trails, and road improvements would be permitted. Other land uses within the tract map site include a spineflower preserve in the northeastern portion of the site. Other facilities and infrastructure proposed on the tract map site include roads (including the Commerce Center Drive Bridge and southerly abutment), trails, drainage improvements, flood protection (including buried bank stabilization within and adjacent to the Santa Clara River), potable and reclaimed water systems, a sanitary sewer system, and dry utility systems. To facilitate development and operation of the project, the proposed project also includes several off-site, project-related components that would be implemented on the additional 592.3 acres of land that, for the most part, is located within the approved Specific Plan boundary. These project-related components are incorporated into this EIR and include:

a. An utility corridor proposed along the south side of State Route (SR) 126 extending from the Valencia WRP (Plant 32) on the east to the proposed Newhall Ranch WRP on the west, which would serve to extend municipal services to the tract map site.

b. To provide access, Magic Mountain Parkway will be extended from its existing terminus just east of the project boundary to provide a westward thoroughfare through the project site. Improvements also will be made to the existing roadway lying within VTTM 53295/Entrada, from The Old Road to the existing terminus. As part of the Magic Mountain Parkway improvements, Media Center Drive will also be re-aligned. Additionally, grading associated with the northerly extension of Westridge

[1] The 4,412 total residential dwelling units does not include the 73 second units that would be developed on the single family lots and authorized by the conditional use permit.

Parkway and southerly extension of Commerce Center Drive would be conducted off of the tract map site.

c. Two water tanks (reclaimed and potable) on a single site are proposed. A portion of the tank site lies to the south of the tract map boundary. Additionally, a third would be constructed off site in the Westridge community south of the site adjacent to an existing water tank.

d. Depending on the timing of other development projects, Southern California Edison may require construction of a 16 kV Substation to serve Mission Village. There are two alternative locations for the proposed substation, both outside the boundaries of Mission Village. Alternative one is located almost entirely within Newhall Ranch in the Potrero Valley portion of the approved Specific Plan with a portion of the grading encroaching into the Legacy Village project (VTTM 061996). Access to the site would be provided along the existing Newhall Ranch agriculture roads. The second alternative is located partially within the Potrero Valley portion of the approved Specific Plan and the Legacy Village (VTTM 061996) project site. Access to the site would be provided along the existing Newhall Ranch agriculture roads.

   Electric service to Mission Village from the Electrical Substation would be provided through approximately 16,400 feet of temporary utility poles/lines that cross Newhall Ranch and that would be converted to permanent facilities during the buildout of Newhall Ranch. The utility poles/lines would be located along or near existing agricultural roads in order to take advantage of the area's existing topography and to minimize impacts.

e. An off-site Water Quality Basin is proposed to the northeast of the project on 9 acres of land. The water quality basin is within the boundaries of Entrada; two debris basins would be constructed along the southerly tract boundary within VTTM 061996 (Legacy Village), which would be removed with construction of Legacy Village;

For purposes of this EIR, the "tract map site" refers to the proposed location of the Mission Village development site itself, and the "project site" refers to the tract map site and off site.

The project applicant is requesting approval of the following discretionary entitlements (Project Approvals) to allow for construction of the proposed Mission Village project site: (a) Vesting Tentative Tract Map No. 061105; (b) Significant Ecological Area (SEA) Conditional Use Permit No. RCUP200500080 for project-level development, including utilities within the Specific Plan's River Corridor Special Management Area (SMA)/SEA 23 boundaries; (c) Conditional Use Permit RCUP200500081 to authorize: (i) development of 73 second dwelling units, and (ii) grading associated with the extension of Westridge Parkway and the construction of off-site improvements, including the extension of Magic Mountain Parkway, a utility corridor, a water quality basin, an electrical substation, and water tanks; (d) Oak Tree Permit No. ROAK200500032 (project site); (e) Oak Tree Permit No. T200500043 (off-site extension of Magic Mountain Parkway); (f) Substantial conformance determination pertaining to Grading and Hillside Management Guidelines; (g) Parking Permit RPKT200500011; (h) Substantial conformance determination for setback standards; (i) Substantial conformance determination for off-site, reciprocal, and shared parking; and (j) Substantial conformance determination for proposed trails sections.

Additional ministerial actions, building plan review, and building permits, would be required by the County prior to actual grading and construction of these improvements.

5. TOPICS OF KNOWN CONCERN

Issues relative to the scope of the Mission Village EIR were identified by the County of Los Angeles through input received from state and local agencies, private organizations, and members of the public.

County Department of Regional Planning staff circulated an Initial Study and Notice of Preparation (NOP) on May 24 to June 23, 2005, in order to receive input from interested public agencies and private parties. A copy of the NOP is presented in **Appendix I** of this EIR, along with a copy of the Initial Study. Copies of all written letters submitted in response to the NOP are presented in **Appendix I** of this EIR. In addition to preparation and circulation of the NOP, the County held a Public Scoping Meeting on June 9, 2005, in nearby Stevenson Ranch, to present the proposed project to the public and to solicit comments from interested public agencies and the public on the content of the Draft EIR. The meeting was attended by approximately 20 people, including public agency representatives, private organizations, and members of the public.

In the comments submitted on the NOP and at the Public Scoping Meeting, several subject areas of concern were raised. These subject areas include biological resources in and adjacent to the Santa Clara River, bank stabilization, traffic effects on local roadways, air emissions from project traffic, water availability, and cumulative development in the Santa Clarita Valley. These concerns are addressed in this EIR under one or more of the topics shown below:

(1) Geotechnical and Soil Resources

(2) Hydrology

(3) Biota

(4) Visual Qualities

(5) Traffic/Access

(6) Noise

(7) Air Quality

(8) Water Service

(9) Wastewater Disposal

(10) Solid Waste Disposal

(11) Sheriff Services

(12) Fire Protection Services

(13) Education

(14) Parks and Recreation

(15) Library Services

(16) Agricultural Resources

(17) Utilities

(18) Mineral Resources

(19) Environmental Safety

(20) Cultural/Paleontological Resources

(21) Floodplain Modifications

(22) Water Quality

(23) Global Climate Change

6. AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

Areas of controversy raised in the NOP comments concern the potential impacts of the Mission Village project on biological resources (including Santa Clara River resources), traffic and circulation, including air emissions, and public services, including water availability. Copies of all written comments submitted in response to the NOP are presented in **Appendix I** of this EIR.

Issues to be resolved include whether to approve the proposed project, whether or how to mitigate the identified significant project and cumulative impacts, and whether to select one of the project alternatives.

7. ALTERNATIVES

The certified Newhall Ranch Specific Plan Program EIR evaluated six on-site alternatives to the Specific Plan along with three alternative site locations. The nine alternatives evaluated were selected based on the significant impacts of the Specific Plan, the comments received in response to the Notice of Preparation, discussions with County staff and its Significant Ecological Area Technical Advisory Committee, discussions at 26 Community Task Force meetings, and discussions with members of the community and community groups.

The Specific Plan Program EIR concluded a reduced density 8,000-unit alternative was the environmentally superior alternative. However, the Board of Supervisors did not choose this alternative, and instead adopted the Newhall Ranch Specific Plan, as revised, along with the mitigation measures identified in both the Final EIR and Mitigation Monitoring Plan. As to the other alternatives, the Board found, generally, that the alternatives were infeasible because they too narrowly limited the range of housing opportunities and did not reflect the market conditions under which the Specific Plan would be developed, and also would not achieve many of the basic objectives of the Specific Plan. Consequently, in accordance with *State CEQA Guidelines* Section 15093, a Statement of Overriding Considerations was adopted to substantiate the Board's decision to reject the environmentally superior alternative because the benefits afforded by the Specific Plan outweighed the environmental effects indentified in the Newhall Ranch Specific Plan Program EIR.

Several additional alternatives to those considered as part of the Newhall Ranch Specific Plan Program EIR were evaluated as part of the Mission Village Project EIR and are described below:

No Project/No Development Alternative – This alternative considered the circumstances under which the proposed project does not proceed. Here, the discussion compares the environmental effects of the property remaining in its current state against the environmental effects that would occur if the project were approved.

No Project/Future Development Alternative – This alternative considers the circumstances under which the proposed project is not approved and another development proposal based on the current land use designations and existing infrastructure support is approved.

Expanded Spineflower Preserve Alternative – The Expanded Spineflower Preserve Alternative would reduce the number of residential units proposed on the site by 214 single-family dwelling units and 1,208 multi-family dwelling units, along with a reduction of 697,000 square feet of commercial space when compared to the proposed project, for a total of 2,990 dwelling units and 858,000 commercial square feet, when compared to the proposed project. The Expanded Spineflower Preserve Alternative would retain the 9.5-acre elementary school, neighborhood park, library site, fire station, and some of the private recreation areas proposed as part of the proposed project, although construction of the Commerce Center Drive Bridge and extension roadway would be eliminated under this alternative, which would eliminate direct access from the project site to SR-126 and the Valencia Commerce Center and also eliminate the project's ability to connect the wastewater system to the Newhall Ranch WRP.

20 Percent Reduction in the Number of Dwelling Units – This alternative would reduce the number of residential units proposed on the site from 382 single-family and 4,030 multi-family to 306 single-family and 3,224 multi-family, when compared to the proposed project. No other changes to the project description are proposed. This alternative would result in fewer units developed with the remaining undeveloped acreage being used for open space. The development footprint of this Alternative is the same as the proposed project.

Cluster Alternative – The Cluster Alternative creates a smaller development footprint but retains all aspects of the proposed project development. This alternative would not reduce the number of residential units, commercial square footage or other improvements proposed by the project. The Cluster Alternative would retain the 9.5-acre elementary school, 20-acre public community park, 5-acre public neighborhood park, library and fire station. Bank stabilization would continue to be required as proposed by the project.

8. SIGNIFICANT IMPACTS/MITIGATION MEASURES

This EIR has been prepared to assess each potentially significant impact to the environment that could result with implementation of the proposed Mission Village project. For a detailed discussion regarding potential impacts, refer to **Section 4.0, Environmental Impact Analysis**, of this EIR.

A summary of the proposed project's significant impacts is provided in **Table ES-1, Summary of Environmental Impacts**. A more detailed summary can be found in **Table ES-2, Summary of Significant Impacts and Mitigation Measures**. Also provided in the summary table is a list of those mitigation measures previously adopted by the County as part of the Specific Plan approvals that are applicable to the Mission Village project, a list of the additional mitigation measures proposed by this EIR, and a determination of the level of significance of each impact after implementation of the identified Specific Plan and project-specific mitigation measures. The reader should note that only those Specific Plan mitigation measures applicable to the Mission Village project are shown on **Table ES-2**. For a complete listing of all Specific Plan mitigation measures and whether each measure is applicable to the proposed project, please refer to EIR **Sections 4.1** through **4.23** under the **Mitigation Measures** subsection.

Table ES-1
Summary of Environmental Impacts

Environmental Topic	Determination of Impact After Mitigation
Geotechnical and Soil Resources	With implementation of the identified mitigation measures, the proposed project's geologic, soil and geotechnical impacts would be mitigated to below a level of significance, and no unavoidable significant project or cumulative impacts would occur.
Hydrology	Implementation of the mitigation measures to the satisfaction of the LACDPW would reduce storm-related flooding, erosion, and sedimentation impacts to less than significant levels. Therefore, no significant unavoidable project or cumulative impacts are anticipated.
Biota	~~While t~~The proposed project would not result in significant unavoidable project or cumulative impacts (after implementation of mitigation measures).~~, the proposed project's contribution to cumulative impacts to coastal scrub would remain significant.~~
Visual Qualities	After implementation of the recommended mitigation measures, visual quality project and cumulative impacts would remain significant and unavoidable.
Traffic/Access	With implementation of the identified mitigation measures, the proposed project's traffic/access impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.

Environmental Topic	Determination of Impact After Mitigation
Noise	Mitigation measures recommended to reduce construction-related and operational noise impacts would reduce the magnitude of those impacts to less than significant levels.~~; however, should pile-driving be required to construct the Commerce Center Drive Bridge, and should the project applicant not find it feasible to complete the pile-driving prior to occupancy of on-site noise-sensitive uses within 4,000 feet of the pile-driving, an unavoidable significant construction noise impact would occur.~~ No cumulative unavoidable impacts would occur.
Air Quality	No feasible mitigation exists that would reduce all of these emissions to below the SCAQMD's recommended thresholds of significance. The project's and cumulative condition construction-related emissions of VOCs, NO_X, PM_{10}, and $PM_{2.5}$ and operation-related emissions of VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$ are considered significant and unavoidable.
Water Service	With implementation of the identified mitigation measures, the proposed project's and cumulative water resources impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
Wastewater Disposal	With implementation of the identified mitigation measures, the proposed project's and cumulative wastewater disposal impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
Solid Waste Services	Even with mitigation, the project's solid and hazardous waste impacts would be considered significant and unavoidable. In addition, cumulative solid and hazardous waste impacts would be considered significant and unavoidable.
Sheriff Services	With implementation of the identified mitigation measures, the proposed project and cumulative Sheriff Services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
Fire Protection Services	With implementation of the identified mitigation measures, the proposed project and cumulative Fire Services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
Education	With implementation of the identified mitigation measures, the proposed project and cumulative education impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.

Environmental Topic	Determination of Impact After Mitigation
Parks and Recreation	With implementation of the identified mitigation measures, the proposed project and cumulative parks and recreation impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
Library Services	With implementation of the identified mitigation measures, the proposed project and cumulative library services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
Agricultural Resources	The project-specific impacts resulting from the loss of prime agricultural land are considered significant and unavoidable. In addition, the cumulative conversion of prime agricultural land to non-agricultural uses constitutes a loss of an irreplaceable resource and is considered a significant and unavoidable cumulative impact.
Utilities	With implementation of the identified mitigation measures, the proposed project and cumulative utilities impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
Mineral Resources	Impacts would be less than significant for both the project and cumulative conditions and no mitigation is necessary.
Environmental Safety	With implementation of the identified mitigation measures, the proposed project and cumulative environmental safety impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
Cultural/Paleontological Resources	With implementation of the identified mitigation measures, the proposed project and cumulative cultural/paleontological resources impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
Floodplain Modifications	With implementation of the identified mitigation measures, the proposed project and cumulative floodplain modification impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
Water Quality	With implementation of the identified mitigation measures, the proposed project and cumulative water quality impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
Global Climate Change	With implementation of the identified mitigation measures, the proposed project and cumulative climate change impacts would be mitigated to below a level of significance, and no significant unavoidable impacts would occur.

Table ES-1
Summary of Significant Impacts and Mitigation Measures

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES		
Based on the analysis presented in the Geotechnical and Soil Resources section of this EIR, potential impacts associated with liquefaction and seismically induced settlement are considered less than significant. Due to the project's topography, low liquefaction potential, thin liquefiable layers and the use of certified compacted fill, there would be no significant impacts associated with lateral spreading or seismically induced settlement. Potential impacts resulting from the abandoned, on-site oil wells also are considered to be less than significant because of the method of abandonment, and the ability to respond to any leaks encountered during site grading. • However, unless mitigated, specific project-related significant geologic, soil, and geotechnical impacts could occur in the following areas: • Ground rupture associated with faults along the Airport Mesa and Saddle and Del Valle Fault Zones; • Potential hazards due to the combination of dynamic compaction and differential settlement, along with differential materials response along cut/fill and bedrock/alluvium contacts; • Fifty-two landslide areas were identified on the site. Most of the land slide areas are concentrated on the eastern half of the project site; • Stability of the proposed cut and fill slopes, critical natural slopes and landslide areas; • Potential drainage and soil erosion concerns related to surface runoff from the project site during construction and operation of the Mission Village project;	SP 4.1-1 The standard building setbacks from ascending and descending man-made slopes are to be followed in accordance with Section 1806.4 of the Los Angeles County Building Code, unless superseded by specific geologic and/or soils engineering evaluations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44) SP 4.1-2 The existing Grading Ordinance for planting and irrigation of cut-slopes and fill slopes is to be adhered to for grading operations within the project site. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44) SP 4.1-3 In order to safeguard against major seismic-related structural failures, all buildings within the project boundaries are to be constructed in conformance with the Los Angeles County Uniform Building Code, as applicable. SP 4.1-4 The location and dimensions of the exploratory trenches and borings undertaken by Allan E. Seward Engineering Geology, Inc. and R.T. Frankian & Associates are to be noted on all grading plans relative to future building plans, unless the trenches and/or borings are removed by future grading operations. If future foundations traverse the trenches or borings, they are to be reviewed and approved by the project Geotechnical Engineer. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45.) SP 4.1-5 Not applicable.	With implementation of the identified mitigation measures, the proposed project's geologic, soil and geotechnical impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)			
• Expansive soils associated with changes from cut and fill of the project site; • Subsidence caused by shallow spread footing for foundation support; and • Soil corrosivity caused by the development of concrete pads on the project site. *Applicable mitigation measures to address these impacts were identified in the Newhall Ranch Specific Plan Program EIR. This EIR recommends additional mitigation measures specific to the Mission Village project site.* *In compliance with Section 111 of the Los Angeles County Building Code, and according to the project geotechnical consultant (R.T. Franklin and Associates), the site designated on the geologic/geotechnical maps, as shown on* ***Appendix 4.1*** *is feasible for development, would be safe against hazards from landslide, settlement or slippage, and would not affect off-site property, provided the mitigation measures identified in this section are adopted and implemented during project construction.*	SP 4.1-6	Should any expansive soils be encountered during grading operations, they are not to be placed nearer the finished surface than 8 feet below the bottom of the subgrade elevation. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	With implementation of the mitigation measures set forth in the Geotechnical and Soil Resources section of this EIR, the proposed project would not result in significant unavoidable geologic, soil or geotechnical impacts.
	SP 4.1-7	If expansive materials are encountered at subgrade elevation in cut areas, the soils are to be removed to a depth of 8 feet below the "finished" or "subgrade" surface and the excavated area backfilled with non-expansive, properly compacted soils. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-8	At the time of subdivision, which allows construction, areas subject to liquefaction are to be mitigated to the satisfaction of the project Geotechnical Engineer prior to site development. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-9	Subdrains are to be placed in areas of high ground water conditions or wherever extensive irrigation is planned. The systems are to be designed to the specifications of the Newhall Ranch Specific Plan Geotechnical Engineer.	
	SP 4.1-10	Subdrains are to be placed in the major and minor canyon fills, behind stabilization blankets, buttress fills, and retaining walls, and as required by the Geotechnical Engineer during grading operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-11	Canyon subdrains may be installed in "V"-ditches or in a rectangular trench excavated to expose competent material or bedrock as approved by the Geotechnical Engineer.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	SP 4.1-12 The vertical spacing of subdrains behind buttress fills, stabilization blankets, etc., are to be a maximum of 15 feet. The gradient is to be at least 2 percent to the discharge end. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-13 Geological materials subject to hydroconsolidation (containing significant void space) are to be removed prior to the placement of fill. Specific recommendations relative to hydroconsolidation are to be provided by the Newhall Ranch Specific Plan Geotechnical Engineer at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)	
	SP 4.1-14 Proposed structures on ridgelines will have a minimum 20-foot horizontal setback from the margin of the bedrocks to prevent perched or ground water levels where relatively impermeable materials can block downward migration.	
	SP 4.1-15 Subsurface exploration is required to delineate the depth and lateral extent of the landslides shown on the geologic map. This work shall be undertaken at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15) Landslides must be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan Geotechnical Engineer, and to the satisfaction of the Los Angeles County Department of Public Works.	
	SP 4.1-16 At the subdivision stage, the existence of landslides designated with "3" on Figure 4.1-2, Existing Landslide Areas (of the Newhall Ranch EIR), and within or adjacent to the development area is to be confirmed. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15) If landslides are confirmed in these areas, they are to be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan Geotechnical Engineer.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	SP 4.1-17 The existence, or lack thereof, of landslides on or adjacent to the roadway alignments for the extension of Magic Mountain Parkway and Valencia Boulevard will be evaluated by subsurface investigations at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11) If landslides are confirmed in these areas, they are to be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan Geotechnical Engineer.	
	SP 4.1-18 The potential hazards associated with debris flow scars and other possible surficial failures located in proximity to the roadway alignments for the extension of Magic Mountain Parkway and Valencia Boulevard will be evaluated at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11) These areas are to be mitigated as determined by the Newhall Ranch Specific Plan Geotechnical Engineer.	
	SP 4.1-19 Remove debris from surficial failures during grading operations prior to the placement of fill. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 16).	
	SP 4.1-20 All soils and/or unconsolidated slopewash and landslide debris is to be removed prior to the placement of compacted fills. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	SP 4.1-21 Cut-slopes, which will expose landslide material, are to undergo geologic and geotechnical evaluation at the subdivision stage to determine their stability and degree of consolidation. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15) Several options are available to mitigate potential landslide failure in the proposed cut-slopes. Landslides may be stabilized with buttress fills or shear keys designed by the Newhall Ranch Specific Plan Geotechnical Engineer; landslide material can be entirely removed and replaced with a stability fill; or the slope can be redesigned to avoid the landslide. Landslides underlying cut pad or road areas may be removed or partially removed if the Newhall Ranch Specific Plan Geologist and Geotechnical Engineer conclude that the landslide is stable and sufficiently consolidated to build on. Landslides located on ascending natural slopes above proposed graded areas will also require evaluation for stability. Unstable landslides on natural slopes above graded areas will either require stabilization, removal, or building setbacks to mitigate potential hazards.	
	SP 4.1-22 Not applicable.	
	SP 4.1-23 Prior to construction of the road embankment located within landslide Qls II, a compacted fill shear key will be constructed at the property boundary. (R.T. Frankian & Associates, 19 September 1994, p. 6)	
	SP 4.1-24 Landslides which will not affect the proposed grading concept are to be placed in Restricted Use Areas on the Final Maps. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 43)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	SP 4.1-25 Surficial stability of cut-slopes designated with a "G" are to be fully evaluated at the subdivision stage, due to the possibility of wedge failures or surficial material in the slope. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43) *(The focused geotechnical studies prepared for the Mission Village project included the analysis of areas previously identified with a "G" in the Newhall Ranch Specific Plan Certified EIR. All proposed cuts were evaluated and, where necessary, focused mitigation measures were identified and included in the list of measures presented below to mitigate potential impacts).*	
	SP 4.1-26 Cut slopes designated as "P" are potentially unstable and are to be fully evaluated at the subdivision stage to ascertain whether they are stable as designed. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43) *(The focused geotechnical studies prepared for the Mission Village project included the analysis of areas previously identified with a "P" in the Newhall Ranch Specific Plan Certified EIR. All proposed cuts were evaluated and, where necessary, focused mitigation measures were identified and included in the list of measures presented below to mitigate potential impacts).*	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	SP 4.1-27 Cut-slopes designated with a "U" are to be further investigated at the subdivision stage to confirm underlying geologic conditions and slope stability. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43) *(The focused geotechnical studies prepared for the Mission Village project included the analysis of areas previously identified with a "U" in the Newhall Ranch Specific Plan Certified EIR. All proposed cuts were evaluated and, where necessary, focused mitigation measures were identified and included in the list of measures presented below to mitigate potential impacts).*	
	SP 4.1-28 Cut-slopes associated with the construction of the proposed extensions of Magic Mountain Parkway and Valencia Boulevard are to be further investigated at the subdivision stage to confirm the underlying geologic conditions and slope stability. Corrective measures are to be required if it is determined that the cut-slopes will not be stable. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, pp. 11 & 12)	
	SP 4.1-29 Orientations of the bedrock attitudes are to be evaluated by the Newhall Ranch Specific Plan Engineering Geologist to identify locations of required buttress fills. Buttress fill design and recommendations, if necessary, are to be presented as mitigation during the grading plan stage. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-30 All fills, unless otherwise specifically designed, are to be compacted to at least 90 percent of the maximum dry unit weight as determined by ASTM Designation D 1557-91 Method of Soil Compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	SP 4.1-31 No fill is to be placed until the area to receive the fill has been adequately prepared and approved by the Geotechnical Engineer. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-32 Fill soils are to be kept free of all debris and organic material. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-33 Rocks or hard fragments larger than 8 inches are not to be placed in the fill without approval of the Geotechnical Engineer, and in a manner specified for each occurrence. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-34 Rock fragments larger than 8 inches are not to be placed within 10 feet of finished pad grade or the subgrade of roadways or within 15 feet of a slope face. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-35 Rock fragments larger than 8 inches may be placed in windrows, below the limits given above, provided the windrows are spaced at least 5 feet vertically and 15 feet horizontally. Granular soil must be flooded around windrows to fill voids between the rock fragments. The granular soil is to be wheel rolled to assure compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-36 The fill material is to be placed in layers which, when compacted, is not to exceed 8 inches per layer. Each layer is to be spread evenly and is to be thoroughly mixed during the spreading to insure uniformity of material and moisture. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-37 When moisture content of the fill material is too low to obtain adequate compaction, water is to be added and thoroughly dispersed until the soil is approximately 2 percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	SP 4.1-38 When the moisture content of the fill material is too high to obtain adequate compaction, the fill material is to be aerated by blading or other satisfactory methods until the soil is approximately 2 percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-39 Where fills toe out on a natural slope or surface, a keyway, with a minimum width of 16 feet and extending at least 3 feet into firm, natural soil, is to be cut at the toe of the fill. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-40 Where the fills toe out on a natural or cut slope and the natural or cut slope is steeper than 5 horizontal to 1 vertical, a drainage bench with a width of at least 8 feet is to be established at the toe of the fill. Fills may be placed over cut slopes if the visible contact between the fill and cut is steeper than 45 degrees. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-41 When placing fills over slopes, sidewall benching is to extend into competent material, approved by the Geotechnical Engineer, with vertical benches not less than 4 feet. (R.T. Frankian & Associates, 19 September 1994, Appendix I) Competent material is defined as being free of loose soil, heavy fracturing, or compressive soils.	
	SP 4.1-42 When constructing fill slopes, the grading contractor is to avoid spillage of loose material down the face of the slope during the dumping and compacting operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	SP 4.1-43 The outer faces of fill slopes are to be compacted by backing a sheepsfoot compactor over the top of the slope, and thoroughly covering the entire slope surface with overlapping passes of the compactor. Compaction of the slope is to be repeated after each 4 feet of fill has been placed. The required compaction must be obtained prior to placement of additional fill. As an alternate, the slope can be overbuilt and cut back to expose a compacted core. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	
	SP 4.1-44 All artificial fill associated with past petroleum activities, as well as other existing artificial fill, are to be evaluated by the Newhall Ranch Specific Plan Geotechnical Engineer at the subdivision and/or grading plan stage. (Allan E. Seward Engineering Geology, 19 September 1994, Inc., p. 45) Unstable fills are to be mitigated through removal, stabilization, or other means as determined by the Newhall Ranch Specific Plan Geotechnical Engineer.	
	SP 4.1-45 Surface runoff from the future graded areas is not to run over any natural, cut, or fill slopes. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)	
	SP 4.1-46 Runoff from future pads and structures is to be collected and channeled to the street and/or natural drainage courses via non-erosive drainage devices. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)	
	SP 4.1-47 Water is not to stand or pond anywhere on the graded pads. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)	
	SP 4.1-48 Oil and water wells that might occur on site are to be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	SP 4.1-49 If any leaking or undocumented oil wells are encountered during grading operations, their locations are to be surveyed and the current well conditions evaluated immediately. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 21) Measures are to be taken to document the wells, abandonment, and remediate the well sites (if necessary) in accordance with state and local regulations.	
	SP 4.1-50 The exact status and location of the Exxon (Newhall Land & Farming) oil well #31 will be evaluated at the subdivision stage. If necessary, the well will be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 12).	
	SP 4.1-51 Survey control will be required to precisely locate the Salt Creek and Del Valle Faults at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 33).	
	SP 4.1-52 Additional subsurface trenching will be performed within the Holser Structural Zone on Newhall Ranch during the subdivision stage to evaluate its existence. Within Potrero Canyon, additional subsurface evaluation will be performed during the subdivision stage to confirm that nontectonic alluvial movement was the cause of surface ground cracking during the January 17, 1994 earthquake, and to evaluate the potential for shallow-depth faults. (Allan E. Seward Engineering Geology, Inc. 19 September 1994, p. 42, as revised above.) *(Additional subsurface evaluations pertaining to Holzer Fault are not applicable for the Mission Village project site. This is due to the fact that the Holzer Fault is not located on the project site.*	
	SP 4.1-53 Precise Building Setback Zones for the Newhall Ranch Specific Plan site are to be defined at the subdivision stage.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	SP 4.1-54 Due to the potential activity of the Salt Creek and Del Valle Faults, site development is to remain outside of Building Setback Zones around fault traces, and the possible fault zone connecting them. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 42).	
	SP 4.1-55 To minimize potential hazards from shattered ridge effects, structures, and storage tanks proposed on ridgelines are to have a minimum 20-foot setback from the margins of the bedrock. Designation of specific building setbacks will require evaluation at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 40) Building Setback Zones are to be identified on all site plans and tract maps for the site.	
	SP 4.1-56 The potential for ground motion and ground failure associated with a seismic event in proximity to the planned roadway alignments of Magic Mountain Parkway and Valencia Boulevard will be evaluated at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11) Mitigation to reduce associated significant impacts will also be identified at that time.	
	MV 4.1-1 Future structures shall be designed according to standards applicable to Seismic Zone 4 of the Uniform Building Code.	
	MV 4.1-2 Lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.) shall be over-excavated 5 feet to minimize potential adverse impacts associated with differential materials response.	
	MV 4.1-3 Over-excavation of clay-rich bedding planes of the Saugus Formation or Pico Formation and subsequent placement of a certified fill cap shall be conducted to mitigate potential hazards from expansive material, and to reduce potential hazards from potential secondary seismogenic movement along bedding planes.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-4 Due to the potential for primary ground surface rupture along the Airport Mesa and/or Saddle Faults, Fault Building Setback zones have been designated for the area within 50 feet of the map trace of the two faults. To reduce potential public heath and safety impacts to a less than significant level, the following restrictions shall be applicable to these areas: • No construction of habitable structures as defined in Appendix B of CDMG Special Publication 42, are allowed within the Fault Building Setback zone. • Pipelines, including gas, water, storm drain, and sewer, shall be constructed to allow for some flexure and emergency shut off valves shall be required for gas and water lines within these zones in case of possible ground deformation during an earthquake. • Site-specific recommendations shall be provided at the Grading Plan or Building Plan stages. MV 4.1-5 If critical facilities or essential services buildings (e.g., hospitals, schools, fire stations, etc.) are to be developed within the area of the Airport Mesa or Saddle faults, a Building Setback of at least 50 feet from each side of the Airport Mesa or Saddle faults shall be maintained. MV 4.1-6 The project shall be designed in accordance will all applicable building codes and standards utilizing the appropriate geotechnical parameters as presented in the "Seismicity" section of the R.T. Frankian & Associates report entitled *Response to County of Los Angeles Review Sheets and Geotechnical Plan Review, Revised Vesting Tentative Tract Map No. 6110,5* (April 29, 2010)) to reduce seismic risk to an acceptable level as defined by CGS in Chapter 2 of SP 117a (CGS, 2008).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-7 The mitigation for liquefaction at the site will consist of a combination of ground motion and structural to reduce the risk to an acceptable level as defined by CGS in chapter 2 of SR 117a (CGS, 2008). The ground modification will consist of the removal of some of the soil material subject to liquefaction and/or elevating the site grades.	
	MV 4.1-8 The recommendations identified in Table I, *Response to County of Los Angeles Review Sheets and Geotechnical Plan Review, Revised Vesting Tentative Tract Map No. 61105* (April 29, 2010) prepared by R.T. Frankian & Associates, shall be incorporated into the project such that the analyzed cut-slopes, proposed grades, remedial grades and compacted fill slopes comply with Los Angeles County minimum requirements for gross stability under static and pseudostatic loading conditions and for surficial stability, as applicable.	
	MV 4.1-9 All landslide removal bottoms shall be observed by the project engineering geologist and surveyed by the supervising civil engineer prior to the placement of engineered fill.	
	MV 4.1-10 Where proposed pad grades occur near the basal Qt contact of the mesas and the basal Qt layer contains a high percentage of oversized (>8 inches) clasts, the Qt shall be removed (over-excavated) and replaced with suitable engineered fill. Stability fills are recommended for all proposed cut-slopes that expose Qt deposits in the slope face.	
	MV 4.1-11 All slopewash in areas of proposed development shall be completely removed prior to the placement of engineered fill.	
	MV 4.1-12 In proposed fill areas, all artificial fill impacting the proposed development shall be entirely removed prior to placement of compacted/certified fill material. If artificial fill is present below proposed cut grade elevations, it shall be completely removed and replaced with certified engineered fill.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-13 Review of the tentative tract map design, the topographic base map and field mapping of the site indicates that where potential debris flow hazard exists the following mitigation measures shall be implemented (but not limited to) to mitigate the potential for debris flow hazard at these locations: • Remove loose surficial material; • Construct diverter slough walls; • Construct impact walls; • Construct debris basins; • Control run-off; • Plant selective deep-rooted vegetation; and • Construct stability fills. MV 4.1-14 As part of the project site grading, 48 of the landslides will be completely removed as part of the site grading. Of the remaining four landslides (Qls-XXXV, Qls-XXXVII, Qls-XLIII, and Qls-XLIV), three of the landslides (Qls-XXXV, Qls-XLIII, and Qls-XLIV) shall be partially removed until a stable configuration is achieved. The southern portion of the fourth landslide (Qls-XXXVII) shall be completely removed below the proposed building pad, and the northern portion (within the spineflower preserve) shall remain in place and be stabilized by a shear key and buttress fill slope. The remaining portion of this landslide will be placed within a Restricted Use Area. MV 4.1-15 All cut slopes shall be graded in accordance with the recommendations of the Project Geotechnical Consultant, as described in the Vesting Tentative Tract Map plan review reports. MV 4.1-16 The proposed fill slopes shall be graded in accordance with the recommendations of Project Geotechnical Consultant as described in the Vesting Tentative Tract Map plan review reports.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-17 The grading adjacent to natural slopes shall be performed in accordance with the recommendations of the Project Geotechnical Consultant, as described in the Vesting Tentative Tract Map plan review reports. Where warranted for gross stability, Building Setbacks recommended in the plan review reports that exceed the setback standards set forth in the Los Angeles County/California Building Code shall be adhered to. The standard setbacks from grossly stable ascending and descending natural slopes provided in the Los Angeles County/California Building Code shall also be followed, where not superseded by the recommended Building Setbacks. MV 4.1-18 The debris flow hazard shall be further evaluated once a 40-scale rough grading plan has been developed for the project site. Appropriate mitigation measures, such as avoidance, debris basins, impact walls, etc., shall be provided for any additional debris flow areas identified on the rough grading plan. MV 4.1-19 Prior to placing compacted fill, the ground surface shall be prepared by removing non-compacted artificial fill (af), disturbed compacted fill soils (caf), loose alluvium, and other unsuitable materials. Areas that are to receive compacted fill shall be inspected by the project geologist/geotechnical engineer prior to the placement of fill. MV 4.1-20 All drainage devices shall be properly installed and inspected by the project geologist/geotechnical engineer and/or owner's representative(s) prior to placement of backfill.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-21 Fill soils shall consist of imported soils or on-site soils free of organics, cobbles, and deleterious material provided each material is approved by the project geologist/geotechnical engineer. The project geologist/geotechnical engineer shall evaluate and/or test the import material for its conformance with the report recommendations prior to its delivery to the site. The contractor shall notify the project geologist/geotechnical engineer prior to importing material to the site.	
	MV 4.1-22 Fill shall be placed in controlled layers (lifts), the thickness of which is compatible with the type of compaction equipment used. The fill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in layers with a thickness (loose) not exceeding 8 inches. Each layer shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test. Density testing shall be performed by the project geologist/geotechnical engineer to verify relative compaction. The contractor shall provide proper access and level areas for testing.	
	MV 4.1-23 Rocks or rock fragments less than 8 inches in the largest dimension may be utilized in the fill, provided they are not placed in concentrated pockets. Rocks larger than 4 inches shall not be placed within 3 feet of finish grade.	
	MV 4.1-24 Rocks greater than 8 inches in largest dimension shall be taken off site, or placed in accordance with the recommendation of the Soils Engineer in areas designated as suitable for rock disposal.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-25 Where space limitations do not allow for conventional fill compaction operations, special backfill materials and procedures may be required. Pea gravel or other select fill can be used in areas of limited space. A sand and Portland cement slurry (2 sacks per cubic-yard mix) shall be used in limited space areas for shallow backfill near final pad grade, and pea gravel shall be placed in deeper backfill near drainage systems. MV 4.1-26 The project geologist/geotechnical engineer shall observe the placement of fill and conduct in-place field density tests on the compacted fill to check for adequate moisture content and the required relative compaction. Where less than specified relative compaction is indicated, additional compacting effort shall be applied and the soil moisture conditioned as necessary until adequate relative compaction is attained. MV 4.1-27 The contractor shall comply with the minimum relative compaction out to the finish slope face of fill slopes, buttresses, and stabilization fills as set forth in the specifications for compacted fill. This may be achieved by either overbuilding the slope and cutting back as necessary, or by direct compaction of the slope face with suitable equipment, or by any other procedure that produces the required result. MV 4.1-28 Any abandoned underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipelines or others not discovered prior to grading are to be removed or treated to the satisfaction of the Soils Engineer and/or the controlling agency for the project. MV 4.1-29 The contractor shall have suitable and sufficient equipment during a particular operation to handle the volume of fill being placed. When necessary, fill placement equipment shall be shut down temporarily in order to permit proper compaction of fills, correction of deficient areas, or to facilitate required field-testing.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-30 The contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications. MV 4.1-31 Final reports shall be submitted after completion of earthwork and after the Soils Engineer and Engineering Geologist have finished their observations of the work. No additional excavation or filling shall be performed without prior notification to the Soils Engineer and/or Engineering Geologist. MV 4.1-32 Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials prior to backfill placement, and shall be inspected by the project geologist/geotechnical engineer. MV 4.1-33 Soils obtained from the excavation may be used as backfill if they are essentially free of organics and deleterious materials, unless otherwise indicated in the applicable geotechnical report. MV 4.1-34 Rocks generated from the trench excavation not exceeding 3 inches in largest dimension may be used as backfill material. However, such material may not be placed within 12 inches of the top of the pipeline. No more than 30 percent of the backfill volume shall contain particles larger than 1.5 inches in diameter, and rocks shall be well mixed with finer soil. MV 4.1-35 Soils (other than aggregates) with a Sand Equivalent (SE) greater than or equal to 30, as determined by ASTM D 2419 Standard Test Method or at the discretion of the engineer or representative in the field, may be used for bedding and shading material in the pipe zone areas. These soils are considered satisfactory for compaction by jetting procedures.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-36 No jetting shall be permitted in utility trenches within the top 2 feet of the subgrade of concrete slabs-on-grade.	
	MV 4.1-37 Trench backfill other than bedding and shading shall be compacted by mechanical methods as tamping sheepsfoot, vibrating or pneumatic rollers, or other mechanical tampers to achieve the density specified herein. The backfill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in horizontal layers with a thickness (loose) not exceeding 8 inches. Trench backfills shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test.	
	MV 4.1-38 The contractor shall select the equipment and process to be used to achieve the specified density without damage to the pipeline, the adjacent ground, existing improvements or completed work.	
	MV 4.1-39 Observations and field tests shall be carried on during construction by the project geologist/geotechnical engineer to confirm that the required degree of compaction has been obtained. Where compaction is less than that specified, additional compaction effort shall be made with adjustment of the moisture content as necessary until the specified compaction is obtained. Field density tests may be omitted at the discretion of the engineer or his representative in the field.	
	MV 4.1-40 Whenever, in the opinion of the project geologist/geotechnical engineer or the owner's Representative(s), an unstable condition is being created, either by cutting or filling, the work shall not proceed until an investigation has been made and the excavation plan revised, if deemed necessary.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-41 Fill material within a trench shall not be placed, spread, or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the project geologist/geotechnical engineer indicate the moisture content and density of the fill are as specified.	
	MV 4.1-42 In order to provide a uniform firm bottom prior to placing fill, all unconsolidated alluvium, slopewash, colluvial soils and severely weathered terrace deposits and bedrock shall be removed from areas to receive fill. The estimated depths of removals (excluding landslides) are 5 to 22 feet, as shown on the Geologic Remediation Maps (Plates G7 to G11) contained in *Geologic and Geotechnical Report, Vesting Tentative Tract Map 61105* (July 22, 2004), as revised by Plates ES8-ES13 contained in the *Geologic and Geotechnical Report, Review of Revised Vesting Tentative Tract Map* (December 22, 2004), prepared by Seward, which is included in **Appendix 4.1**. The exact depth and extent of necessary removals will be determined in the field during the grading operations when observations and more location-specific evaluations can be performed. Removal depths for these areas are based on subsurface investigations, laboratory testing, proposed fill, depth use intended and analyses (including liquefaction and cyclic settlement analyses) as well as the geotechnical engineer's geologic and geotechnical judgment.	
	MV 4.1-43 All existing uncertified fill (i.e., artificial fill) is considered unsuitable for support of proposed engineered fills and/or structures and must be removed and replaced with compacted fill. It is estimated that a maximum thickness of approximately 25 feet of artificial fill currently exists in the vicinity of proposed Lots 782 and 783 on the project site.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-44 To protect against potential landslide activity, colluvium/slopewash present within the canyon swales and on drainage sideslopes shall be removed to depths ranging from 10 to 60 feet. Removals at the locations of exploratory trenches shall be extended to the bottom of the trench backfill if the adjacent removal depths are shallower than the trench. MV 4.1-45 In areas to receive compacted fill where the surface gradient is steeper than 5:1, the soil mantle, colluvium and unsuitable material shall be removed and such areas benched horizontally into competent material in conjunction with fill placement. MV 4.1-46 After the ground surface to receive fill has been exposed, it shall be ripped to a minimum depth of 6 inches, brought to optimum moisture content or above and thoroughly mixed to obtain a near uniform moisture condition and uniform blend of materials, and then compacted to the required relative compaction per the latest ASTM D 1557 laboratory maximum density. MV 4.1-47 Ground water is not expected to impede the grading operations over the project site. Where recommended removals encounter groundwater, water levels will need to be controlled by providing an adequate excavation bottom slope and sumps for pumping water out as the excavation proceeds, or groundwater may be lowered by installing shallow dewatering well points prior to grading. Partial removals of soils above the water table and soil improvement below the water table (e.g., shallow compaction grouting) may be another option. Dewatering may be needed depending on the season when the removals are performed.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-48 A minimum 5- to 8-foot-thick over-excavation shall be performed on all cut lots, and transitional lots (transitions between bedrock, fill, terrace deposits and alluvium) and a minimum 3-foot-thick over-excavation on streets. This over-excavation will provide a uniform base for structural support of buildings and traffic loads. If on a cut/fill transition lot the maximum depth of fill exceeds 15 feet, then the thickness of the fill cap shall be one-third of the deepest fill thickness below any proposed structure. If excavation of the native soils (i.e., bedrock) exposes high expansive materials, then the lot over-excavation shall be deepened to 8 feet. Cut and transition lots located in areas of steeply dipping bedrock will need to be over-excavated to a depth of 8 feet. If these lots are underlain by weak sheared bedding planes or shears they may require a deeper over excavation and need to be evaluated on a case-by-case basis during the grading operations. Lots potentially affected by the requirements have been identified in the Geologic Remediation Maps (Plates G7 to G11) included in the *Geologic and Geotechnical Report, Vesting Tentative Tract Map 61105* (July 22, 2004), as revised by Plates ES8-ES13 contained in the *Geologic and Geotechnical Report, Review of Revised Vesting Tentative Tract Map* (December 22, 2004), prepared by Seward, which is included in EIR **Appendix 4.1**.	
	MV 4.1-49 All fill material shall be placed in uniform lifts not exceeding 8 inches in its loose state and compacted to a minimum of 90 percent relative compaction as determined based on the latest ASTM Test Designation D-1557.	
	MV 4.1-50 For fills deeper than 40 feet, the portion of fill below 40 feet depth shall be compacted to a minimum of 93 percent relative compaction. To ensure compliance with this requirement, these areas shall be delineated at the Grading Plan stage.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-51 Fill slope inclination shall not be steeper than 2:1. The fill material within approximately one equipment width (typically 15 feet) of the slope face shall be constructed with cohesive material obtained from on-site soils. The finished fill-slope face shall be constructed by over-building the slope and cutting back to the compacted fill material. Stability Fills are recommended where cut-slope faces will expose fill-over bedrock, alluvium-over-bedrock, or Quaternary Terrace Deposits over bedrock conditions. These fills shall be constructed with a keyway at the toe of the fill slope with a minimum equipment width but not less than 15 feet, and a minimum depth of 3 feet into the firm undisturbed earth. Following completion of the keyway excavations, the project engineering geologist shall observe and approve the keyway bottom prior to backfilling with Certified Engineered Fill. MV 4.1-52 Where fill slopes are constructed above natural ground with a gradient of 5:1 or steeper, all topsoil, colluvium, and unsuitable material shall be removed and a keyway shall be constructed at the toe of the fill slope with a minimum width of 15 feet, and a minimum depth of 3 feet into firm undisturbed earth. Following completion of the keyway excavations, the project Engineering Geologist/Geotechnical Engineer or his representative shall observe and approve the keyway bottom prior to backfilling with compacted fill.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-53 Where fill slopes toe out on relatively level natural ground, the removals shall be performed to a minimum 1:1 projection from the toe of slope to the recommended removal depth. Where sliver fill-slopes are proposed, it is recommended that the slope be constructed with a minimum 15-foot-width Stability Fill throughout, which is keyed in at the toe of slope.	
	MV 4.1-54 Excavations deeper than 3 feet shall conform to safety requirements for excavations as set forth in the State Construction Safety Orders enforced by the State Division of Industrial Safety, CAL OSHA. Temporary excavations 12 feet or lower shall be no steeper than 1:1. For excavations to 20 feet in height, the bottom 3.5 feet may be vertical and the upper portion shall be no steeper than 1.5:1. Excavations not complying with these requirements shall be shored.	
	MV 4.1-55 Excavation walls in sands and dry soils shall be kept moist, but not saturated at all times.	
	MV 4.1-56 The bases of excavations or trenches shall be firm and unyielding prior to foundations or utility construction. On-site materials other than topsoil or soils with roots or deleterious materials may be used for backfilling excavations. Densification (compaction) by jetting may be used for on-site clean sands or imported equivalent of coarser sand provided they have a Sand Equivalent greater than or equal to 30 as determined by ASTM D2419 test method.	
	MV 4.1-57 Parameters for design of cantilever and braced shoring shall be provided at the grading plan stage.	
	MV 4.1-58 If any leaking or undocumented oil wells are encountered during grading operations, their locations shall be surveyed and the current well conditions evaluated immediately. If potentially hazardous materials relating to operation of the oil wells are encountered during future grading operations, they shall be assessed and mitigated to the satisfaction of DOGGR before grading is permitted to continue.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-59 To maintain appropriate long-term drainage and erosion control, the following points shall be adhered to in slope protection, landscaping, irrigation and modifications to slopes, pads and structures: • All interceptor ditches, drainage terraces, down-drains, and any other drainage devices shall be maintained and kept clear of debris. A qualified Engineer shall review any proposed additions or revisions to these systems, to evaluate their impact on slope erosion. • Retaining walls shall have adequate freeboard to provide a catchment area for minor slope erosion. Periodic inspection, and if necessary, cleanout of deposited soil and debris shall be performed, particularly during and after periods of rainfall. • Slope surficial soils may be subject to water-induced mass erosion. Therefore, a suitable proportion of slope planting shall have root systems, which will develop well below 3 feet. Intervening areas can then be planted with lightweight surface plants with shallower root systems. All plants shall be lightweight and require low moisture. Any loose slough generated during the process of planting shall be properly removed from the slope face(s). • Construction delays, climate/weather conditions, and plant growth rates may be such that additional short-term erosion control measures may be needed; examples would be matting, netting, plastic sheets, deep (5 feet) staking, etc.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-60 All possible precautions shall be taken to maintain moderate and uniform soil moisture. Slope irrigation systems shall be properly operated and maintained and system controls shall be placed under strict control.	
	MV 4.1-61 Surface drainage control design shall include provisions for positive surface gradients to ensure that surface runoff is not permitted to pond, particularly above slopes or adjacent to building foundations or slabs. Surface runoff shall be directed away from slopes and foundations and collected in lined ditches or drainage swales, via non-erodible drainage devices, which shall discharge to paved roadways, or existing watercourses. If these facilities discharge onto natural ground, means shall be provided for control erosion and to create sheet flow.	
	MV 4.1-62 Site grading shall be observed, particularly after heavy, prolonged rainfall, to identify erosion areas at an early stage. Maintenance work shall be done as soon as practical to repair these areas and prevent their enlargement.	
	MV 4.1-63 Fill slopes, Buttress Fill and Stability Fills, as applicable, shall be provided with subsurface drainage as necessary for stability. Subdrains along the bottom of canyon fills shall be constructed.	
	MV 4.1-64 Water should not be allowed to pond on future graded areas, or allowed to flow uncontrolled over natural or graded slopes. Surface drainage should be directed to terrace drains or debris basins. Debris material generated from erosion should be contained within site boundaries. All slope terrace drains should be kept clear of all debris to limit impounding or surface water. Graded slopes should be seeded with a deep-rooting, drought-resistant vegetation to minimize erosion.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.1 GEOTECHNICAL AND SOIL RESOURCES (CONTINUED)		
	MV 4.1-65 All final grades shall be sloped away from the building foundations to allow rapid removal of surface water runoff. No ponding of water shall be allowed adjacent to the foundations. Plants and other landscaped vegetation requiring excessive watering shall be avoided adjacent to the building foundations. If such landscaping is installed, an effective water-tight barrier shall be provided to prevent water from affecting the building foundations.	
	MV 4.1-66 Additional testing for expansive soils shall be performed at the grading plan stage and during finish grading so that appropriate foundation design recommendations for expansive soils, if applicable, can be made.	
	MV 4.1-67 Pending additional testing, either Type I or II cement shall be used in concrete placed in contact with the ground. Mitigating recommendations against soil corrosivity shall be revised/expanded based on additional confirmatory tests that shall be performed at the Grading Plan stage. Final recommendations for concrete will be in accordance with the latest UBC requirements, and a corrosion specialist shall provide mitigating recommendations for potential corrosion of metals in contact with on-site soils.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.2 HYDROLOGY		
Site clearing and grading operations within the Mission Village project site would have the potential to discharge sediment downstream during storm events. Temporary erosion control measures in disturbed areas of the project site during the construction phase are recommended to reduce this potential impact to less than significant levels. *As to operational impacts, with implementation of the Specific Plan mitigation measures requiring the incorporation of certain project design features and additional mitigation specific to Mission Village, development of the proposed project would result in less than significant impacts on drainage patterns because development would not substantially alter existing drainage patterns, significantly modify a drainage channel, nor change the rate of flow, currents, or the course and direction of surface waters such that they would cause substantial erosion or siltation, or cause on-site or off-site flooding or mudflow. Once developed, the Mission Village project would reduce post-development storm water flows during a 50-year capital storm event, as compared to existing conditions. Specifically, the amount of discharge from the project site (including the tributary watershed in which the project site lies) would decrease from 5,682 cubic feet per second (cfs) to 4,862 cfs. This 14 percent reduction in rainfall runoff would be due to the reduction in erosive areas on the project site that contribute sediment and debris to the runoff. Mitigation requires that the proposed storm drainage improvements meet the flood control requirements of the Flood Control and Watershed Management Divisions of the Los Angeles County Department of Public Works, thereby reducing flood impacts to less than*	Please refer to **4.22, Water Quality**, of this summary table for a listing of Program EIR mitigation measures pertaining to hydrology. SP 4.2-1 All on- and off-site flood control improvements necessary to serve the Newhall Ranch Specific Plan are to be constructed to the satisfaction of the LACDPW, Flood Control Division. SP 4.2-2 All necessary permits or letters of exemption from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the Regional Water Quality Control Board for Specific Plan-related development are to be obtained prior to construction of drainage improvements. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement) (of the Newhall Ranch Specific Plan Program EIR). SP 4.2-3 All necessary streambed agreement(s) are to be obtained from the California Department of Fish and Game wherever grading activities alter the flow of streams under CDFG jurisdiction. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement) (of the Newhall Ranch Specific Plan Program EIR).	Implementation of the mitigation measures to the satisfaction of the LACDPW would reduce storm-related flooding, erosion, and sedimentation impacts to less than significant levels. Therefore, no significant unavoidable impacts are anticipated.

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.2 HYDROLOGY (CONTINUED)			
(continued) significant levels. Additionally, the proposed bank stabilization and bridge abutments within the river would not impede or redirect flood flows within the river and, therefore, would not cause a significant impact relative to flooding. *None of the improvements proposed on the site would be subject to flood hazard: future inhabitable structures on the site would be a minimum of 1 foot above the 100-year flood hazard area. The proposed project would also not result in risk of loss, injury, or death due to flooding, mudflow, tsunami, or seiche.* *Project water quality impacts are discussed in this EIR in* ***Section 4.22, Water Quality****. Project impacts on biological resources in the Santa Clara River as a result of changes to river hydraulics associated with the proposed site grading, bank stabilization, and other floodplain modifications are addressed in this EIR in* ***Section 4.21, Floodplain Modifications****.*	SP 4.2-4	Conditional Letters of Map Revision (CLOMR) relative to adjustments to the 100-year FIA floodplain are to be obtained by the applicant before the proposed drainage facilities are constructed. (*The proposed project has complied with this requirement. See Appendix 4.2)*	
	SP 4.2-5	Prior to the approval and recordation of each subdivision map, a Hydrology Plan, Drainage Plan, and Grading Plan (including an Erosion Control Plan if required) for each subdivision must be prepared by the applicant of the subdivision map to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after site development. These plans shall be prepared to the satisfaction of the LACDPW.	
	SP 4.2-6	Install permanent erosion control measures, such as desilting and debris basins, drainage swales, slope drains, storm drain inlet/outlet protection, and sediment traps in order to prevent sediment and debris from the upper reaches of the drainage areas which occur on the Newhall Ranch site from entering storm drainage improvements. These erosion control measures shall be installed to the satisfaction of the LACDPW.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.2 HYDROLOGY (CONTINUED)		
	SP 4.2-7 The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the LACDPW. These requirements currently include preparation of an Urban Storm Water Mitigation Plan (USWMP) containing design features and Best Management Practices (BMPs) appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of a Storm Water Management Pollution Prevention Plan (SWPPP) containing design features and BMPs appropriate and applicable to the subdivision. The LACDPW shall monitor compliance with those NPDES requirements.	
	MV 4.2-1 The on-site storm drains (pipes and reinforced concrete boxes) and open channels shall be designed and constructed to meet the storm flows, as required by the LACDPW.	
	MV 4.2-2 Debris basins shall be constructed pursuant to LACDPW requirements to intercept storm flows from undeveloped areas before they discharge into the developed portions of the Mission Village tract map site.	
	MV 4.2-3 Energy dissipaters consisting of either riprap or larger standard impact type energy dissipaters shall be installed along the Santa Clara River as required by LACDPW at outlet locations to reduce velocities of runoff into the channel to prevent erosion.	
	MV 4.2-4 The project is required to comply with the RWQCB Municipal Permit (General MS4 Permit) Order No. 01-182, NPDES No. CAS004001 (amended September 14, 2006), and with the state's General Construction Activity Storm Water Permit, California State Water Resources Control Board Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) No. CAS000002, reissued on August 19, 1999, as amended and further modified by Resolution No. 2001-046 on April 26, 2001.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.2 HYDROLOGY (CONTINUED)		
	MV 4.2-5 During all construction phases, temporary erosion control shall be implemented to retain soil and sediment on the tract map site as follows: • Re-vegetate exposed areas as quickly as possible; • Minimize disturbed areas; • Divert runoff from downstream drainages with earth dikes, temporary drains, slope drains, etc.; • Reduce velocity through outlet protection, check dams, and slope roughening/terracing; • Implement dust control measures, such as sand fences, watering, etc.; • Stabilize all disturbed areas with blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, and/or other erosion resistant soil coverings or treatments; • Stabilize construction entrances/exits with aggregate underdrains with filter cloth or other comparable method; • Place sediment control BMPs at appropriate locations along the site perimeter and at all operational internal inlets to the storm drain system at all times during the rainy season (sediment control BMPs may include filtration devices and barriers, such as fiber rolls, silt fence, straw bale barriers, and gravel inlet filters, and/or with settling devices, such as sediment traps or basins; and/or • Eliminate or reduce, to the extent feasible, non-storm water discharges (e.g., pipe flushing, fire hydrant flushing, over-watering during dust control, vehicle and equipment wash down, etc.) from the construction site through the use of appropriate sediment control BMPs.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.2 HYDROLOGY (CONTINUED)		
	MV 4.2-6 All necessary permits, agreements, and/or letters of exemption from the USACE and/or CDFG for project-related development within their respective jurisdictions must be obtained prior to issuance of grading permits.	
	MV 4.2-7 By October 1st of each year, a separate erosion control plan for construction activities shall be submitted to the local municipality describing the erosion control measures that will be implemented during the rainy season (October 1 through April 15).	
	MV 4.2-8 A final developed condition hydrology analysis (LACDPW Drainage Concept Report [DCR] and Final Design Report [FDR]) shall be prepared in conjunction with final project design when precise engineering occurs. This final analysis shall confirm that the final project design is consistent with this analysis. This final developed condition hydrology analysis shall confirm that the sizing and design of the water quality and hydrologic control BMPs control hydromodification impacts in accordance with the Newhall Ranch Sub-Regional Stormwater Mitigation Plan. All elements of the storm drain system shall conform to the policies and standards of the LACDPW, Flood Control Division, as applicable.	
	MV 4.2-9 Ultimate project hydrology and debris production calculations shall be prepared by a project engineer to verify the requirements for debris basins and/or desilting inlets.	
	MV 4.2-10 To reduce debris being discharged from the site, debris basins shall be designed and constructed pursuant to LACDPW Flood Control requirements to intercept flows from undeveloped areas entering into the developed portions of the site.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA		
The entire project site occupies 1,854.5 acres, including the 1,261.8-acre Mission Village tract map site and an additional 592.8 acres of off-site land primarily within the boundaries of the approved Specific Plan. The project site includes 277.9 acres of riparian vegetation, including 111.8 acres of riparian woodland (southern willow scrub, shrub tamarisk, and southern cottonwood-willow riparian) and 166.1 acres of other riparian vegetation communities. The project site includes 1,576.8 acres of upland vegetation communities and land covers, of which 1,430.4 acres occur outside the 100-year floodplain of the Santa Clara River. The project site includes 1.5 miles of the Santa Clara River mainstem; this represents 1.7 percent of the overall Santa Clara River mainstem (86 miles). The total Mission Village project area, inclusive of infrastructure improvements, includes approximately 5 miles of the Santa Clara River mainstem (6 percent of overall). The Mission Village project, including the necessary off-site project components, would result in the permanent conversion of, or temporary disturbance to, 1,493.1 acres of the following: • 413.4 *acres of California sagebrush scrub* • *16.1 acres of California sagebrush scrub–Artemisia* • *12.9 acres of California sagebrush scrub–black sage* • *83.2 acres of California sagebrush scrub–California buckwheat.* • *13.9 acres of California sagebrush scrub–undifferentiated chaparral* • *127.0 acres of California sagebrush scrub–purple sage* • *0.1 acre of disturbed California sagebrush scrub* • *394.3 acres of disturbed lands* • *219.9 acres of land currently used for agricultural purposes* • *8.0 acres of developed land* • 19.7 acres of river wash.	SP 4.6-1 The restoration mitigation areas located within the River Corridor SMA shall be in areas that have been disturbed by previous uses or activities. Mitigation shall be conducted only on sites where soils, hydrology, and microclimate conditions are suitable for riparian habitat. First priority will be given to those restorable areas that occur adjacent to existing patches (areas) of native habitat that support sensitive species, particularly Endangered or Threatened species. The goal is to increase habitat patch size and connectivity with other existing habitat patches while restoring habitat values that will benefit sensitive species. SP 4.6-2 A qualified biologist shall prepare or review revegetation plans. The biologist shall also monitor the restoration effort from its inception through the establishment phase. SP 4.6-3 Revegetation Plans may be prepared as part of a California Department of Fish and Game 1603 Streambed Alteration Agreement and/or an U.S. Army Corps of Engineers Section 404 Permit, and shall include: • Input from both the Project proponent and resource agencies to assure that the Project objectives applicable to the River Corridor SMA and the criteria of this RMP are met. • The identification of restoration/mitigation sites to be used. This effort shall involve an analysis of the suitability of potential sites to support the desired habitat, including a description of the existing conditions at the site(s) and such base line data information deemed necessary by the permitting agency.	Implementation of the mitigation measures required by the Newhall Ranch Specific Plan Program EIR and the Specific Plan Resource Management Plan (RMP), as well as the additional mitigation measures required by this EIR, would mitigate project-specific impacts to less than significant levels. Due to the incorporation of additional mitigation measures required by this EIR, those project-level significant unavoidable impacts identified in the Newhall Ranch Specific Plan Program EIR (i.e., loss of sensitive animal species, coastal sage scrub, and wildlife habitat, and the increase in human and domestic animal presence) would be mitigated to less than significant.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
		The proposed Mission Village project would contribute toward the cumulative impacts to biological resources. These impacts, however, can be reduced to less than significant levels through mitigation. The Mission Village project would contribute to a significant unavoidable cumulative impact related to regional impacts to coastal scrub and San Fernando Valley spineflower individuals.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
(continued) • *28.8 acres of southern cottonwood-willow riparian forest* • *66.1 acres of California annual grassland* • *34.3 acres of undifferentiated chaparral* • *7.8 acres of coast live oak woodland* • *22.3 acres of big sagebrush scrub* • *0.7 acre of southern willow scrub* • *6.9 acres of arrow weed scrub* • *5.6 acres of Mexican elderberry scrub* • *2.6 acres chamise chaparral* • *1.8 acres of chamise–hoaryleaf ceanothus chaparral* • *1.9 acres of valley oak/grass* • *1.6 acres of herbaceous wetlands* • *1.8 acres of mulefat scrub* • *1.1 acre of disturbed mulefat scrub* • *0.6 acre of eriodictyon scrub* • *0.1 acre of giant reed grassland* • *0.5 acre of alluvial scrub.*	SP 4.6-4 The revegetation effort shall involve an analysis of the site conditions such as soils and hydrology so that site preparation needs can be evaluated. The revegetation plan shall include the details and procedures required to prepare the restoration site for planting (i.e., grading, soil preparation, soil stockpiling, soil amendments, etc.), including the need for a supplemental irrigation system, if any. SP 4.6-5 Restoration of riparian habitats within the River Corridor SMA shall use plant species native to the Santa Clara River. Cuttings or seeds of native plants shall be gathered within the River Corridor SMA or purchased from nurseries with local supplies to provide good genetic stock for the replacement habitats. Plant species used in the restoration of riparian habitat shall be listed on the approved project plant palette (Specific Plan Table 2.6-1, Recommended Plant Species for Habitat Restoration in the River Corridor SMA) or as approved by the permitting state and federal agencies. SP 4.6-6 The final revegetation plans shall include notes that outline the methods and procedures for the installation of the plant materials. Plant protection measures identified by the project biologist shall be incorporated into the planting design/layout. SP 4.6-7 The revegetation plan shall include guidelines for the maintenance of the mitigation site during the establishment phase of the plantings. The maintenance program shall contain guidelines for the control of non-native plant species, the maintenance of the irrigation system, and the replacement of plant species.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
(continued) Development of the proposed project would preclude landscape level or regional wildlife movement between the Santa Clara River and undeveloped lands to the south. Dead-End Canyon, Middle Canyon, and Magic Mountain Canyon would be developed and eliminated as potential wildlife movement corridors. Lion Canyon and portions of Exxon Canyon would not be developed, but would become dead-ends and preclude movement between large habitat areas. Although the Mission Village portion of the Specific Plan area would be developed and affect local wildlife movement, regional habitat connectivity would be maintained. The conceptual regional open space plan developed by Penrod et al.,[1] provides for landscape-scale habitat connectivity between the Santa Susana Mountains to the south and the Los Padres National Forest to the north encompasses the High Country SMA/SEA 20 and the Salt Creek area and the Santa Clara River west of Mission Village. The High Country SMA/SEA 20 and Salt Creek area comprise an important part of the "least cost (best potential route) path" linkage design identified by Penrod et al.[2] They provide a key part of the east–west linkage that crosses I-5 and connects with the Angeles National Forest in the San Gabriel Mountains to the east and with Ventura County SOAR open space to the southwest. They also provide a significant part of the north–south linkage between the Santa Susana Mountains and the "Fillmore Greenbelt" to the northwest that further links up with the Los Padres National Forest and the Angeles National Forest to the north.	SP 4.6-8 The revegetation plan shall provide for monitoring to evaluate the growth of the developing habitat. Specific performance goals for the restored habitat shall be defined by qualitative and quantitative characteristics of similar habitats on the river (e.g., density, cover, species composition, structural development). The monitoring effort shall include an evaluation of not only the plant material installed, but the use of the site by wildlife. The length of the monitoring period shall be determined by the permitting State and/or Federal agency. SP 4.6-9 Monitoring reports for the mitigation site shall be reviewed by the permitting State and/or Federal agency. SP 4.6-10 Contingency plans and appropriate remedial measures shall also be outlined in the revegetation plan. SP 4.6-11 Habitat enhancement as referred to in this document means the rehabilitation of areas of native habitat that have been moderately disturbed by past activities (e.g., grazing, roads, oil and natural gas operations, etc.) or have been invaded by non-native plant species such as giant cane (*Arundo donax*) and tamarisk (*Tamarix* sp.). SP 4.6-12 Removal of grazing is an important means of enhancement of habitat values. Without ongoing disturbance from cattle, many riparian areas will recover naturally. Grazing except as permitted as a long-term resource management activity will be removed from the River Corridor SMA pursuant to the Long-Term Management Plan set forth in Section 4.6 of the Specific Plan EIR.	

1 K. Penrod et al., *South Coast Missing Linkages Project: A Linkage Design for the Santa Monica-Sierra Madre Connection* (Idyllwild, California: South Coast Wildlands, in cooperation with the National Park Service, Santa Monica Mountains Conservancy, California State Parks, and The Nature Conservancy, 2006).

2 K. Penrod et al., *South Coast Missing Linkages Project: A Linkage Design for the Santa Monica-Sierra Madre Connection.*

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
(continued) In approving the Specific Plan and Conditional Use Permit No. 94-087-(5), the Board of Supervisors found that the Specific Plan contained sufficient natural vegetative cover and open space to buffer critical resources in the River Corridor SMA/SEA 23 from the development shown in the Specific Plan. The Board of Supervisors further found that the Specific Plan incorporated extensive buffer areas to protect critical resources within the Santa Clara River. The Specific Plan's adopted Resource Management Plan requires a minimum 100-foot-wide setback adjacent to the Santa Clara River between (a) the river side of the top of bank stabilization and (b) development within certain specified land use designations (including those of the Mission Village project site). This requirement may be modified if the Planning Director, in consultation with the County staff biologist, determines that a smaller buffer would adequately protect the riparian resources within the River Corridor SMA/SEA 23, or that a 100-foot-wide setback is infeasible for physical infrastructure planning. Again, these buffer criteria are consistent with the Buffer Study[3] and CDFG recommendations described below in ***Subsection 9(b)(1)(b)(2)(c)****.* *Significant impacts associated with the Specific Plan would occur with respect to the loss of mulefat scrub, coast live oak woodland, coastal sage scrub, Mexican elderberry scrub, southern willow scrub, southern cottonwood willow riparian forest, great basin scrub, scalebroom scrub, valley freshwater marsh, wildlife habitat, special-status bird nests, special-status plant species, protected oaks, special-status wildlife species, and California Department of Fish and Game (CDFG) and U.S. Army Corps of Engineers (Corps) jurisdictional resources. Significant indirect impacts*	SP 4.6-13 To provide guidelines for the installation of supplemental plantings of native species within enhancement areas, a revegetation plan shall be prepared prior to implementation of mitigation (see guidelines for revegetation plans above). These supplemental plantings will be composed of plant species similar to those growing in the existing habitat patch (see Specific Plan Table 2.6-1). SP 4.6-14 Not all enhancement areas will necessarily require supplemental plantings of native species. Some areas may support conditions conducive for rapid "natural" reestablishment of native species. The revegetation plan may incorporate means of enhancement to areas of compacted soils, poor soil fertility, trash or flood debris, and roads as a way of enhancing riparian habitat values. SP 4.6-15 Removal of non-native species such as giant cane (*Arundo donax*), salt cedar or tamarisk (*Tamarix* sp.), tree tobacco (*Nicotiana glauca*), castor bean (*Ricans communis*), if included in a revegetation plan to mitigate impacts, shall be subject to the following standards: • First priority shall be given to those habitat patches that support or have a high potential for supporting sensitive species, particularly Endangered or Threatened species. • All non-native species removals shall be conducted according to a resource agency approved exotics removal program. • Removal of non-native species in patches of native habitat shall be conducted in such a way as to minimize impacts to the existing native riparian plant species.	

3 Impact Sciences, *North Valencia Annexation Buffer Study*, prepared for Newhall Land and Farming Company. April 28, 1997.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
(continued) would occur with respect to increased light and glare, increased non-native plant species, and increased human and domestic animal presence. *The direct and indirect impacts associated with development and operation of the Mission Village project are consistent with the findings of the Newhall Ranch Specific Plan Program EIR (March 1999)*[4] *and Revised Additional Analysis (May 2003).*[5] *The Mission Village Biological Resources Technical report was reviewed by the Significant Environmental Area Technical Advisory Committee (SEATAC) on three separate occasions: January 29, 2007, September 10, 2007, and April 7, 2008. This EIR section reflects comments received from the SEATAC.*	SP 4.6-16 Mitigation banking activities for riparian habitats will be subject to State and Federal regulations and permits. Mitigation banking for oak resources shall be conducted pursuant to the Oak Resources Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. SP 4.6-17 Access to the River Corridor SMA for hiking and biking shall be limited to the river trail system (including the Regional River Trail and various Local Trails) as set forth in this Specific Plan. • The River trail system shall be designed to avoid impacts to existing native riparian habitat, especially habitat areas known to support sensitive species. Where impacts to riparian habitat are unavoidable, disturbance shall be minimized and mitigated as outlined above under Mitigation Measures SP 4.6-1 through SP 4.6-8. • Access to the River Corridor SMA will be limited to daytime use of the designated trail system. • Signs indicating that no pets of any kind will be allowed within the River Corridor SMA, with the exception that equestrian use is permitted on established trails, shall be posted along the River Corridor SMA. • No hunting, fishing, or motor or off-trail bike riding shall be permitted. • The trail system shall be designed and constructed to minimize impacts on native habitats.	

4 County of Los Angeles, *Environmental Impact Report (EIR) for the Newhall Ranch Specific Plan and Water Reclamation Plant* (1999).

5 Impact Sciences, Inc., Revised Additional Analysis to the Newhall Ranch Specific Plan and Water Reclamation Plant Final Program EIR, Volume VIII (2003).

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-18 Where development lies adjacent to the boundary of the River Corridor SMA a transition area shall be designed to lessen the impact of the development on the conserved area. Transition areas may be comprised of Open Area, natural or revegetated manufactured slopes, other planted areas, bank areas, and trails. Exhibits 2.6-4, 2.6-5, and 2.6-6 indicate the relationship between the River Corridor SMA and the development (disturbed) areas of the Specific Plan. The SMAs and the Open Area as well as the undisturbed portions of the development areas are shown in green. As indicated on the exhibits, on the south side of the river the River Corridor SMA is separated from development by the river bluffs, except in one location. The Regional River Trail will serve as transition area on the north side of the river where development areas adjoin the River Corridor SMA (excluding Travel Village). SP 4.6-19 The following are the standards for design of transition areas: • In all locations where there is no steep grade separation between the River Corridor SMA and development, a trail shall be provided along this edge. • Native riparian plants shall be incorporated into the landscaping of the transition areas between the River Corridor SMA and adjacent development areas where feasible for their long-term survival. Plants used in these areas shall be those listed on the approved plant palette (Specific Plan Table 2.6-2 of the Resource Management Plan [Recommended Plants for Transition Areas Adjacent to the River Corridor SMA]). • Roads and bridges that cross the River Corridor SMA shall have adequate barriers at their perimeters to discourage access to the River Corridor SMA adjacent to the structures.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-19 (continued) • Where bank stabilization is required to protect development areas, it shall be composed of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other locations where public health and safety requirements necessitate concrete or other bank protection. • A minimum 100-foot-wide buffer adjacent to the Santa Clara River should be required between the top river side of bank stabilization and development within the Land Use Designations Residential Low Medium, Residential Medium, Mixed-Use and Business Park unless, through Planning Director review in consultation with the staff biologist, it is determined that a lesser buffer would adequately protect the riparian resources within the River Corridor, or that a 100-foot-wide buffer is infeasible for physical infrastructure planning. The buffer area may be used for public infrastructure, such as flood control access; sewer, water, and utility easements; abutments; trails and parks, subject to findings of consistency with the Specific Plan and applicable County policies. SP 4.6-20 The following guidelines shall be followed during any grading activities that take place within the River Corridor SMA: • Grading perimeters shall be clearly marked and inspected by the project biologist prior to grading occurring within or immediately adjacent to the River Corridor SMA. • The project biologist shall work with the grading contractor to avoid inadvertent impacts to riparian resources. SP 4.6-21 Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the River Corridor SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3 of the Specific Plan.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-22 Upon completion of development of all land uses, utilities, roads, flood control improvements, bridges, trails, and other improvements necessary for implementation of the Specific Plan within the River Corridor in each subdivision allowing construction within or adjacent to the River Corridor, a permanent, non-revocable *conservation and public access easement* shall be offered to the County of Los Angeles pursuant to **Mitigation Measure 4.6-23**, below, over the portion of the River Corridor SMA within that subdivision. SP 4.6-23 The River Corridor SMA *Conservation and Public Access Easement* shall be offered to the County of Los Angeles prior to the transfer of the River Corridor SMA ownership, or portion thereof to the management entity described in **Mitigation Measure 4.6-26**, below. SP 4.6-24 The River Corridor SMA *Conservation and Public Access Easement* shall prohibit grazing, except as a long-term resource management activity, and agriculture within the River Corridor and shall restrict recreation use to the established trail system. Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended in the event of the filing of any legal action against Los Angeles County challenging final approval of the Newhall Ranch Specific Plan and any related project approvals or certification of the Final EIR for Newhall Ranch. Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended by the time period between the filing of any such legal action and the entry of a final judgment by a court with appropriate jurisdiction, after exhausting all rights of appeal, or execution of a final settlement agreement between all parties to the legal action, whichever occurs first.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-25 The River Corridor SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities. SP 4.6-26 Prior to the recordation of the River Corridor SMA *Conservation and Public Access Easement* as specified in **Mitigation Measure 4.6-23**, above, the land owner shall provide a plan to the County for the permanent ownership and management of the River Corridor SMA, including any necessary financing. This plan shall include the transfer of ownership of the River Corridor SMA to the Center for Natural Lands Management, or if the Center for Natural Lands Management is declared bankrupt or dissolved, ownership will transfer or revert to a *joint powers authority* consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). SP 4.6-26a Two types of habitat restoration may occur in the High Country SMA: (1) riparian revegetation activities principally in Salt Creek Canyon; and (2) oak tree replacement in, or adjacent to, existing oak woodlands and savannahs. • Mitigation requirements for riparian revegetation activities within the High Country SMA are the same as those for the River Corridor SMA and are set forth in Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16, above. • Mitigation requirements for oak tree replacement are set forth in **Mitigation Measure 4.6-48**, below.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-27 Removal of grazing from the High Country SMA except for those grazing activities associated with long-term resource management programs, is a principal means of enhancing habitat values in the creeks, brushland, and woodland areas of the SMA. The removal of grazing in the High Country SMA is discussed below under (b)4 Long Term Management. All enhancement activities for riparian habitat within the High Country SMA shall be governed by the same provisions as set forth for enhancement in the River Corridor SMA. Specific Plan Table 2.6-3 of the Resource Management Plan provides a list of appropriate plant species for use in enhancement areas in the High Country SMA.	
	SP 4.6-28 Not applicable.	
	SP 4.6-29 Not applicable.	
	SP 4.6-30 Not applicable.	
	SP 4.6-31 Not applicable.	
	SP 4.6-32 Not applicable.	
	SP 4.6-33 Not applicable.	
	SP 4.6-34 Grading perimeters shall be clearly marked and inspected by the project biologist prior to impacts occurring within or adjacent to the High Country SMA.	
	SP 4.6-35 The project biologist shall work with the grading contractor to avoid inadvertent impacts to biological resources outside of the grading area.	
	SP 4.6-36 Not applicable.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-37 The High Country SMA shall be offered for dedication in three approximately equal phases of approximately 1,400 acres each proceeding from north to south, as follows: 1. The first offer of dedication will take place with the issuance of the 2,000th residential building permit of Newhall Ranch; 2. The second offer of dedication will take place with the issuance of the 6,000th residential building permit of Newhall Ranch; and 3. The remaining offer of dedication will be completed by the 11,000th residential building permit of Newhall Ranch. 4. The Specific Plan applicant shall provide a quarterly report to the Departments of Public Works and Regional Planning, which indicates the number of residential building permits issued in the Specific Plan area by subdivision map number. SP 4.6-38 Prior to dedication of the High Country SMA, a *conservation and public access easement* shall be offered to the County of Los Angeles and a conservation and management easement offered to the Center for Natural Lands Management. The High Country SMA *Conservation and Public Access Easement* shall be consistent in its provisions with any other *conservation easement*s to state or federal resource agencies, which may have been granted as part of mitigation or mitigation banking activities. SP 4.6-39 The High Country SMA conservation and public access easement shall prohibit grazing within the High Country, except for those grazing activities associated with the long-term resource management programs, and shall restrict recreation to the established trail system.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-40 The High Country SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.	
	SP 4.6-41 The High Country SMA shall be offered for dedication in fee to a *joint powers authority* consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). The *joint powers authority* will have overall responsibility for recreation within and conservation of the High Country.	
	SP 4.6-42 An appropriate type of service or assessment district shall be formed under the authority of the Los Angeles County Board of Supervisors for the collection of up to $24 per single family detached dwelling unit per year and $15 per single family attached dwelling unit per year, excluding any units designated as Low and Very Low affordable housing units pursuant to Section 3.10, Affordable Housing Program of the Specific Plan. This revenue would be assessed to the homeowner beginning with the occupancy of each dwelling unit and distributed to the *joint powers authority* for the purposes of recreation, maintenance, construction, conservation and related activities within the *High Country Special Management Area*.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-43 Suitable portions of *Open Area* may be used for mitigation of riparian, *oak resources*, or elderberry scrub. Mitigation activities within *Open Area* shall be subject to the following requirements, as applicable. • River Corridor SMA Mitigation Requirements, including: Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16; and • High Country SMA Mitigation Requirements, including: Mitigation Measures 4.6-27, 4.6-29 through 4.6-42, and • Mitigation Banking — Mitigation Measure 4.6-16. SP 4.6-44 Drainages with flows greater than 2,000 cfs will have soft bottoms. Bank protection will be of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other areas where public health and safety considerations require concrete or other stabilization. SP 4.6-45 The precise alignments and widths of major drainages will be established through the preparation of drainage studies to be approved by the County at the time of subdivision maps which permit construction. SP 4.6-46 While Open Area is generally intended to remain in a natural state, some grading may take place, especially for parks, major drainages, trails, and roadways. Trails are also planned to be within Open Area. SP 4.6-47 At the time that final subdivision maps permitting construction are recorded, the *Open Area* within the map will be offered for dedication to the Center for Natural Lands Management. Community Parks within *Open Area* are intended to be public parks. Prior to the offer of dedication of *Open Area* to the Center for Natural Lands Management, all necessary *conservation and public access easements*, as well as easements for infrastructure shall be offered to the County.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-47a Mitigation Banking will be permitted within the River Corridor SMA, the High Country SMA, and the *Open Area land use designations*, subject to the following requirements: • Mitigation banking activities for riparian habitats will be subject to state and federal regulations, and shall be conducted pursuant to the mitigation requirements set forth in Mitigation Measure 4.6-1 through 4.6-15 above. • Mitigation banking for oak resources shall be conducted pursuant to 4.6-48, below. • Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. SP 4.6-48 Standards for the restoration and enhancement of oak resources within the High Country SMA and the Open Area include the following (oak resources include oak trees of the sizes regulated under the County Oak Tree Ordinance, Southern California black walnut trees, and mainland cherry trees/shrubs): • To mitigate the impacts to oak resources that may be removed as development occurs in the Specific Plan Area, replacement trees shall be planted in conformance with the oak tree ordinance in effect at that time. • Oak resource species obtained from the local gene pool shall be used in restoration or enhancement. • Prior to recordation of construction-level final subdivision maps, an oak resource replacement plan shall be prepared that provides the guidelines for the oak tree planting and/or replanting. The Plan shall be reviewed by the Los Angeles Department of Regional Planning and the County Forester and shall include the following: site selection and preparation, selection of proper species including sizes and planting densities, protection from herbivores, site maintenance, performance standards, remedial actions, and a monitoring program.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-48 (continued) • All plans and specifications shall follow County oak tree guidelines, as specified in the County Oak Tree Ordinance. SP 4.6-49 To minimize the potential exposure of the development areas, Open Area, and the SMAs to fire hazards, the Specific Plan is subject to the requirements of the Los Angeles County Fire Protection District (LACFPD), which provides fire protection for the area. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a wildfire fuel modification plan shall be prepared in accordance with the fuel modification ordinance standards in effect at that time and shall be submitted for approval to the County Fire Department. SP 4.6-50 The wildfire fuel modification plan shall depict a fuel modification zone the size of which shall be consistent with the County fuel modification ordinance requirements. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the fuel modification ordinance. SP 4.6-51 In order to enhance the habitat value of plant communities that require fuel modification, fire retardant plant species containing habitat value may be planted within the fuel modification zone. Typical plant species suitable for Fuel Modification Zones are indicated in Specific Plan Table 2.6-5 of the Resource Management Plan. Fuel modification zones adjacent to SMAs and Open Areas containing habitat of high value such as oak woodland and savannas shall utilize a more restrictive plant list, which shall be reviewed by the County Forester.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-52 The wildfire fuel modification plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to the County Fire Department requirements. SP 4.6-53 If, at the time any subdivision map proposing construction is submitted, the County determines through an Initial Study, or otherwise, that there may be Rare, Threatened or Endangered, plant or animal species on the property to be subdivided, then, in addition to the prior surveys conducted on the Specific Plan site to define the presence or absence of sensitive habitat and associated species, current, updated site-specific surveys for all such animal or plant species shall be conducted in accordance with the consultation requirements set forth in Mitigation Measure 4.6-59 within those areas of the Specific Plan where such animal or plant species occur or are likely to occur. The site-specific surveys shall include the unarmored three-spine stickleback, the arroyo toad, the Southwestern pond turtle, the California red-legged frog, the southwestern willow flycatcher, the least Bell's vireo, the San Fernando Valley spineflower and any other Rare, Sensitive, Threatened, or Endangered plant or animal species occurring, or likely to occur, on the property to be subdivided. All site-specific surveys shall be conducted during appropriate seasons by qualified botanists or qualified wildlife biologists in a manner that will locate any Rare, Sensitive, Threatened, or Endangered animal or plant species that may be present. To the extent there are applicable protocols published by either the United States Fish and Wildlife Service or the California Department of Fish and Game, all such protocols shall be followed in preparing the updated site-specific surveys.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-53 (continued) All site-specific survey work shall be documented in a separate report containing at least the following information: (a) project description, including a detailed map of the project location and study area; (b) a description of the biological setting, including references to the nomenclature used and updated vegetation mapping; (c) detailed description of survey methodologies; (d) dates of field surveys and total person-hours spent on the field surveys; (e) results of field surveys, including detailed maps and location data; (f) an assessment of potential impacts; (g) discussion of the significance of the Rare, Threatened or Endangered animal or plant populations found in the project area, with consideration given to nearby populations and species distribution; (h) mitigation measures, including avoiding impacts altogether, minimizing or reducing impacts, rectifying or reducing impacts through habitat restoration, replacement or enhancement, or compensating for impacts by replacing or providing substitute resources or environments, consistent with CEQA (*State CEQA Guidelines* Section 15370); (i) references cited and persons contacted; and (j) other pertinent information, which is designed to disclose impacts and mitigate for such impacts."	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-54 Prior to development within or disturbance to occupied unarmored threespine stickleback habitat, a formal consultation with the USFWS shall occur. SP 4.6-55 Prior to development or disturbance within wetlands or other sensitive habitats, permits shall be obtained from pertinent federal and state agencies and the Specific Plan shall conform to the specific provisions of said permits. Performance criteria shall include that described in Mitigation Measures 4.6-1 through 4.6-16 and 4.6-42 through 4.6-47 for wetlands, and Mitigation Measures 4.6-27, 4.6-28, and 4.6-42 through 4.6-48 for other sensitive habitats. SP 4.6-56 All lighting along the perimeter of natural areas shall be downcast luminaries with light patterns directed away from natural areas. SP 4.6-57 Where bridge construction is proposed and water flow would be diverted, blocking nets and seines shall be used to control and remove fish from the area of activity. All fish captured during this operation would be stored in tubs and returned unharmed back to the river after construction activities were complete. SP 4.6-58 To limit impacts to water quality the Specific Plan shall conform with all provisions of required NPDES permits and water quality permits that would be required by the State of California Regional Water Quality Control Board.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-59 Consultation shall occur with the County of Los Angeles (County) and California Department of Fish and Game (CDFG) at each of the following milestones: 1. Before Surveys. Prior to conducting sensitive plant or animal surveys at the Newhall Ranch subdivision map level, the applicant, or its designee, shall consult with the County and CDFG for purposes of establishing and/or confirming the appropriate survey methodology to be used. 2. After Surveys. After completion of sensitive plant or animal surveys at the subdivision map level, draft survey results shall be made available to the County and CDFG within sixty (60) calendar days after completion of the field survey work. 3. Subdivision Map Submittal. Within thirty (30) calendar days after the applicant, or its designee, submits its application to the County for processing of a subdivision map in the Mesas Village or Riverwood Village, a copy of the submittal shall be provided to CDFG. In addition, the applicant, or its designee, shall schedule a consultation meeting with the County and CDFG for purposes of obtaining comments and input on the proposed subdivision map submittal. The consultation meeting shall take place at least thirty (30) days prior to the submittal of the proposed subdivision map to the County.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-59 (continued) 4. Development/Disturbance and Further Mitigation. Prior to any development within, or disturbance to, habitat occupied by Rare, Threatened, or Endangered plant or animal species, or to any portion of the Spineflower Mitigation Area Overlay, as defined below, all required permits shall be obtained from both USFWS and CDFG, as applicable. It is further anticipated that the Federal and State permits will impose conditions and mitigation measures required by federal and state law that are beyond those identified in the Newhall Ranch Final EIR (March 1999), the Newhall Ranch DAA (April 2001) and the Newhall Ranch Revised DAA (2002). It is also anticipated that conditions and mitigation measures required by federal and state law for project-related impacts on Endangered, Rare or Threatened species and their habitat will likely require changes and revisions to Specific Plan development footprints, roadway alignments, and the limits, patterns, and techniques associated with project-specific grading at the subdivision map level. SP 4.6-60 If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be elderberry scrub vegetation on the property being subdivided, then a site-specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied. SP 4.6-61 Not Applicable. SP 4.6-62 Not Applicable. SP 4.6-63 Riparian resources that are impacted by buildout of the Newhall Ranch Specific Plan shall be restored with similar habitat at the rate of 1 acre replaced for each acre lost.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-64 Not Applicable. SP 4.6-65 In order to facilitate the conservation of the spineflower on the Newhall Ranch Specific Plan site, the applicant, or its designee, shall, concurrent with Specific Plan approval, agree to the identified special study areas shown below in Figure 2.6-8, Spineflower Mitigation Area Overlay. The applicant, or its designee, further acknowledges that, within and around the Spineflower Mitigation Area Overlay (Figure 2.6-8), changes will likely occur to Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading at the subdivision map level. The applicant, or its designee, shall design subdivision maps that are responsive to the characteristics of the spineflower and all other Endangered plant species that may be found on the Specific Plan site. SP 4.6-66 Direct impacts to known spineflower populations within the Newhall Ranch Specific Plan area shall be avoided or minimized through the establishment of one or more on-site preserves that are configured to ensure the continued existence of the species in perpetuity. Preserve(s) shall be delineated in consultation with the County and CDFG, and will likely require changes and revisions to Specific Plan development footprints for lands within and around the Spineflower Mitigation Area Overlay (Figure 2.6-8). Delineation of the boundaries of Newhall Ranch spineflower preserve(s) for the entire Specific Plan area shall be completed in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesas Village, or that portion of Riverwood Village in which the San Martinez spineflower population occurs.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-66 (continued) A sufficient number of known spineflower populations shall be included within the Newhall Ranch spineflower preserve(s) in order to ensure the continued existence of the species in perpetuity. The conservation of known spineflower populations shall be established in consultation with the County and CDFG, and as consistent with standards governing issuance of an incidental take permit for spineflower pursuant to Fish and Game Code Section 2081, subdivision (b). In addition to conservation of known populations, spineflower shall be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s). The creation of introduced populations shall require seed collection and/or top soil at impacted spineflower locations and nursery propagation to increase seed and sowing of seed. The seed collection activities, and the maintenance of the bulk seed repository, shall be approved in advance by the County and CDFG. Once the boundaries of the Newhall Ranch spineflower preserve(s) are delineated, the project applicant, or its designee, shall be responsible for conducting a spineflower population census within the Newhall Ranch spineflower preserve(s) annually for 10 years. (These census surveys shall be in addition to the surveys required by Mitigation Measure 4.6-53, above.) The yearly spineflower population census documentation shall be submitted to the County and CDFG, and maintained by the project applicant, or its designee. If there are any persistent population declines documented in the annual population census reports, the project applicant, or its designee, shall be responsible for conducting an assessment	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-66 (continued) of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. In no event, however, shall project-related activities jeopardize the continued existence of the Newhall Ranch spineflower populations. If a persistent population decline is documented, such as a trend in steady population decline that persists for a period of 5 consecutive years, or a substantial drop in population is detected over a 10-year period, spineflower may be introduced in consultation with CDFG in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the bulk spineflower seed repository, together with other required management activity or activities. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County and CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, including monitoring, as approved by the County and CDFG. Annual viability reports shall be submitted to the County and CDFG for 10 years following delineation of the Newhall Ranch spineflower preserve(s) to ensure long-term documentation of the spineflower population status within the Newhall Ranch preserve(s). In the event annual status reports indicate the spineflower population within the Newhall Ranch preserve(s) is not stable and viable 10 years following delineation of the spineflower preserve(s), the project applicant, or its designee, shall continue to submit annual status reports to the County and CDFG for a period of no less than an additional five years.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-67 Indirect impacts associated with the interface between the preserved spineflower populations and planned development within the Newhall Ranch Specific Plan shall be avoided or minimized by establishing open space connections with Open Area, River Corridor, or High Country land use designations. In addition, buffers (i.e., setbacks from developed, landscaped, or other use areas) shall be established around portions of the delineated preserve(s) not connected to Open Area, the River Corridor or the High Country land use designations. The open space connections and buffer configurations shall take into account local hydrology, soils, existing and proposed adjacent land uses, the presence of non-native invasive plant species, and seed dispersal vectors. Open space connections shall be configured such that the spineflower preserves are connected to Open Area, River Corridor, or High Country land use designations to the extent practicable. Open space connections shall be of adequate size and configuration to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). Open space connections for the spineflower preserve(s) shall be configured in consultation with the County and CDFG. Open space connections for the spineflower preserve(s) shall be established for the entire Specific Plan area in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs. For preserves and/or those portions of preserves not connected to Open Area, River Corridor, or High Country land use designations, buffers shall be established at variable distances of between 80 and 200 feet from the edge of development to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants,	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-67 (continued) increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). The buffer size/configuration shall be guided by the analysis set forth in the "*Review of Potential Edge Effects on the San Fernando Valley Spineflower*," prepared by Conservation Biology Institute, January 19, 2000, and other sources of scientific information and analysis, which are available at the time the preserve(s) and buffers are established. Buffers for the spineflower preserve(s) shall be configured in consultation with the County and CDFG for the entire Specific Plan area. Buffers for the spineflower preserve(s) shall be established in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs. Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. No other development or disturbance of native habitat shall be allowed within the spineflower preserve(s) or buffer(s). The project applicant, or its designee, shall be responsible for revegetating open space connections and buffer areas of the Newhall Ranch spineflower preserve(s) to mitigate temporary impacts due to grading that will occur within portions of those open space connections and buffer areas. The impacted areas shall be reseeded with a native seed mix to prevent erosion, reduce the potential for invasive non-native plants, and maintain functioning habitat areas within the buffer area. Revegetation seed mix shall be reviewed and approved by the County and CDFG.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-68 To protect the preserved Newhall Ranch spineflower populations, and to further reduce potential direct impacts to such populations due to unrestricted access, the project applicant, or its designee, shall erect and maintain temporary orange fencing and prohibitive signage around the Newhall Ranch preserve(s), open space connections and buffer areas, which are adjacent to areas impacted by proposed development prior to and during all phases of construction. The areas behind the temporary fencing shall not be used for the storage of any equipment, materials, construction debris, or anything associated with construction activities. Following the final phase of construction of any Newhall Ranch subdivision map adjacent to the Newhall Ranch spineflower preserve(s), the project applicant, or its designee, shall install and maintain permanent fencing along the subdivision tract bordering the preserve(s). Permanent signage shall be installed on the fencing along the preservation boundary to indicate that the fenced area is a biological preserve, which contains protected species and habitat, that access is restricted, and that trespassing and fuel modification are prohibited within the area. The permanent fencing shall be designed to allow wildlife movement. The plans and specifications for the permanent fencing and signage shall be approved by the County and CDFG prior to the final phase of construction of any Newhall Ranch subdivision map adjacent to a Newhall Ranch spineflower preserve(s).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-69 Indirect impacts resulting from changes to hydrology (i.e., increased water runoff from surrounding development) at the interface between spineflower preserve(s) and planned development within the Newhall Ranch Specific Plan shall be avoided or mitigated to below a level of significance. Achievement of this standard will be met through the documented demonstration by the project applicant, or its designee, that the storm drain system achieves pre-development hydrological conditions for the Newhall Ranch spineflower preserve(s). To document such a condition, the project applicant, or its designee, shall prepare a study of the pre- and post-development hydrology, in conjunction with Newhall Ranch subdivision maps adjacent to spineflower preserve(s). The study shall be used in the design and engineering of a storm drain system that achieves pre-development hydrological conditions. The study must conclude that proposed grade changes in development areas beyond the buffers will maintain pre-development hydrology conditions within the preserve(s). The study shall be approved by the Planning Director of the County, and the resulting conditions confirmed by CDFG. The storm drain system for Newhall Ranch subdivision maps adjacent to any spineflower preserves must be approved by the County prior to the initiation of any grading activities.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-70 Consistent with the Spineflower Mitigation Area Overlay reflected in Mitigation Measure 4.6-65, direct impacts to known Newhall Ranch spineflower populations associated with proposed road construction or modifications to existing roadways shall be further assessed for proposed road construction at the Newhall Ranch subdivision map level, in conjunction with the tiered EIR required for each subdivision map. To avoid or substantially lessen direct impacts to known spineflower populations, Specific Plan roadways shall be redesigned or realigned, to the extent practicable, to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in Mitigation Measures 4.6-66 and 4.6-67. The project applicant, or its designee, acknowledges that that road redesign and realignment is a feasible means to avoid or substantially lessen potentially significant impacts on the now known Newhall Ranch spineflower populations. Road redesign or alignments to be considered at the subdivision map level include: (a) Commerce Center Drive; (b) Magic Mountain Parkway; (c) Chiquito Canyon Road; (d) Long Canyon Road; (e) San Martinez Grande Road; (f) Potrero Valley Road; (g) Valencia Boulevard; and (h) Any other or additional roadways that have the potential to significantly impact known Newhall Ranch spineflower populations.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-70 (continued) Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch, unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. SP 4.6-71 Consistent with the Spineflower Mitigation Area Overlay reflected in Mitigation Measure 4.6-65, direct impacts to known Newhall Ranch spineflower populations shall be further assessed at the Newhall Ranch subdivision map level, in conjunction with the required tiered EIR process. To avoid or substantially lessen impacts to known spineflower populations at the subdivision map level, the project applicant, or its designee, may be required to adjust Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in Mitigation Measures 4.6-66 and 4.6-67 for all future Newhall Ranch subdivision maps that encompass identified spineflower populations.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-72 A Fire Management Plan shall be developed to avoid and minimize direct and indirect impacts to the spineflower, in accordance with the adopted Newhall Ranch Resource Management Plan (RMP), to protect and manage the Newhall Ranch spineflower preserve(s) and buffers. The Fire Management Plan shall be completed by the project applicant, or its designee, in conjunction with approval of any Newhall Ranch subdivision map adjacent to a spineflower preserve. The final Fire Management Plan shall be approved by the County of Los Angeles Fire Department through the processing of subdivision maps. Under the final Fire Management Plan, limited fuel modification activities within the spineflower preserves will be restricted to selective thinning with hand tools to allow the maximum preservation of Newhall Ranch spineflower populations. No other fuel modification or clearance activities shall be allowed in the Newhall Ranch spineflower preserve(s). Controlled burning may be allowed in the future within the Newhall Ranch preserve(s) and buffers, provided that it is based upon a burn plan approved by the County of Los Angeles Fire Department and CDFG. The project applicant, or its designee, shall also be responsible for annual maintenance of fuel modification zones, including, but not limited to, removal of undesirable non-native plants, revegetation with acceptable locally indigenous plants and clearing of trash and other debris in accordance with the County of Los Angeles Fire Department.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-73 At the subdivision map level, the project applicant, or its designee, shall design and implement project-specific design measures to minimize changes in surface water flows to the Newhall Ranch spineflower preserve(s) for all Newhall Ranch subdivision maps adjacent to the preserve(s) and buffers, and avoid and minimize indirect impacts to the spineflower. Prior to issuance of a grading permit for each such subdivision map, the project applicant, or its designee, shall submit for approval to the County plans and specifications that ensure implementation of the following design measures: (a) During construction activities, drainage ditches, piping or other approaches will be put in place to convey excess storm water and other surface water flows away from the Newhall Ranch spineflower preserve(s) and connectivity/preserve design/buffers, identified in Mitigation Measures 4.6-66 and 4.6-67; (b) Final grading and drainage design will be developed that does not change the current surface and subsurface hydrological conditions within the preserve(s); (c) French drains will be installed along the edge of any roadways and fill slopes that drain toward the preserve(s); (d) Roadways will be constructed with slopes that convey water flows within the roadway easements and away from the preserve(s); (e) Where manufactured slopes drain toward the preserve(s), a temporary irrigation system would be installed to the satisfaction of the County in order to establish the vegetation on the slope area(s). This system shall continue only until the slope vegetation is established and self sustaining;	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-73 (continued) (f) Underground utilities will not be located within or through the preserve(s). Drainage pipes installed within the preserve(s) away from spineflower populations to convey surface or subsurface water away from the populations will be aligned to avoid the preserve(s) to the maximum extent practicable; and (g) Fencing or other structural type barriers that will be installed to reduce intrusion of people or domestic animals into the preserve(s) shall incorporate footing designs that minimize moisture collection. SP 4.6-74 A knowledgeable, experienced botanist/biologist, subject to approval by the County and CDFG, shall be required to monitor the grading and fence/utility installation activities that involve earth movement adjacent to the Newhall Ranch spineflower preserve(s) to avoid the incidental take through direct impacts of conserved plant species, and to avoid disturbance of the preserve(s). The biological monitor will conduct biweekly inspections of the project site during such grading activities to ensure that the mitigation measures provided in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section) are implemented and adhered to. Monthly monitoring reports, as needed, shall be submitted to the County verifying compliance with the mitigation measures specified in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section). The biological monitor will have authority to immediately stop any such grading activity that is not in compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section), and to take reasonable steps to avoid the take of, and minimize the disturbance to, spineflower populations within the preserve(s).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-75 The following measures shall be implemented to avoid and minimize indirect impacts to Newhall Ranch spineflower populations during all phases of project construction: (a) Water Control. Watering of the grading areas would be controlled to prevent discharge of construction water into the Newhall Ranch preserve(s) or on ground sloping toward the preserve(s). Prior to the initiation of grading operations, the project applicant, or its designee, shall submit for approval to the County an irrigation plan describing watering control procedures necessary to prevent discharge of construction water into the Newhall Ranch preserve(s) and on ground sloping toward the preserve(s). (b) Storm Water Flow Redirection. Diversion ditches would be constructed to redirect storm water flows from graded areas away from the Newhall Ranch preserve(s). To the extent practicable, grading of areas adjacent to the preserve(s) would be limited to spring and summer months (May through September) when the probability of rainfall is lower. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County a storm water flow redirection plan that demonstrates the flow of storm water away from the Newhall Ranch spineflower preserve(s). (c) Treatment of Exposed Graded Slopes. Graded slope areas would be trimmed and finished as grading proceeds. Slopes would be treated with soil stabilization measures to minimize erosion. Such measures may include seeding and planting, mulching, use of geotextiles and use of stabilization mats. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County the treatments to be applied to exposed graded slopes that would ensure minimization of erosion.	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)			
	SP 4.6-76	In conjunction with submission of the first Newhall Ranch subdivision map in either Mesas Village or that portion of Riverwood Village in which the San Martinez spineflower location occurs, the project applicant, or its designee, shall reassess project impacts, both direct and indirect, to the spineflower populations using subdivision mapping data, baseline data from the Newhall Ranch Final EIR and data from the updated plant surveys (see, Specific Plan EIR Mitigation Measure 4.6-53). This reassessment shall take place during preparation of the required tiered EIR for each subdivision map. If the reassessment results in the identification of new or additional impacts to Newhall Ranch spineflower populations, which were not previously known or identified, the mitigation measures set forth in this program, or a Fish and Game Code Section 2081 permit(s) issued by CDFG, shall be required, along with any additional mitigation required at that time.	
	SP 4.6-77	Direct and indirect impacts to the preserved Newhall Ranch spineflower populations shall require a monitoring and management plan, subject to the approval of the County. The applicant shall consult with CDFG with respect to preparation of the Newhall Ranch spineflower monitoring/management plan. This plan shall be in place when the preserve(s) and connectivity/preserve design/buffers are established (see Mitigation Measures 4.6-66 and 4.6-67). The criteria set forth below shall be included in the plan. Monitoring. The purpose of the monitoring component of the plan is to track the viability of the Newhall Ranch spineflower preserve(s) and its populations, and to ensure compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-77 (continued) The monitoring component of the plan shall investigate and monitor factors such as population size, growth or decline, general condition, new impacts, changes in associated vegetation species, pollinators, seed dispersal vectors, and seasonal responses. Necessary management measures will be identified. The report results will be sent annually to the County, along with photo documentation of the assessed site conditions. The project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, with the concurrence of CDFG, to conduct quantitative monitoring over the life of the Newhall Ranch Specific Plan. The botanist/biologist shall have a minimum of three years experience with established monitoring techniques and familiarity with Southern California flora and target taxa. Field surveys of the Newhall Ranch spineflower preserve(s) will be conducted each spring. Information to be obtained will include: (a) an estimate of the numbers of spineflowers in each population within the preserve(s); (b) a map of the extent of occupied habitat at each population; (c) establishment of photo monitoring points to aid in documenting long-term trends in habitat; (d) aerial photographs of the preserved areas at five-year intervals; (e) identification of significant impacts that may have occurred or problems that need attention, including invasive plant problems, weed problems and fencing or signage repair; and (f) overall compliance with the adopted mitigation measures.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-77 (continued) For a period of three years from Specific Plan re-approval, all areas of potential habitat on the Newhall Ranch site will be surveyed annually in the spring with the goal of identifying previously unrecorded spineflower populations. Because population size and distribution limits are known to vary depending on rainfall, annual surveys shall be conducted for those areas proposed for development in order to establish a database appropriate for analysis at the project-specific subdivision map level (rather than waiting to survey immediately prior to proceeding with the project-specific subdivision map process). In this way, survey results gathered over time (across years of varying rainfall) will provide information on ranges in population size and occupation. New populations, if they are found, will be mapped and assessed for inclusion in the preserve program to avoid impacts to the species. Monitoring/Reporting. An annual report will be submitted to the County and CDFG by December 31st of each year. The report will include a description of the monitoring methods, an analysis of the findings, effectiveness of the mitigation program, site photographs, and adoptive management measures, based on the findings. Any significant adverse impacts, signage, fencing or compliance problems identified during monitoring visits will be reported to the County and CDFG for corrective action by the project applicant, or its designee.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-77 (continued) Management. Based on the outcome of ongoing monitoring and additional project-specific surveys addressing the status and habitat requirements of the spineflower, active management of the Newhall Ranch spineflower preserve(s) will be required in perpetuity. Active management activities will be triggered by a downward population decline over 5 consecutive years, or a substantial drop in population over a 10-year period following County re-approval of the Specific Plan. Examples of management issues that may need to be addressed in the future include, but are not limited to, control of exotic competitive non-native plant species, herbivory predation, weed control, periodic controlled burns, or fuel modification compliance. After any population decline documented in the annual populations census following County re-approval of the Specific Plan, the project applicant, or its designee, shall be responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. If a persistent population decline is documented, such as a trend in steady population decline persistent for a period of 5 consecutive years, or a substantial drop in population detected over a 10-year period, spineflower may be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the bulk spineflower seed repository, together with other required management activity or activities. In connection with this monitoring component, the project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, to complete: (a) a study of the breeding and pollination biology of the spineflower, including investigation into seed physiology to assess parameters that may be important as	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-77 (continued) management tools to guarantee self-sustainability of populations, which may otherwise have limited opportunity for germination; and (b) a population genetics study to document the genetic diversity of the Newhall Ranch spineflower population. The criteria for these studies shall be to develop data to make the Newhall Ranch spineflower management program as effective as possible. These studies shall be subject to approval by the County's biologist, with the concurrence of CDFG. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County with the concurrence of CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, as approved by the County and CDFG. The length of the active management components set forth above shall be governed by attainment of successful management criteria set forth in the plan rather than by a set number of years. SP 4.6-78 To the extent project-related direct and indirect significant impacts on spineflower cannot be avoided or substantially lessened through establishment of the Newhall Ranch spineflower preserve(s), and other avoidance, minimization, or other compensatory mitigation measures, a translocation and reintroduction program may be implemented in consultation with CDFG to further mitigate such impacts. Direct impacts (i.e., take) to occupied spineflower areas shall be fully mitigated at a 4:1 ratio. Impacts to occupied spineflower areas caused by significant indirect effects shall be mitigated at a 1:1 ratio.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-78 (continued) Introduction of new spineflower areas will be achieved through a combination of direct seeding and translocation of the existing soil seed bank that would be impacted by grading. Prior to any development within, or disturbance to, spineflower populations, on-site and off-site mitigation areas shall be identified and seed and top soil shall be collected. One-third of the collected seed shall be sent to the Rancho Santa Ana Botanical Garden for storage. One third of the seed shall be sent to the USDA National Seed Storage Lab in Fort Collins, Colorado for storage. One third shall be used for direct seeding of the on-site and off-site mitigation areas. **Direct seeding.** Prior to the initiation of grading, the project applicant, or its designee, shall submit to the County a program for the reintroduction of spineflower on Newhall Ranch. The reintroduction program shall include, among other information: (a) location map with scale; (b) size of each introduction polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for seed collection and application; and (f) monitoring and reporting. The program shall be submitted to CDFG for input and coordination. The project applicant, or its designee, shall implement the reintroduction program prior to the initiation of grading. At least two candidate spineflower reintroduction areas will be created within Newhall Ranch and one candidate spineflower reintroduction area will be identified off site. Both on-site and off-site reintroduction areas will be suitable for the spineflower in both plant community and soils, and be located within the historic range of the taxon. Success criteria shall be included in the monitoring/management plan, with criteria for the germination, growth, and production of viable seeds of individual plants for a specified period.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-78 (continued) Although the reintroduction program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the reintroduction program. **Translocation.** Prior to the initiation of grading, the project applicant, or its designee, shall submit to the County a translocation program for the spineflower. Translocation would salvage the topsoil of spineflower areas to be impacted due to grading. Salvaged spineflower soil seed bank would be translocated to the candidate spineflower reintroduction areas. The translocation program shall include, among other information: (a) location map with scale; (b) size of each translocation polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for topsoil collection and application; and (f) monitoring and reporting. The translocation program shall be submitted to CDFG for input and coordination. Translocation shall occur within the candidate spineflower reintroduction areas on site and off site. Successful criteria for each site shall be included in the monitoring/management plan/with criteria for the germination and growth to reproduction of individual plants for the first year a specified period. Although the translocation program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the translocation program.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	SP 4.6-79 Not applicable. SP 4.6-80 Not applicable. MV 4.3-1 Temporary impacts from construction activities in the riverbed shall be restricted to the following areas of disturbance: (1) an 85-foot-wide zone that extends into the river from the base of the riprap or gunite bank protection where it intercepts the river bottom; (2) 100 feet on either side of the outer edge of a new bridge or bridge to be modified; (3) a 60-foot-wide corridor for utility lines; (4) 20-foot-wide temporary access ramps; and (5) 60-foot roadway width temporary construction haul routes. The locations of these temporary construction sites and the routes of all access roads shall be shown on maps submitted with the sub-notification letter submitted to the Corps and CDFG for individual project approval. Any variation from these limits shall be submitted, with a justification for a variation for Corps and CDFG approval. The construction plans should indicate what type of vegetation, if any, would be temporarily disturbed or removed and the post-construction activities to facilitate revegetation of the temporarily impacted areas. The boundaries of the construction site and any temporary access roads within the riverbed shall be marked in the field with stakes and flagging. No construction activities, vehicular access, equipment storage, stockpiling, or significant human intrusion shall occur outside the work area and access roads.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-2 Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities that result in any disturbance to the banks or wetted channel, aquatic habitats within construction sites and access roads, as well as all aquatic habitats within 300 feet of construction sites and access roads, shall be surveyed by a qualified biologist for the presence of the unarmored threespine stickleback, arroyo chub, and Santa Ana sucker. The Corps and CDFG shall be notified at least 14 days prior to the survey and shall have the option of attending. The biologist shall file a written report of the survey with both agencies within 14 days of the survey and no later than 10 days prior to any construction work in the riverbed. If there is evidence that fish spawn has occurred in the survey area, then surveys shall cease unless otherwise authorized by USFWS. If surveys determine that gravid fish are present, that spawning has recently occurred, or that juvenile fish are present in the proposed construction areas, all activities within aquatic habitat will be suspended. Construction within aquatic habitats shall only occur when it is determined that juvenile fish are not present within the project area.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-3 Conduct focused surveys for California red-legged frogs. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed at the appropriate season for California red-legged frogs. The applicant shall contract with a qualified biologist to conduct focused surveys for California red-legged frogs. If detected in or adjacent to the project area, no work will be authorized within 500 feet of occupied habitat until the applicant provides concurrence from the USFWS to CDFG and Corps. If present, the applicant shall implement measures required by the USFWS Biological Opinion for California red-legged frog that either supplement or supercede these measures. If present, the applicant shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG. (1) The applicant shall retain a qualified biologist with demonstrated expertise with California red-legged frogs to monitor all construction activities in potential red-legged frog habitat and assist the applicant in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of California red-legged frogs.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-3 (continued) (2) Prior to the onset of construction activities, the applicant shall provide all personnel who will be present on work areas within or adjacent to the project area the following information: a. A detailed description of the California red-legged frogs, including color photographs; b. The protection the California red-legged frog receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act; c. The protective measures being implemented to conserve the California red-legged frogs and other species during construction activities associated with the proposed project; and d. A point of contact if California red-legged frogs are observed. (3) All trash that may attract predators of the California red-legged frogs will be removed from work sites or completely secured at the end of each work day. (4) Prior to the onset of any construction activities, the applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the California red-legged frogs and the actions taken to reduce impacts to this species. Because California red-legged frogs may occur in various locations during different seasons of the year, the applicant, USFWS, and authorized biologist will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on California red-legged frogs. The goal of this effort is to reduce the level of mortality of California red-legged frogs during construction.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-3 (continued) (5) Work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG. All workers will be advised that equipment and vehicles must remain within the fenced work areas. (6) The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any California red-legged frogs from within the fenced area to suitable habitat outside of the fence. If California red-legged frogs are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS/CDFG. (7) Fencing to exclude California red-legged frogs will be at least 24 inches in height. (8) The type of fencing must be approved by the authorized biologist and the USFWS/CDFG. (9) Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of California red-legged frogs may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the applicant in scheduling its work activities accordingly. (10) If California red-legged frogs are found within an area that has been fenced to exclude California red-legged frogs, activities will cease until the authorized biologist moves the California red-legged frog(s).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-3 (continued) (11) If California red-legged frogs are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the California red-legged frogs. The authorized biologist in consultation with USFWS/CDFG will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS. (12) Any California red-legged frogs found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, access to deep perennial pools, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area. (13) The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed. (14) Staging areas for all construction activities will be located on previously disturbed upland areas, if possible, designated for this purpose. All staging areas will be fenced. (15) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-4 Focused surveys for arroyo toad shall be conducted. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed at the appropriate season for arroyo toad. The applicant shall contract with a qualified biologist to conduct focused surveys for arroyo toad. If detected in or adjacent to the project area, no work will be authorized within 500 feet of occupied habitat until the applicant provides concurrence from the USFWS to CDFG and the Corps. The applicant shall implement measures required by the USFWS Biological Opinion that either supplement or supercede these measures. If arroyo toads are determined to be present, the applicant shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG: (1) The applicant shall retain a qualified biologist with demonstrated expertise with arroyo toads to monitor all construction activities in potential arroyo toad habitat and assist the applicant in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of arroyo toad.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-4 (continued) (2) Prior to the onset of construction activities, the applicant shall provide all personnel who will be present on work areas within or adjacent to the project area the following information: a. A detailed description of the arroyo toad, including color photographs; b. The protection the arroyo toad receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act; c. The protective measures being implemented to conserve the arroyo toad and other species during construction activities associated with the proposed project; and d. A point of contact if arroyo toads are observed. (3) All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each work day. (4) Prior to the onset of any construction activities, the applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, the applicant, USFWS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads. The goal of this effort is to reduce the level of mortality of arroyo toads during construction. The parties realize that, if arroyo	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-4 (continued) (4) (con'td) toads are present, complete prevention of all mortality is likely not possible because some arroyo toads may occur anywhere within suitable habitat during any given season; the detection of every individual over large areas is impossible because of the small size, fossorial habits, and cryptic coloration of the arroyo toad. (5) Where construction can occur in habitat where arroyo toads are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG. All workers will be advised that equipment and vehicles must remain within the fenced work areas. (6) The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any arroyo toads from within the fenced area to suitable habitat outside of the fence. If arroyo toads are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS/CDFG. (7) Fencing to exclude arroyo toads will be at least 24 inches in height. (8) The type of fencing must be approved by the authorized biologist and the USFWS/CDFG.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-4 (continued) (9) Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of arroyo toads may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the applicant in scheduling its work activities accordingly. (10) If arroyo toads are found within an area that has been fenced to exclude arroyo toads, activities will cease until the authorized biologist moves the arroyo toads. (11) If arroyo toads are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the arroyo toads. The authorized biologist in consultation with USFWS/CDFG will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS. (12) Any arroyo toads found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area. (13) The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-4 (continued) (14) Staging areas for all construction activities will be located on previously disturbed upland areas designated for this purpose. All staging areas will be fenced within potential toad habitat. (15) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times. (16) Drift fence/pitfall trap surveys will be implemented in toad sensitive areas prior to construction in an effort to reduce potential mortality to this species. Prior to any construction activities in the project area, silt fence shall be installed completely around the proposed work area and a qualified biologist should conduct a preconstruction/clearance survey of the work area for arroyo toads. Any toads found in the work area should be relocated to suitable habitat. The silt fence shall be maintained for the duration of the work activity. (17) The applicant shall restrict work to daylight hours, except during an emergency, in order to avoid nighttime activities when arroyo toads may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-5 Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 500 feet of construction sites and access roads shall be surveyed at the appropriate season for southwestern pond turtle. Focused surveys shall consist of a minimum of four daytime surveys, to be completed between April 1 and June 1. The survey schedule may be adjusted in consultation with CDFG to reflect the existing weather or stream conditions. The applicant shall develop a Plan to address the relocation of southwestern pond turtle. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for this species; identify the locations where more intensive efforts should be conducted; identify the habitat and conditions in the proposed relocation site(s); the methods that would be utilized for trapping and relocating individuals; and provide for the documentation/recordation of the numbers of animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground-disturbing activities within potentially occupied habitat. If southwestern pond turtles are detected in or adjacent to the project, nesting surveys shall be conducted.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-5 (continued) Focused surveys for evidence of southwestern pond turtle nesting shall be conducted in, or adjacent to, the project when suitable nesting habitat exists within 1,300 feet of occupied habitat in an area where project-related ground disturbance will occur (*e.g.*, development, ground disturbance). If both of those conditions are met, a qualified biologist shall conduct focused, systematic surveys for southwestern pond turtle nesting sites. The survey area shall include all suitable nesting habitat within 1,300 feet of occupied habitat in which project-related ground disturbance will occur. This area may be adjusted based on the existing topographical features on a case-by-case basis with the approval of CDFG. Surveys will entail searching for evidence of pond turtle nesting, including remnant eggshell fragments, which may be found on the ground following nest depredation. If a southwestern pond turtle nesting area would be adversely impacted by construction activities, the applicant shall avoid the nesting area. If avoidance of the nesting area is determined to be infeasible, the authorized biologist shall coordinate with CDFG to identify if it is possible to relocate the pond turtles. Eggs or hatchlings shall not be moved without written authorization from CDFG. The qualified biologist shall be present during all activities immediately adjacent to or within habitat that supports populations of southwestern pond turtle. Clearance surveys for pond turtles shall be conducted within 500 feet of potential habitat by the authorized biologist prior to the initiation of construction each day. The resume of the proposed biologist will be provided to CDFG for approval prior to conducting the surveys.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-6 Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 300 feet of construction sites and access roads shall be surveyed at the appropriate season for two-striped garter snake and south coast garter snake. Focused surveys shall consist of a minimum of four daytime surveys, to be completed between April 1 and September 1. The survey schedule may be adjusted in consultation with CDFG to reflect the existing weather or stream conditions. If located, the species will be relocated to suitable pre-approved locations identified in the two-striped garter snake and/or south coast garter snake Relocation Plan. The applicant shall develop a Plan to address the relocation of two-striped garter snake and south coast garter snake. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for each species, identify the locations where more intensive efforts should be conducted, identify the habitat and conditions in the proposed relocation site(s), identify the methods that would be utilized for trapping and relocating the individual species, and provide for the documentation/recordation of the species and number of animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground-disturbing activities, within potentially occupied habitat. The qualified biologist shall be present during all activities immediately adjacent to or within habitat that supports populations of two-striped garter snake and/or south coast garter snake. Clearance surveys for garter snakes shall be conducted within 200 feet of potential habitat by the authorized biologist prior to the initiation of construction each day. The resume of the proposed biologists will be provided to CDFG for approval prior to conducting the surveys.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-7 Prior to construction the applicant shall develop a relocation plan for coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch-nosed snake. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for each species; identify the locations where more intensive efforts should be conducted; identify the habitat and conditions in the proposed relocation site(s); the methods that would be utilized for trapping and relocating the individual species; and provide for the documentation/recordation of the species and number of the animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground disturbing activities within potentially occupied habitat. The Plan shall include the specific survey and relocation efforts that would occur for construction activities that occur both during the activity period of the special status species (generally March to November) and for periods when the species may be present in the work area but difficult to detect due to weather conditions (generally December through February). Thirty days prior to construction activities in coastal scrub, chaparral, oak woodland, riparian habitats, or other areas supporting these species qualified biologists shall conduct surveys to capture and relocate individual coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch-nosed snake in order to avoid or minimize take of these special-status species. The plan shall require a minimum of three (3) surveys conducted during the time of year/day when each species is most likely to be observed. Individuals shall be relocated to nearby undisturbed areas with suitable habitat. If construction is scheduled to occur during the low activity period (generally December through February) the surveys shall be conducted prior to this period if possible and	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-7 (continued) exclusion fencing shall be placed to limit the potential for re-colonization of the site prior to construction. The qualified biologist will be present during ground-disturbing activities immediately adjacent to or within habitat that supports populations of these species. Clearance surveys for special-status reptiles shall be conducted by a qualified biologist prior to the initiation of construction each day. Results of the surveys and relocation efforts shall be provided to CDFG in the annual mitigation status report. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits. MV 4.3-8 During any stream diversion or culvert installation activity, a qualified biologist(s) shall be present and shall patrol the areas within, upstream, and downstream of the work area. The biologists shall inspect the diversion and inspect for stranded fish or other aquatic organisms. Under no circumstances shall the unarmored threespine stickleback be collected or relocated, unless USFWS personnel or their agents implement this measure. Any event involving stranded fish shall be recorded and reported to CDFG and USFWS within 24 hours. MV 4.3-9 Temporary bridges, culvert crossings, or other feasible methods of providing access across the river shall be constructed outside of the winter season and not during periods when spawning is occurring. Prior to the construction of any temporary or permanent crossing of the Santa Clara River, the applicant shall develop a Stream Crossing and Diversion Plan. The plan shall include the following elements: the timing and methods for pre-construction aquatic species surveys; a detailed description of the diversion methods (e.g., berms shall be constructed of on-site alluvium materials of low silt content, inflatable dams, sand bags, or other approved	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-9 (continued) materials); special-status species relocation; fish exclusion techniques, including the use of block netting and fish relocation; methods to maintain fish passage during construction; channel habitat enhancement, including the placement of vegetation, rocks, and boulders to produce riffle habitat; fish stranding surveys; and the techniques for the removal of crossings prior to winter storm flows. The Plan shall be submitted to the USFWS and CDFG for approval at least 30 days prior to implementation. If adult special-status fishes are present and spawning has not occurred, they shall be relocated prior to the diversion or crossing. Block nets of 0.125-inch woven mesh will be set upstream and downstream. On days with possible high temperature or low humidity (temperatures in excess of 80° F), work will be done in the early morning hours, as soon as sufficient light is available, to avoid exposing fishes to high temperatures and/or low humidity. If high temperatures are present, the fishes will be herded to downstream areas past the block net. Once the fishes have been excluded by herding, a USFWS staff member or his or her agents shall inspect the site for remaining or stranded fish. A USFWS staff member or his or her agents shall relocate the fish to suitable habitat outside the project area (including those areas potentially subject to high turbidity). During the diversion/relocation of fishes, the USFWS or his or her agents shall be present at all times. MV 4.3-10 Installation of bridges, culverts, or other structures shall not impair the movement of fish and aquatic life. Bottoms of temporary culverts shall be placed at or below channel grade. Bottoms of permanent culverts shall be placed below channel grade. Culvert crossings shall include provisions for a low flow channel where velocities are less than 2 feet per second to allow fish passage.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-11 **a. Stream diversion bypass channels:** Stream diversion bypass channels will be constructed when the active wetted channel is within the work zone. Diversion bypass channels will be built in accordance with **MV 4.3-9** and in consultation with CDFG/USFWS. Equipment shall not be operated in areas of ponded or flowing water unless authorized by CDFG/USFWS. The diversion channel shall be of a width and depth comparable to the natural river channel. In all cases where flowing water is diverted from a segment of the stream channel, the bypass channel will be constructed prior to the diversion of the active stream. The bypass channel will be constructed prior to diverting the stream, beginning in the downstream area and continuing in an upstream direction. Where feasible and in consultation with CDFG/USFWS, the configuration of the diversion channel will be curved (sinuous) with multiple sets of obstructions (*i.e.*, boulders, large logs, or other CDFG/USFWS-approved materials) placed in the channel at the point of each curve (*i.e.*, on alternating sides of the channel). If emergent aquatic vegetation is present in the original channel, the applicant will transplant suitable vegetation into the diversion channel and on the banks prior to or at the time of the water diversion. A qualified restoration ecologist will supervise the construction of the diversion channels on site. The integrity of the channel and diversion shall be maintained throughout the intended diversion period. Channel bank or barrier construction shall be adequate to prevent seepage into or from the work area. Construction of diversion channels shall not occur if surveys determine that gravid fish are present, spawning has recently occurred, or juvenile fish are present in the proposed construction areas.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-11 (continued) At the conclusion of the diversion, either at the commencement of the winter season, or the completion of construction, the applicant will coordinate with CDFG/USFWS to determine if the diversion should be left in place or the stream returned to the original channel. If CDFG/USFWS determine the stream should be diverted to the original channel, the original channel will be modified prior to re-diversion (*i.e.*, while dry) to construct curves (sinuosity) into that channel, including the placement of obstructions (*i.e.*, boulders, large logs, or other CDFG/USFWS-approved materials). The original channel will be replanted with emergent vegetation as the diversion channel was planted. If the diversion channel is abandoned, the boulders will remain in place. **b. Dewatering:** Construction dewatering in close proximity to stream flow shall implement the following: Assess local stream and groundwater conditions, including flow depths, groundwater elevations, and anticipated dewatering cone of influence (radius of draw down). Assess surface water elevations upstream, adjacent to, and downstream of the extraction points, to assess any critical flow regimes susceptible to excessive draw down and therefore fish stranding issues. Assess surface water elevations downstream of the discharge locations (if discharge is proposed to the flowing stream) to assess any flow regimes and overbank areas that may be susceptible to flooding and therefore fish stranding at the cessation of discharge. Discharge locations shall also be assessed for potential channel bed erosion from dewatering discharge, and appropriate BMPs must be implemented to prevent excessive erosion or turbidity in the discharge.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-11 (continued) The information above shall be summarized and provided in a plan approved by CDFG and Corps. Fish shall be excluded from any artificial flowing channels from dewatering discharge. Methods to ensure separation may include, but are not limited to: block netting at the confluence; creation of a physical drop greater than 4 inches at the confluence; or maintaining a velocity range unsuitable for fish passage, such as a berm at the confluence with small diameter pipes for discharge. MV 4.3-12 Slow-moving water habitats shall be constructed upstream and downstream of any river crossing or bridge construction area to provide refuge for special-status fishes during construction. Where feasible and in consultation with CDFG and USFWS, the applicant shall enhance slow-moving water habitats for each linear foot disturbed by hand-excavating shallow side channels and placing multiple sets of obstructions (*e.g.*, boulders, large logs, or other CDFG- and USFWS-approved materials) in the channel. MV 4.3-13 Water containing mud, silt, or other pollutants from construction activities shall not be allowed to enter a flowing stream or be placed in locations that may be subject to normal storm flows during periods when storm flows can reasonably be expected to occur.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-14 Thirty days prior to construction activities, a qualified biologist shall conduct a pre-construction survey for mountain lion natal dens. The survey area shall include the construction footprint and the area within 2,000 feet of the project disturbance boundaries. Should an active natal den be located, the applicant shall cease work within 2,000 feet and inform CDFG within 24 hours. No construction activities shall occur in the 2,000-foot buffer until a qualified biologist in consultation with CDFG establishes an appropriate setback from the den that would not adversely affect the successful rearing of the cubs. No construction activities or human intrusion shall occur within the established setback until the cubs have been successfully reared or the cats have left the area.	
	MV 4.3-15 Within 30 days of ground-disturbing activities associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically March through August in the project region, or as determined by a qualified biologist), the applicant shall have weekly surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone. Pre-construction surveys shall include nighttime surveys to identify active rookery sites. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 7 days prior to initiation of disturbance work. If ground-disturbing activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than 7 days will have elapsed between the survey and ground-disturbing activities.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-15 (continued) If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist in consultation with CDFG, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. In the event that golden eagles establish an active nest in the River Corridor SMA/SEA 23, the buffers will be established in consultation with CDFG. Potential golden eagle nesting will be reported to CDFG within 24 hours. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts to these nests occur. Results of the surveys shall be provided to CDFG in the annual mitigation status report. For listed riparian songbirds (least Bell's vireo, southwestern willow flycatcher, yellow-billed cuckoo) USFWS protocol surveys shall be conducted. If active nests are found, clearing and construction within 300 feet of the nest shall be postponed or halted, at the discretion of the biologist in consultation with CDFG and USFWS, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. If no active nests are observed, construction may proceed. If active nests are found, work may proceed provided that construction activity is located at least 300 feet from active nests (or as authorized through the context of the Biological Opinion and 2081b Incidental Take Permit). This buffer may be adjusted provided noise levels do not exceed 60 dB(A) hourly L_{eq} at the edge of the nest site as determined by a qualified biologist in coordination with a qualified acoustician.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-15 (continued) If the noise meets or exceeds the 60 dB(A) L_{eq} threshold, or if the biologist determines that the construction activities are disturbing nesting activities, the biologist shall have the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) L_{eq} hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. The qualified biologist shall be responsible for documenting the results of the surveys and the ongoing monitoring and for reporting these results to CDFG and USFWS. For coastal California gnatcatcher, the applicant shall conduct USFWS protocol surveys in suitable habitat within the project area and all areas within 500 feet of access or construction-related disturbance areas. Suitable habitats, according to the protocol, include "coastal sage scrub, alluvial fan, chaparral, or intermixed or adjacent areas of grassland and riparian habitats." A permitted biologist shall perform these surveys according to the USFWS' (1997a) Coastal California Gnatcatcher Presence/Absence Survey Guidelines. If a territory or nest is confirmed, the USFWS and CDFG shall be notified immediately. If present, a 500-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. No project activities may occur in these areas unless otherwise	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-15 (continued) authorized by USFWS and CDFG. Construction activities in suitable gnatcatcher habitat will be monitored by a full-time qualified biologist. The monitoring shall be of a sufficient intensity to ensure that the biologist could detect the presence of a bird in the construction area. MV 4.3-16 Thirty days prior to construction activities in grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for San Diego black-tailed jackrabbit and San Diego desert woodrat. If San Diego black-tailed jackrabbits are present, non-breeding rabbits shall be flushed from areas to be disturbed. Dens, depressions, nests, or burrows occupied by pups shall be flagged and ground-disturbing activities avoided within a minimum of 200 feet during the pup-rearing season (February 15 through July 1). This buffer may be reduced based on the location of the den upon consultation with CDFG. Occupied maternity dens, depressions, nests, or burrows shall be flagged for avoidance, and a biological monitor shall be present during construction. If unattended young are discovered, they shall be relocated to suitable habitat by a qualified biologist. The applicant shall document all San Diego black-tailed jackrabbit identified, avoided, or moved and provide a written report to CDFG within 72 hours. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-16 (continued) If active San Diego desert woodrat nests (stick houses) are identified within the disturbance zone or within 100 feet of the disturbance zone, a fence shall be erected around the nest site adequate to provide the woodrat sufficient foraging habitat at the discretion of the qualified biologist in consultation with CDFG. Clearing and construction within the fenced area will be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. If avoidance is not possible, the applicant will take the following sequential steps: (1) all understory vegetation will be cleared in the area immediately surrounding active nests followed by a period of one night without further disturbance to allow woodrats to vacate the nest, (2) each occupied nest will then be disturbed by a qualified wildlife biologist until all woodrats leave the nest and seek refuge off site, and (3) the nest sticks shall be removed from the project site and piled at the base of a nearby hardwood tree (preferably a coast live oak or California walnut). Relocated nests shall not be spaced closer than 100 feet apart, unless a qualified wildlife biologist has determined that a specific habitat can support a higher density of nests. The applicant shall document all woodrat nests moved and provide a written report to CDFG. All woodrat relocation shall be conducted by a qualified biologist in possession of a scientific collecting permit.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-17 Thirty days prior to construction activities in grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for American badger. If American badgers are present, occupied habitat shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during the pup-rearing season (February 15 through July 1) and a minimum 200 foot buffer established. This buffer may be reduced based on the location of the den upon consultation with CDFG. Maternity dens shall be flagged for avoidance, identified on construction maps, and a qualified biologist shall be present during construction. If avoidance of a non-maternity den is not feasible, badgers shall be relocated either by trapping or by slowly excavating the burrow (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more that 4 inches at a time) before or after the rearing season (February 15 through July 1). Any relocation of badgers shall occur only after consultation with CDFG. A written report documenting the badger removal shall be provided to CDFG within 30 days of relocation. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-18 No earlier than 30 days prior to the commencement of construction activities, a pre-construction survey shall be conducted by a qualified biologist to determine if active roosts of special-status bats are present on or within 300 feet of the project disturbance boundaries. Should an active maternity roost be identified (in California, the breeding season of native bat species is generally from April 1 through August 31), the roost shall not be disturbed and construction within 300 feet shall be postponed or halted, until the roost is vacated and juveniles have fledged. Surveys shall include rocky outcrops, caves, structures, and large trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities). Trees and rocky outcrops shall be surveyed by a qualified bat biologist (i.e., a biologist holding a CDFG collection permit and a Memorandum of Understanding with CDFG allowing the biologist to handle bats). If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed) by the project. If avoidance of the maternity roost must occur, the bat biologist shall survey (through the use of radio telemetry or other CDFG approved methods) for nearby alternative maternity colony sites. If the bat biologist determines in consultation with and with the approval of CDFG that there are alternative roost sites used by the maternity colony and young are not present then no further action is required. If a maternity roost will be impacted by the project, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the project site no less than three months prior to the eviction of the colony. Large concrete walls (e.g., on bridges) on south or southwestern slopes that are retrofitted with slots and cavities are an example of structures that may provide alternative potential roosting	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-18 (continued) habitat appropriate for maternity colonies. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. CDFG shall also be notified of any hibernacula or active nurseries within the construction zone. If non-breeding bat hibernacula are found in trees scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted, under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). In situations requiring one-way doors, a minimum of one week shall pass after doors are installed and temperatures should be sufficiently warm for bats to exit the roost because bats do not typically leave their roost daily during winter months in southern coastal California. This action should allow all bats to leave during the course of one week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in the judgment of the qualified bat biologist in consultation with CDFG shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (*i.e.,* there shall be no less or more than one night between initial disturbance and the grading or tree removal). These actions should allow bats to leave during nighttime hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. If an active maternity roost is located on the project site, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (*i.e.*, prior to March 1) or after young are flying (i.e., after July 31) using the exclusion techniques described above.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-19 Any common or special-status species bat day roost sites found by a qualified biologist during pre-construction surveys conducted per **MV 4.3-18**, to be directly (within project disturbance footprint) or indirectly (within 300 feet of project disturbance footprint) impacted are to be mitigated with creation of artificial roost sites. The project applicant shall establish (an) alternative roost site(s) within suitable preserved open space located at an adequate distance from sources of human disturbance.	
	MV 4.3-20 Thirty days prior to construction activities, a qualified biologist shall conduct CDFG protocol surveys to determine whether the burrowing owl is present at the site. The surveys shall consist of three site visits and shall be conducted in areas dominated by field crops, disturbed habitat, grasslands, and along levee locations, or if such habitats occur within 500 feet of a construction zone. If located, occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. If the burrowing owl is detected but nesting is not occurring, construction work can proceed after any owls have been evacuated from the site using CDFG-approved burrow closure procedures and after alternative nest sites have been provided in accordance with the CDFG Staff Report on Burrowing Owl Mitigation (10-17-95).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-20 (continued) Unless otherwise authorized by CDFG, a 500-foot buffer, within which no activity will be permissible, will be maintained between project activities and nesting burrowing owls during the nesting season. This protected area will remain in effect until August 31 or at CDFG's discretion and based upon monitoring evidence, until the young owls are foraging independently. Results of the surveys and relocation efforts shall be provided to CDFG in the annual mitigation status report. MV 4.3-21 Waste and recycling receptacles that discourage foraging by wildlife species adapted to urban environments shall be installed in common areas and parks throughout the Mission Village site. MV 4.3-22 All oaks that will not be removed that are regulated under CLAOTO with driplines within 50 feet of land clearing (including brush clearing) or areas to be graded shall be enclosed in a temporary fenced zone for the duration of the clearing or grading activities. Fencing shall extend to the root protection zone (i.e., the area at least 15 feet from the trunk or 5 feet beyond the drip line, whichever distance is greater). No parking or storage of equipment, solvents, or chemicals that could adversely affect the trees shall be allowed within 25 feet of the trunk at any time. Removal of the fence shall occur only after the project arborist or qualified biologist confirms the health of preserved trees.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-23 Mitigation Measures **SP 4.6-1** through **SP 4.6-16** specify requirements for riparian mitigation conducted in the High Country SMA/SEA 20, Salt Creek area, and Open Area. The applicant will prepare and implement a plan for mitigation of both riparian and upland habitats (such as riparian adjacent big sagebrush scrub), and incorporates these Mitigation Measures (**SP 4.6-1** through **SP 4.6-16**). A Comprehensive Mitigation Implementation Plan (CMIP) has been developed by Applicant that provides an outline of mitigation to offset impacts. The CMIP demonstrates the feasibility of creating the required mitigation acreage to offset project impacts (see **MV 4.3-31**). However, the CMIP does not identify mitigation actions specifically for impacts to waters of the United States. But since these waters are a subset of CDFG jurisdiction, the applicable Corps mitigation requirements would be met or exceeded.[6] Detailed riparian/wetland mitigation plans, in accordance with the CMIP, shall be submitted to, and are subject to the approval of, the Corps and CDFG as part of the sub-notification letters for individual projects. Individual project submittals shall include applicable CMIP elements, complying with the requirements outlined below. The detailed wetlands mitigation plan shall specify, at a minimum, the following: (1) the location of mitigation sites; (2) site preparation, including grading, soils preparation, irrigation installation, (2a) the quantity (seed or nursery stock) and species of plants to be planted (all species to be native to region); (3) detailed procedures for creating additional vegetation communities;	

6 For detailed information concerning the Corps compensatory mitigation program for impacts to waters of the United States, please reference Appendix 11.0 of the Section 404(b)1 Alternatives Analysis, included in Appendix F1.0 of the Final EIS/EIR.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-23 (continued) (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the enhancement/restoration area; (6) a list of criteria by which to measure success of the mitigation sites (*e.g.*, percent cover and richness of native species, percent survivorship, establishment of self-sustaining native plantings, maximum allowable percent of non-native species); (7) measures to exclude unauthorized entry into the creation/enhancement areas; and (8) contingency measures in the event that mitigation efforts are not successful. The detailed wetlands mitigation plans shall also classify the biological value (as "high," "moderate," or "low") of the vegetation communities to be disturbed as defined in these conditions, or may be based on an agency-approved method (e.g., Hybrid Assessment of Riparian Communities [HARC]). The biological value shall be used to determine mitigation replacement ratios required under **MV 4.3-31** and **MV 4.3-39**. The detailed wetlands mitigation plans shall provide for the 3:1 replacement of any Southern California black walnut to be removed from the riparian corridor for individual projects. The plan shall be subject to the approval of the CDFG and the Corps and approved prior to the impact to riparian resources. **MV 4.3-33** describes that the functions and values will be assessed for the riparian areas that will be removed, and **MV 4.3-31** and **MV 4.3-39** describe the replacement ratios for the habitats that will be impacted.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-24 Approximately 616.3 acres of coastal scrub shall be preserved on site within Open Area and/or off site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village. This measure ensures that preserved areas will be part of a greater managed preserved system of numerous natural vegetation communities meant to support both common and special-status widllife species. These areas support the same types of habitat that would be lost through construction and would be further enhanced through management and monitoring activities. MV 4.3-25 Prior to ground disturbance, construction, or site preparation activities, the applicant shall retain the services of a qualified biologist to conduct pre-construction surveys for western spadefoot toad within all portions of the project site containing suitable breeding habitat. Surveys shall be conducted during a time of year when the species could be detected (e.g., the presence of rain pools). If western spadefoot toad is identified on the project site, the following measures will be implemented: (1) Under the direct supervision of the qualified biologist, western spadefoot toad habitat shall be created within suitable natural sites on the Specific Plan site outside of the proposed development envelope. The amount of occupied breeding habitat to be impacted by the project shall be replaced at a 2:1 ratio. The actual relocation site design and location shall be approved by CDFG. The location shall be in a suitable habitat as far away as feasible from any of the homes and roads to be built. The relocation ponds shall be designed such that they only support standing water for several weeks following seasonal rains in order that aquatic predators (e.g., fish, bullfrogs, and crayfish) cannot become established.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-25 (continued) (1) (cont'd) Terrestrial habitat surrounding the proposed relocation site shall be as similar in type, aspect, and density to the location of the existing ponds as feasible. No site preparation or construction activities shall be permitted in the vicinity of the currently occupied ponds until the design and construction of the pool habitat in preserved areas of the site has been completed and all western spadefoot toad adult, tadpoles, and egg masses detected are moved to the created pool habitat. (2) Based on appropriate rainfall and temperatures, generally between the months of February and April, the biologist shall conduct pre-construction surveys in all appropriate vegetation communities within the development envelope. Surveys will include evaluation of all previously documented occupied areas and a reconnaissance-level survey of the remaining natural areas of the site. All western spadefoot adults, tadpoles, and egg masses encountered shall be collected and released in identified/created relocation ponds described above. (3) The qualified biologist shall monitor the relocation site for five years, involving annual monitoring during and immediately following peak breeding season such that surveys can be conducted for adults as well as for egg masses and larval and post-larval toads. Further, survey data will be provided to CDFG by the monitoring biologist following each monitoring period and a written report summarizing the monitoring results will be provided to CDFG at the end of the monitoring effort. Success criteria for the monitoring program shall include verifiable evidence of toad reproduction at the relocation site.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-26 Prior to ground disturbance, vegetation clearing, construction, or site preparation activities, a qualified biologist shall be retained to conduct a Worker Environmental Awareness Program (WEAP) for all construction/contractor personnel. A list of construction personnel who have completed training prior to the start of construction shall be maintained on site and this list shall be updated as required when new personnel start work. No construction worker may work in the field for more than five days without participating in the WEAP. The qualified biologist shall provide ongoing guidance to construction personnel and contractors to ensure compliance with environmental/permit regulations and mitigation measures. The qualified biologist shall perform the following: • Provide training materials and briefings to all personnel working on site. The material shall include but not be limited to the identification and status of plant and wildlife species, significant natural plant community habitats (e.g., riparian), fire protection measures, and review of mitigation requirements. • A discussion of the federal and state Endangered Species Acts, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, other state or federal permit requirements and the legal consequences of non-compliance with these acts. • Attend the pre-construction meeting to ensure that timing/location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds, pre-construction surveys, or relocation efforts).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-26 (continued) • Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas. Maps showing the location of special-status wildlife or populations of rare plants, exclusion areas, or other construction limitations (e.g., limitations on nighttime work) will be provided to the environmental monitors and construction crews prior to ground disturbance. This applies to preconstruction activities, such as site surveying and staking, natural resources surveying or reconnaissance, establishment of water quality BMPs, and geotechnical or hydrological investigations. • Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction and provide a contact person in the event of the discovery of dead or injured wildlife. • Review/designate the construction area in the field with the contractor in accordance with the final grading plan. • Ensure that haul roads, access roads, and on-site staging and storage areas are sited within grading areas to minimize degradation of vegetation communities adjacent to these areas (if activities outside these limits are necessary, they shall be evaluated by the biologist to ensure that no special-status species habitats will be affected). • Conduct a field review of the staking (to be set by the surveyor) designating the limits of all construction activity. • Flag or temporarily fence any construction activity areas immediately adjacent to riparian areas. • Ensure and document that required pre-construction surveys and/or relocation efforts have been implemented.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-26 (continued) • To reduce the potential for the spread of exotic invasive invertebrates (e.g., New Zealand mud snails and weeds (including weed seeds) during project ~~preconstruction~~ clearing and construction, all heavy equipment proposed for use on the project site shall be verified cleaned (including wheels, tracks, undercarriages, and bumpers, as applicable) before delivery to the project site. Equipment must be documented as exotic invasive invertebrate (e.g.,mud snail) and weed free upon delivery to the project site initial staging area, including: (1) vegetation clearing equipment (skid steer loaders, loaders, dozers, backhoes, excavators, chippers, grinders, and any hauling equipment, such as off-road haul trucks, flat bed, or other vehicles); (2) earth-moving equipment (scrapers, dozers, excavators, loaders, motor-graders, compactors, backhoes, off-road water trucks, and off-road haul trucks); and (3) all project-associated vehicles (including personal vehicles) that, upon inspection by the monitoring biologist, are deemed to present a risk for spreading exotic invasive invertebrate (e.g.,mud snails) or weeds. Equipment shall be cleaned at existing construction yards or at a wash station. The biological monitor shall document that all construction equipment (as described above) has been cleaned prior to working within the project work site. Any equipment/vehicles determined to not be free of exotic invasive invertebrates (e.g., mud snails) and weeds shall immediately be sent back to the originating construction yard for washing, or wash station where rinse water is collected and disposed of in either a sanitary sewer or other legal point of disposal.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-26 (continued) • Equipment/vehicles moved from the site must be inspected, and re-washed as necessary, prior to re-engaging in construction activities in the project work area. A written daily log shall be kept for all vehicle/equipment washing that states the date, time, location, type of equipment washed, methods used, and location of work;	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-26 (continued) • Be present during initial vegetation clearing and grading. • Submit to the CDFG an immediate report (within 72 hours) of any conflicts or errors resulting in impacts to special-status biological resources. MV 4.3-27 The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan (Dudek 2007) shall be revised and submitted to CDFG for review and approval prior to ground disturbance to occupied habitat. Upon approval, the plan will be implemented by the applicant or its designee. The revised plan will demonstrate the feasibility of enhancing or restoring slender mariposa lily habitat in selected areas to be managed as natural open space (i.e., the Salt Creek area or High Country SMA/SEA 20, spineflower preserves, or River Corridor SMA/SEA 23) without conflicting with other resource management objectives. Habitat replacement/enhancement will be at a 1:1 ratio (acres restored/enhanced to acres impacted). The revised plan will describe habitat improvement/ restoration measures to be completed prior to introducing slender mariposa lily. Habitat improvement/restoration will be based on native occupied slender mariposa lily habitat. The revised plan will specify: (1) the location of mitigation sites (may be selected from among 559 acres of suitable mitigation land in the High Country SMA/SEA 20 and Salt Creek area identified in the Draft Newhall Ranch Mitigation Feasibility Study (Dudek 2007); (2) a description of "target" vegetation (native shrubland or grassland) to include estimated cover and abundance of native shrubs and grasses in occupied slender mariposa lily habitat on Newhall Ranch land (either at sites to be destroyed by construction or at sites to be preserved); (3) site preparation	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-27 (continued) measures to include topsoil treatment, soil decompaction, erosion control, temporary irrigation systems, or other measures as appropriate; (4) methods for the removal of non-native plants (e.g., mowing, weeding, raking, herbicide application, or burning); (5) the source of all plant propagules (seed, potted nursery stock, *etc.*), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful. Habitat restoration/enhancement will be judged successful when (1) percent cover and species richness of native species reach 50 percent of their cover and species richness at undisturbed occupied slender mariposa lily habitat at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation. At that point slender mariposa lily propagules (seed or bulbs) will be introduced onto the site.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-27 (continued) The revised plan will specify methods to collect propagules and introduce slender mariposa lily into these mitigation sites. Introductions will use source material (seeds or bulbs) from no more than 1.0 mile distant, similar slope exposures, and no more than 500 ft. elevational difference from the mitigation site, unless otherwise approved by CDFG. Bulbs may be salvaged and transplanted from slender mariposa lily occurrences to be lost; alternately, seed may be collected from protected occurrences, following CDFG-approved seed collection guidelines (*i.e.*, MOU for rare plant seed collection). No bulbs will be translocated into areas within 300 feet of proposed or existing development. The Applicant or its designee will monitor the reintroduction sites for no fewer than five additional years to estimate slender mariposa lily survivorship (for bulbs) or seedling establishment (for seeded sites). Annual monitoring reports will be prepared and submitted to CDFG and will be made available to the public to guide future mitigation planning for slender mariposa lily. Monitoring reports will describe all restoration/enhancement measures taken in the preceding year; describe success and completion of those efforts and other pertinent site conditions (erosion, trespass, animal damage) in qualitative terms; and describe mariposa lily survival or establishment in quantitative terms. A minimum of 133 acres of slender mariposa lily cumulative occupied area will be conserved and managed in the RMDP and SCP project boundaries. Of these 133 acres, approximately 103 acres of slender mariposa lily cumulative occupied area will be conserved and managed in the RMDP and SCP project boundary in the High Country SMA/SEA 20 and Salt Creek area, and 2 acres occur within the River Corridor SMA/SEA 23 and/or proposed spineflower preserves. Additional	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-27 (continued) cumulative occupied area will be conserved and managed in the San Martinez Grande Canyon area at a 1:1 ratio (acres conserved and managed to acres impacted) based on impacts to cumulative occupied area within the Entrada planning area, as a means to ensure regional biodiversity of the species. Up to an additional 28 acres of slender mariposa lily cumulative occupied area can be conserved and managed in the San Martinez Grande Canyon area for this purpose. MV 4.3-28 The Oak Resource Replacement Plan to be prepared (as described in Newhall Ranch Specific Plan Program EIR Mitigation Measure SP 4.6-48) shall include measures to create, enhance, and/or restore 9.7 acres of coast live oak woodland and valley/oak savannah within the High Country SMA/SEA 20. The plan shall be subject to the requirements outlined in **SP 4.6-48**. The applicant shall prepare an Oak Resource Management Plan that incorporates the findings of the Draft Newhall Ranch Mitigation Feasibility Report (Dudek 2007) and areas identified (in the technical report) as being suitable for oak woodland enhancement and creation shall be used as mitigation. Other mitigation sites may be used upon approval by the County. The plan shall be reviewed by the County Forester. The plan shall include the following: (1) site selection and preparation; (2) selection of proper species, including sizes and planting densities; (3) protection from herbivores; (4) site maintenance; (5) success criteria; (6) remedial actions; and (7) a monitoring program.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-29 The project applicant will retain a qualified biologist to develop an Exotic Wildlife Species Control Plan and implement a control program for bullfrog, African clawed frog, and crayfish. The program will require the control of these species during construction within the River corridor and modified tributaries (bridges, diversions, bank stabilization, drop structures). The Plan shall include a description of the species targeted for eradication, the methods of harvest that will be employed, the disposal methods, and the measures that would be employed to avoid impacts to sensitive wildlife (*e.g.*, stickleback, arroyo toad, nesting birds) during removal activities (*i.e.*, timing, avoidance of specific areas). Annual monitoring shall occur for the first five years after construction of project facilities. Monitoring will be conducted within sentinel locations along the River Corridor SMA/SEA 23 and where the project provides potential habitat for these species (*e.g.*, future ponds and water features). Control shall be conducted within project facilities where monitoring results indicate that exotic species have colonized an area. After the first 5 years, the NLMO or other entity will be responsible for controlling exotic aquatic species. MV 4.3-30 In order to reduce impacts to biological resources from grading and construction activities, all related activities will be conducted to facilitate the escape of animals to natural areas. Construction and grading activities will begin in disturbed areas in order to avoid stranding animals in isolated patches of vegetation. Trenches will be covered at night or escape routes provided to prevent animals from falling into and being trapped in trenches. If escape routes are provided in lieu of covering trenches, the excavations will be inspected by a qualified biologist prior to restart of work.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-31 The permanent removal of existing habitats in Corps and/or CDFG jurisdictional areas in the Santa Clara River and tributaries shall be replaced by creating habitats of similar functions and values/services (see **MV 4.3-33**) on the project site, or as allowed under **MV 4.3-39**. The riparian habitat mitigation will meet CDFG mitigation requirements listed in **Table 4.3-11**, consistent with success criteria for mitigation in **MV 4.3-36**.	
	MV 4.3-32 Creation of new vegetation communities and restoration of impacted vegetation communities shall occur at suitable sites in or adjacent to jurisdictional areas or in areas where bank stabilization would occur. Locations where the excavation of uplands for bank protection/stabilization results in creation of new, unvegetated riverbed or other disturbance shall receive the highest level of priority for vegetation community restoration. Restoration sites may also occur at locations outside the riverbed where there are appropriate hydrologic conditions to create a self-sustaining riparian vegetation community and where upland and riparian vegetation community values are absent or very low. All sites shall contain suitable hydrological conditions and surrounding land uses to ensure a self-sustaining functioning riparian vegetation community. Candidate restoration sites shall be described in the annual mitigation status report (see **MV 4.3-43**). Sites will be approved when the detailed wetlands mitigation plans are submitted to the Corps and CDFG as part of the sub-notification letters submitted for individual projects. Status of the sites will be addressed through agency review of the annual mitigation status report and mitigation accounting form. Each mitigation plan will include acreages, maps, and site specific descriptions of the proposed revegetation site, including analysis of soils, hydrologic suitability, and present and future adjacent land uses.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation

4.3 BIOTA (CONTINUED)

Table 4.3-11
CDFG Jurisdictional Permanent Impacts Mitigation Ratios

Ratios Listed by Vegetation Types & Quality				
Vegetation Community	**Veg Code/ID**	**HIGH Reach Value*** (Mit. Ratio)**	**MEDIUM Reach Value** (Mit. Ratio)**	**LOW Reach Value*** (Mit. Ratio)**
Southern Cottonwood–Willow Riparian Forrest	SCRWF	4:1	3:1	2:1
Southern Willow Scrub	SWS	3:1	2.5:1	2:1
Oak Woodland (Coast Live, Valley)	CLOW/VOW	3:1	2.5:1	2:1
Big Sagebrush Scrub	BSS	2.5:1	2:1	1.5:1
Mexican Elderberry Scrub	MES	2.5:1	2:1	1.5:1
Cismontane Alkaline Marsh	CAM	2.5:1	2:1	1.5:1
Coastal and Valley Fresh Water Marsh	CFWM	2:1	1.5:1	1:1
Mulefat Scrub	MFS	2:1	1.5:1	1.25:1
Arrowweed Scrub	AWS	2:1	1.5:1	1:1
California Sagebrush scrub, and CSB-dominated habitats	CSB, CSB-A, -BS, -CB, -CHP, and -PS	2:1	1.5:1	1:1
Herbaceous Wetland	HW	1.5:1	1.25:1	1:1
River Wash, emergent veg.	RW	1.5:1	1.25:1	1:1
Chaparral, Chamise Chaparral	CHP, CC	1.5:1	1.25:1	1:1
Coyote Brush Scrub	CYS	1.5:1	1.25:1	1:1
Eriodictyon Scrub	EDS	1.5:1	1.25:1	1:1
California Grass Lands	CGL	1:1	1:1	1:1
Agricultural/Disturbed/Developed	AGR/DL/DEV	1:1	1:1	1:1

Notes:
** HIGH reach value indicates a portion of the Santa Clara River or main tributary that scored above 0.79 Total Score utilizing the HARC methodology described in* ***Section 4.2****, Geomorphology and Riparian Resources, of the Draft RMDP-SCP EIS/EIR.*
*** MEDIUM reach value indicates a portion of the Santa Clara River or main tributary that scored between 0.4 and 0.79 Total Score utilizing the HARC methodology described in* ***Section 4.2.***
**** LOW reach value indicates a portion of the Santa Clara River or main tributary that scored below 0.4 Total Score utilizing the HARC methodology described in* ***Section 4.2.***

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-33 Replacement vegetation communities shall be designed to replace the functions and values of the vegetation communities being removed. The replacement vegetation communities shall have similar dominant trees and understory shrubs and herbs (excluding exotic species) to those of the affected vegetation communities (see **Table 4.3-12** for example of recommended plant species for the River Corridor SMA/SEA 23 and tributaries). In addition, the replacement vegetation communities shall be designed to replicate the density and structure of the affected vegetation communities once the replacement vegetation communities have met the mitigation success criteria.	

Table 4.3-12
Potential Plant Species for Vegetation Community Restoration in the River Corridor SMA/SEA 23 and Tributaries

Trees	
red willow	*Salix laevigata*
arroyo willow	*Salix lasiolepis*
Fremont cottonwood	*Populus fremontii*
black cottonwood	*Populus balsamifera* ssp. *Trichocarpa*
western sycamore	*Platanus racemosa*
Shrubs	
Mulefat	*Baccharis salicifolia*
sandbar willow	*Salix exigua*
arrow weed	*Pluchea sericea*
Herbs	
Mugwort	*Artemisia douglasiana*
western ragweed	*Ambrosia psilostachya*
Cattail	*Typha latifolia*
Bulrush	*Scirpus americanus*
prairie bulrush	*Scirpus maritimus*

Note: This is a recommended list. Other species may be found suitable based on site conditions and state and federal permits.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-34 Average plant spacing shall be determined based on an analysis of vegetation communities to be replaced. The applicant shall develop plant spacing specifications for all riparian vegetation communities to be restored. Plant spacing specifications shall be reviewed and approved by the Corps and CDFG when restoration plans are submitted to the agencies as part of the sub-notification letters submitted to the Corps and CDFG for individual projects or as part of the annual mitigation status report and mitigation accounting form. MV 4.3-35 If at any time prior to CDFG/Corps approval of the restoration area, the site is subject to an act of God (flood, fires, or drought), the applicant shall be responsible for replanting the damaged area. The site will be subject to the same success criteria as provided for **MV 4.3-36**. Should a second act of God occur prior to CDFG/Corps approval of the restoration area, the applicant shall coordinate with the CDFG/Corps to develop an alternative restoration strategy(ies) to meet success requirements. This may include restoration elsewhere in the River corridor or tributaries.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-36 The revegetation site will be considered "complete" upon meeting all of the following success criteria. In a sub-notification letter, the applicant may request modification of success criteria on a project by project basis. Acceptance of such request will be at the discretion of CDFG and the Corps. 1. Regardless of the date of initial planting, any restoration site must have been without active manipulation by irrigation, planting, or seeding for a minimum of three years prior to Agency consideration of successful completion. 2. The percent cover and species richness of native vegetation shall be evaluated based on local reference sites established by CDFG and the Corps for the plant communities in the impacted areas. 3. Native shrubs and trees shall have at least 80 percent survivorship after two years beyond the beginning of the success evaluation start date. This may include natural recruitment. 4. Non-native species cover will be no more than 5 percent absolute cover through the term of the restoration. 5. Giant reed (*Arundo donax*), tamarisk (*Tamarix ramosissima*), perennial pepperweed (*Lepidium latifolium*), tree of heaven (*Ailanthus altissimus*), pampas grass (*Cortaderia selloana)* and any species listed on the California State Agricultural list, or Cal-IPC list of noxious weeds will not be present on the revegetation site as of the date of completion approval. 6. Using the HARC assessment methodology, the compensatory mitigation site shall meet or exceed the baseline functional scores of the impact area in Corps' jurisdictional waters, as described in the Conceptual Mitigation Plan[7] for Waters of the United States.	

[7] For detailed information concerning the Corps compensatory mitigation program for impacts to waters of the United States, please reference Appendix 11.0 of the Section 404(b)1 Alternatives Analysis, included in Appendix F1.0 of the Final EIS/EIR.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-37 Temporary irrigation shall be installed as necessary for plant establishment. Irrigation shall continue as needed until the restoration site becomes self sustaining regarding survivorship and growth. Irrigation shall be terminated in the fall to provide the least stress to plants. Following irrigation termination, the irrigation piping will be removed where not destructive to the established plants. MV 4.3-38 In areas where invasive exotic plant species control is authorized by CDFG in lieu of creating or restoring other riparian habitat mitigation (**MV 4.3-31**), removal areas shall be kept free of exotic plant species for 5 years after initial treatment. In areas where extensive exotic removal occurs, revegetation with native plants or natural recruitment shall be documented. MV 4.3-39 The exotics control program may utilize methods and procedures in accordance with the provisions in the Upper Santa Clara River Watershed Arundo/Tamarisk Removal Plan Final Environmental Impact Report, dated February 2006, or the applicant may propose alternative methods and procedures for Corps and CDFG review and approval pursuant to a sub-notification letter. By example: a 10-acre site occupied by 10% exotic species will be credited for 1 acre of mitigation. MV 4.3-40 All native riparian trees with a 3-inch diameter at breast height (dbh) or greater in temporary construction areas shall be replaced using 1- or 5-gallon container plants, containered trees, or pole cuttings in the temporary construction areas in the winter following the construction disturbance. The growth and survival of the replacement trees shall meet the performance standards specified in **MV 4.3-36**. In addition, the growth and survival of the planted trees shall be monitored until they meet the self-sustaining success criteria in accordance with the methods and reporting procedures specified in **MV 4.3-36, MV 4.3-42,** and **MV 4.3-43.**	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-41 Vegetation communities temporarily impacted by the proposed project shall be revegetated as described in **MV 4.3-31**. Large trunks of removed trees may also remain on site to provide habitat for invertebrates, reptiles, and small mammals or may be anchored within the project site for erosion control. To facilitate restoration, mulch, or native topsoil (the top 6- to 12-inch deep layer containing organic material), may be salvaged from the work area prior to construction. Following construction, salvaged topsoil shall be returned to the work area and placed in the restoration site. Within one year, the project biologist will evaluate the progress of restoration activities in the temporary impact areas to determine if natural recruitment has been sufficient for the site to reach performance goals. In the event that native plant recruitment is determined by the project biologist to be inadequate for successful habitat establishment, the site shall be revegetated in accordance with the methods designed for permanent impacts (i.e., seeding, container plants, and/or a temporary irrigation system may be recommended). This will help ensure the success of mitigation areas. The applicant shall restore the temporary construction area per the success criteria and ratios described in **MV 4.3-23, MV 4.3-31**, and **MV 4.3-36**. Annual monitoring reports on the status of the recovery of~~r~~ temporarily impacted areas shall be submitted to the Corps and CDFG as part of the annual mitigation status report (**MV 4.3-42** and **MV 4.3-43**). MV 4.3-42 To provide an accurate and reliable accounting system for mitigation, the applicant shall file a mitigation accounting form annually with the Corps and CDFG by April 1.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-43 An annual mitigation status report shall be submitted to the Corps and CDFG by April 1 of each year until satisfaction of success criteria identified in **MV 4.3-36**. This report shall include any required plans for plant spacing, locations of candidate restoration and weed control sites or proposed "in-lieu fees," restoration methods, and vegetation community restoration performance standards. For active vegetation community creation sites, the report shall include the survival, percent cover, and height of planted species; the number by species of plants replaced; an overview of the revegetation effort and its success in meeting performance criteria; the method used to assess these parameters; and photographs. For active exotics control sites, the report shall include an assessment of weed control; a description of the relative cover of native vegetation, bare areas, and exotic vegetation; an accounting of colonization by native plants; and photographs. The report shall also include the mitigation accounting form (see **MV 4.3-42**), which outlines accounting information related to species planted or exotics control and mitigation credit remaining. The annual mitigation and monitoring report shall document the current functional capacity of the compensatory mitigation site using the HARC assessment methodology, as well as documenting the baseline functional scores of the impact site in jurisdictional waters of the United States.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-44 Require focused surveys for the spring snail (*Pyrgulopsis castaicensis* n. sp.) by a qualified biologist prior to the commencement of grading/construction activities in any drainage area supporting perennial flow. Any individuals of the *Pyrgulopsis castaicensis* n. sp. found within the Middle Canyon drainage shall be relocated to appropriate habitat within Middle Canyon Spring. If *Pyrgulopsis castaicensis* n. sp. are discovered during aquatic and semi-aquatic pre-construction surveys in any other perennial flowing water, the applicant shall consult with CDFG prior to initiating disturbance of the area. A report documenting the number of *Pyrgulopsis castaicensis* n. sp. located, the conditions of the area, and where the species has been relocated to, if applicable, shall be submitted to CDFG within 60 days following the relocation.	
	MV 4.3-45 An Integrated Pest Management (IPM) plan that addresses the use of pesticides (including rodenticides and insecticides) on site will be prepared prior to the issuance of building permits for the initial tract map. The IPM will implement appropriate Best Management Practices to avoid and minimize adverse effects on the natural environment, including vegetation communities, special-status species, species without special status, and associated habitats, including prey and food resources (e.g., insects, small mammals, seeds). Potential management practices include cultural (e.g., planting pest-free stock plants), mechanical (e.g., weeding, trapping), and biological controls (e.g., natural predators or competitors of pest species, insect growth regulators, natural pheromones, or biopesticides), and the judicious use of chemical controls, as appropriate (e.g., targeted spraying versus broadcast applications). The IPM will establish management thresholds (i.e., not all incidences of a pest require management);	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-45 (continued) prescribe monitoring to determine when management thresholds have been exceeded; and identify the most appropriate and efficient control method that avoids and minimizes risks to natural resources. Preparation of the covenants, conditions, and restrictions (CC&Rs) for each tract map shall include language that prohibits the use of anticoagulant rodenticides in the project site. MV 4.3-46 The Natural Lands Management Organization (NLMO) shall fund or otherwise coordinate the regular removal of trash and debris from riparian habitats on or adjacent to the project site. The removal of trash shall be conducted in a manner as to not disturb sensitive habitats. MV 4.3-47 Each tract map Home Owners' Association shall supply educational information to future residents regarding pets, wildlife, and open space areas. The material shall discuss the presence of native animals (e.g., coyote, bobcat, mountain lion), indicate that those native animals could prey on pets, indicate that no actions shall be taken against native animals should they prey on pets allowed outdoors, ~~indicate that residents should not feed wildlife intentionally or unintentionally by leaving pet food outside,~~ and indicate that pets must be leashed while using the designated trail system and/or in any areas within or adjacent to open space. Control of stray and feral cats and dogs will be conducted in open space areas on an as-needed basis by the NLMO(s) or the Newhall Ranch *joint powers authority* (JPA) managing the River Corridor SMA/SEA 23, High Country SMA/SEA 20, or Salt Creek area or by the HOAs managing the Open Areas. Feral cats and dogs may be trapped and deposited with the local Society for the Prevention of Cruelty to Animals or the Los Angeles County Department of Animal Control.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-48 Upon ~~completion of~~initiating of landscaping within a development area, quarterly monitoring shall be initiated for Argentine ants along the urban–open space interface at sentinel locations where invasions could occur (e.g., where moist microhabitats that attract Argentine ants may be created). A qualified biologist shall determine the monitoring locations. Ant pitfall traps will be placed in these sentinel locations and operated on a quarterly basis to detect invasion by Ar~~e~~gentine ants. If Argentine ants are detected during monitoring, direct control measures will be implemented immediately to help prevent the invasion from worsening. These direct controls may include but are not limited to nest/mound insecticide treatment, or available natural control methods being developed. A general reconnaissance of the infested area would also be conducted to identify and correct the possible source of the invasion, such as uncontrolled urban runoff, leaking pipes, or collected water. Monitoring and control of Argentine ants would occur for a 5-year period. After the first 5 years, the NLMO or other entity will be responsible for controlling Argentine ants.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-49 Thirty days prior to construction activities, a qualified biologist shall conduct a preconstruction survey for ringtail. The survey area shall include suitable riparian and woodland habitat (southern coast live oak riparian forest, southern cottonwood–willow riparian forest, southern willow scrub, coast live oak woodland, valley oak woodland, and mixed oak woodland) within the construction disturbance zone and a 300-foot buffer around the construction site. Should the ringtail be observed in the breeding and rearing period of February 1 through August 31, no construction-related activities shall occur within 300 feet of the occupied area for the period of February 1 through August 31 or until the ringtail has been determined by a qualified biologist (in consultation with CDFG) to no longer occupy areas within 300 feet of the construction zone and/or that construction activities would not adversely affect the successful rearing of young. If the ringtail is observed within the construction disturbance zone or in the 300-foot buffer around the construction site in the nonbreeding/rearing period of September 1 through January 31, and avoidance is not possible, denning ringtail shall be safely evicted under the direction of a qualified biologist (as determined by a Memorandum of Understanding with CDFG). All activities that involve the ringtail shall be documented and reported to CDFG.	
	MV 4.3-50 Any Southern California black walnut and mainland cherry trees or shrubs outside riparian areas greater than 1 inch dbh shall be replaced in the ratio of at least 2:1. Multi-trunk trees/shrub dbh shall be calculated based on combined trunk dbh. Mitigation shall be deemed complete when each replacement tree attains at least 1 inch in diameter 1 foot above the base.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-51 Bridges over the Santa Clara River shall be designed to minimize impacts to natural areas and riparian resources from associated lighting and stormwater runoff. All lighting will be designed to be directed away from natural areas (pursuant to SP-4.6-56) using shielded lights, low sodium-vapor lights, bollard lights, or other available light and glare minimization methods. Bridges will be designed to minimize normal vehicular lighting from trespassing into natural areas using side walls a minimum of 24 inches high. All stormwater from the bridges will be directed to water treatment facilities for water quality treatment. MV 4.3-52 Construction plans shall include necessary design features and construction notes to ensure protection of vegetation communities and special-status plant and aquatic wildlife species adjacent to construction. In addition to applicable erosion control plans and performance under SCAQMD Rule 403d dust control (SCAQMD 2005), the project stormwater pollution prevention plan (SWPPP) shall include the following minimum BMPs. Together, the implementation of these requirements shall ensure protection of adjacent habitats and wildlife species during construction. At a minimum, the following measures/restrictions shall be incorporated into the SWPPP, and noted on construction plans where appropriate, to avoid impacting special-status species during construction: • Avoid planting or seeding invasive species in development areas within 200 feet of native vegetation communities. • Provide location and details for any dust control fencing along project boundaries (MV 4.3-53). • Vehicles shall not be driven or equipment operated in areas of ponded or flowing water, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as otherwise provided for in the 404 Permit or 1603 Agreement.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-52 (continued) • Silt settling basins installed during the construction process shall be located away from areas of ponded or flowing water to prevent discolored, silt-bearing water from reaching areas of ponded or flowing water during normal flow regimes. • If a stream channel has been altered during the construction and/or maintenance operations, its low flow channel shall be returned as nearly as practical to pre-project topographic conditions without creating a possible future bank erosion problem or a flat, wide channel or sluice-like area. The gradient of the streambed shall be returned to pre-project grade, to the extent practical, unless it represents a wetland restoration area. • Temporary structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the high water mark before such flows occur. • Staging/storage areas for construction equipment and materials shall be located outside of the ordinary high water mark. • Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily, to prevent leaks of materials that could be deleterious to aquatic life if introduced to water. • Stationary equipment such as motors, pumps, generators, and welders which may be located within the riverbed construction zone shall be positioned over drip pans. No fuel storage tanks shall be allowed in the riverbed.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-52 (continued) • No debris, bark, slash sawdust, rubbish, cement or concrete or washing thereof, oil, petroleum products, or other organic material from any construction, or associated activity of whatever nature, shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into, watercourses included in the permit. When construction operations are completed, any excess materials or debris shall be removed from the work area. • No equipment maintenance shall be done within or near any stream where petroleum products or other pollutants from the equipment may enter these areas with stream flow. • The operator shall install and use fully covered trash receptacles to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash will be regularly picked up in construction areas. • The operator shall not permit pets on or adjacent to the construction site. • No guns or other weapons are allowed on the construction site during construction, with the exception of the security personnel and only for security functions. No hunting shall be authorized/permitted during construction.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-53 Development areas shall have dust control measures implemented and maintained to prevent dust from impacting vegetation communities and special-status plant and aquatic wildlife species. Dust control shall comply with SCAQMD Rule 403d (SCAQMD 2005). Where construction activities occur within 100 feet of known special-status plant species locations, chemical dust suppression shall not be utilized. Where determined necessary by a qualified biologist, a screening fence (i.e., a 6-foot-high chain link fence with green fabric up to a height of 5 feet) shall be installed to protect special-status species locations. See **MV 4.3-65** for dust control requirements related to spineflower preserves.	
	MV 4.3-54 Permanent fencing shall be installed along all River Corridor SMA/SEA 23 trails adjacent to the Santa Clara River, or other sensitive resources, in order to minimize impacts associated with increased human presence on protected vegetation communities and special-status plant and wildlife species. The fencing will be split rail to avoid inhibiting wildlife movement. Viewing platforms will be located in land covers currently mapped as agriculture, disturbed land, or developed land.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-55 To protect Middle Canyon Spring and to reduce potential direct impacts to any special-status species that may be located within the spring complex due to unrestricted access, the project applicant or its designee shall avoid all construction-related activities within the Middle Canyon Spring complex and erect and maintain temporary orange fencing and prohibitive signage around the Middle Canyon Spring prior to and during all phases of construction within 200 feet of the spring and, if applicable, around the Middle Canyon drainage within 100 feet of flowing water. A qualified biologist will be present to monitor construction activities within 200 feet of the spring and, if applicable, around the Middle Canyon drainage within 100 feet of flowing water. The areas behind the temporary fencing shall not be used for the storage of any equipment, materials, construction debris, or anything associated with construction activities. Any upslope runoff from construction areas will be directed away from the Middle Canyon Spring. Following the final phase of construction of any Newhall Ranch subdivision tract adjacent to Middle Canyon Spring, the project applicant or its designee shall install and maintain permanent fencing along the subdivision tract bordering the spring. Permanent signage shall be installed on the fencing along the spring boundary to indicate that the fenced area is a biological preserve that contains protected species and habitat. No trail shall be constructed that passes within 100 feet of the Middle Canyon Spring (see **Figure 4.3-4B** above). a. As described in MV 4.3-51, t~~T~~he Commerce Center Drive Bridge will be designed to minimize secondary impacts associated with lighting and water quality impacts through the installation of indirect and downcast lighting, and routing of stormwater to water quality treatment facilities.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-56 A Middle Canyon Spring Habitat Management Plan will be developed that details the measures to be implemented to maintain the populations of the spring snail (*Pyrgulopsis castaicensis* n. sp.) and Newhall sunflower species. The plan shall be subject to the approval of CDFG and implemented by the Applicant prior to disturbance within 100 feet of flowing water in Middle Canyon Creek and/or 200 feet of Middle Canyon Spring.	
	MV 4.3-57 Plant palettes proposed for use on landscaped slopes, street medians, park sites, and other public landscaped and fuel modification zone (FMZ) areas within 200 feet of native vegetation communities shall be reviewed by a qualified restoration specialist to ensure that the proposed landscape plants will not naturalize and require maintenance or cause vegetation community degradation in the open space areas (River Corridor SMA/SEA 23, High Country SMA/SEA 20, Salt Creek area, and natural portions of the Open Area). Container plants to be installed within public areas within 200 feet of the open space areas shall be inspected by a qualified restoration specialist for the presence of disease, weeds, and pests, including Argentine ants. Plants with pests, weeds, or diseases shall be rejected. In addition, landscape plants within 200 feet of native vegetation communities shall not be on the Cal-IPC California Invasive Plant Inventory (most recent version) or on the list of Invasive Ornamental Plants listed in Appendix B of the Spineflower Conservation Plan (SCP). The current Cal-IPC list can be obtained from the Cal-IPC web site (http://www.cal-ipc.org/ip/inventory/index.php). Landscape plans will include a plant palette composed of native or non-native, non-invasive species that do not require high irrigation rates. Except as required for fuel modification, irrigation of perimeter landscaping shall be limited to temporary irrigation (i.e., until plants become established).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-58 A final SCP shall be adopted and implemented after approval by CDFG, including the permanent dedication of preserves (see draft in Appendix 4.3). The proposed spineflower preserve areas shall be offered to CDFG as a permanent conservation easement within one year after issuance of the requested 2081 Permit to ensure long-term protection. The conservation easement shall be to CDFG and contain appropriate funding and restrictions to help ensure that the spineflower preserve lands are protected in perpetuity. MV 4.3-59 The spineflower preserves shall be managed by Applicant and their preserve manager(s) and/or natural lands management organization(s) (NLMO). Applicant shall submit a statement of qualifications for their proposed preserve manager(s)/NLMO(s) for approval by CDFG. Applicant will fund in full all implementation of spineflower preserve management as described in the SCP and all mitigation measures listed in this document. MV 4.3-60 Spineflower preserve temporary fencing shall be shown on construction plans and installed prior to initiating construction clearing and grubbing activities within 500 feet of spineflower preserves, including the buffers. The spineflower preserve manager or a qualified biologist shall monitor fence installation. Clearing for fence installation shall be minimized to what is necessary to install the fence and, where possible, shall leave the roots of native plants in place to allow regrowth. As necessary, native vegetation will be restored and weed management will be performed following fence installation to ensure temporarily cleared native plant areas do not become weed dominated after installation. General project clearing and grubbing within 500 feet of the fence may commence upon verification by the spineflower preserve manager or the qualified biologist that protective fencing is in place and is adequate. Appropriate BMPs shall be installed at the edge of development manufactured slopes when the spineflower preserve is within 500 feet and down-slope of proposed development.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-61 Construction documents shall indicate that the grading contractor is responsible for protecting spineflower preserves during construction work. The construction documents shall indicate that the contractor is responsible for informing all employees and subcontractors of the environmentally sensitive areas and the proper conduct of work when working near (e.g., within 500 feet) of these areas. The construction documents shall require a pre-construction meeting to perform an "environmental education session" with the grading contractor/contractor's employees, subcontractors, and equipment operators prior to commencing construction work within 500 feet of the spineflower preserves. The environmental education session shall be conducted by the spineflower preserve manager or a qualified biologist and focus on informing workers of the location and sensitivity of the spineflower and the requirements for protecting it. The construction documents shall indicate that the grading contractor shall be responsible for mitigating any impacts to spineflower preserves due to the negligence of the grading contractor/contractor's employees, subcontractors, or equipment operators. If accidental trespass into a spineflower preserve occurs during construction, the violation shall be documented by the preserve manager and immediately reported to CDFG. Follow-up action will be taken in accordance with the Section 2081 of the Fish and Game Code, Incidental Take Permit issued by CDFG.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-62 Construction plans shall include necessary design features and construction notes to demonstrate consistency of development in the vicinity of spineflower preserves with the Spineflower Conservation Plan (SCP). In addition to applicable erosion control plans and performance under SCAQMD Rule 403d dust control (SCAQMD 2005), the project stormwater pollution prevention plan (SWPPP). Together, the implementation of these requirements shall ensure that spineflower preserve populations are protected during construction. At a minimum, the following measures/restrictions shall be incorporated into the SWPPP and noted on construction plans, where appropriate, to avoid impacting spineflower preserves during construction: • Avoid planting or seeding invasive species in development areas during construction phases. • Do not use erosion control devices that may contain weeds, such as hay bales, etc., within 200 feet of spineflower preserves, or anywhere upstream of spineflower preserves. • Do not windrow or stockpile soil within 200 feet of spineflower preserve boundaries or anywhere upstream of spineflower preserves. • Do not locate staging areas, maintenance, or concrete washout areas within 500 feet (unless otherwise authorized by CDFG, and no closer than 200 feet in any instance), where adjacent to or anywhere upstream of spineflower preserves.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-62 (continued) • Do not store toxic compounds, including fuel, oil, lubricants, paints, release agents, or any other construction materials that could damage spineflower habitat if spilled near spineflower preserve areas, or anywhere upstream of spineflower preserves, or along spineflower preserve boundaries. • Provide location and details for any fencing for temporary and permanent access control along preserve boundaries (per MV 4.3-64 for temporary fencing and MV 4.3-69 for permanent fencing). • Provide location and details for any dust control fencing along preserve boundaries (per MV 4.3-65). • Provide location and details for any stormwater run-on controls/BMPs coming from development area to spineflower preserve (per **MV 4.3-71** and **MV 4.3-72**). MV 4.3-63 The spineflower preserve manager or qualified biologist shall review construction plans and specifications, SWPPP, and, where appropriate, erosion control plans and implementation of SCAQMD Rule 403d dust control measures (SCAQMD 2005) prior to construction within 500 feet of spineflower preserves for compliance with the Spineflower Conservation Plan and associated permits and project-related environmental documents. A copy of the SWPPP and associated monitoring reports will be provided to CDFG.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-64 Spineflower preserves shall be protected prior to clearing and during construction with temporary construction fencing as described in **MV 4.3-60**. Openings shall be included in the fence when located within wildlife corridors and vegetation community connectivity areas to allow for the safe passage of wildlife. The spineflower preserve manager or a qualified biologist shall indicate the location and width of each of these openings. The fencing shall be three-strand non-barbed wire fence or bright orange ultraviolet stabilized polyethylene construction "snow" fencing, attached to metal t-posts that extend at least 4 feet above grade or equivalent. Protective fencing shall be maintained in good condition until completion of project construction. Where construction activities occur within 500 feet of a spineflower preserve, the spineflower preserve manager or qualified biologist shall review fencing weekly during construction monitoring visits and note any fencing that is in need of repair. Repairs shall be completed within three working days of notification by the spineflower preserve manager or qualified biologist. MV 4.3-65 Development areas shall have dust control measures implemented and maintained to prevent dust from impacting vegetation within the spineflower preserve areas. Dust control shall be implemented during construction in compliance with SCAQMD Rule 403d (SCAQMD 2005). Where construction activities occur within 100 feet of a spineflower location, chemical dust suppression shall not be utilized. Where determined necessary by the spineflower preserve manager or qualified biologist, a screening fence (i.e., a 6-foot-high chain link fence with green fabric up to a height of 5 feet) shall be installed to protect spineflower locations.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-66 The spineflower preserve manager or qualified biologist shall perform weekly construction monitoring for all construction activities within 500 feet of spineflower preserve areas. The spineflower preserve manager's or qualified biologist's construction monitoring tasks shall include reviewing and approving protective fencing, dust control measures, and erosion control devices before construction work begins; conducting a contractor education session at the preconstruction meeting; reviewing the site weekly (minimum) during construction to ensure the fencing, dust control, and BMP measures are in place and functioning correctly and that work is not directly or indirectly impacting spineflower plants; and quarterly monitoring shall be initiated for Argentine ants along the construction–open space interface at sentinel locations where invasions could occur (*e.g.*, where moist microhabitats that attract Argentine ants may be created). A qualified biologist shall determine the monitoring locations. Ant pitfall traps will be placed in these sentinel locations and operated on a quarterly basis to detect invasion by Argentine ants. If Argentine ants are detected during monitoring, direct control measures will be implemented immediately to help prevent the invasion from worsening. These direct controls may include but are not limited to nest/mound insecticide treatment, or available natural control methods being developed. A general reconnaissance of the infested area would also be conducted to identify and correct the possible source of the invasion, such as uncontrolled urban runoff, leaking pipes, or collected water. Each site visit shall be followed up with a summary monitoring report sent electronically to Applicant indicating the status of the site. Monthly monitoring reports, as needed, shall be submitted to CDFG and the County of Los Angeles). Monitoring reports shall include remedial recommendations and issue resolution discussions when necessary.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-67 Plant palettes proposed for use on landscaped slopes, street medians, park sites, and other public landscaped and FMZ areas within 200 feet of a spineflower preserve shall be reviewed and approved within 30 days by the spineflower preserve manager or qualified biologist and CDFG to ensure that the proposed landscape plants will not naturalize and require maintenance or cause vegetation community degradation in the spineflower preserve and buffer areas. Container plants to be installed within public areas within 200 feet of the spineflower preserves shall be inspected by the spineflower preserve manager or qualified biologist for the presence of disease, weeds, and pests, including Argentine ants. Plants with pests, weeds, or diseases shall be rejected. In addition, for public areas within 200 feet of spineflower preserves, landscape plants shall not be on the Cal-IPC California Invasive Plant Inventory (most recent version) or on the list of Invasive Ornamental Plants listed in Appendix B of the SCP. The current Cal IPC list can be obtained from the Cal-IPC web site (http://www.cal-ipc.org/ip/inventory/index.php).	
	MV 4.3-68 All portions of the spineflower preserves shall be closed, with the exception of pre-identified existing dirt roads and utility easements. The pre-identified existing dirt roads and utility easement access roads shall function as access routes for the spineflower preserve manager, spineflower preserve maintenance personnel, utility personnel, and emergency services vehicles only (e.g., police, fire, and medical). No other vehicle or foot traffic, including nature or recreational trails, will be permitted in the preserve, including the buffer. The dirt roads shall be gated and locked at the outside edges of the buffer zone. Signs discouraging unauthorized access shall be posted. The only persons or entities issued gate keys shall be the spineflower preserve managers and their employees, easement holding utility companies, emergency services, the Applicant, and CDFG.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-69 Fencing shall be installed along the outside edge of the spineflower preserve and buffer areas adjacent to proposed developments, parks, golf courses, or other "active land uses" to prevent unauthorized access. Specific areas that are adequately protected by steep terrain (1.5:1 or steeper) and/or dense vegetation may not require fencing but would require signage. The determination of the need for fencing in these areas shall be subject to the approval of the spineflower preserve manager or qualified biologist. If monitoring determines that slope and/or vegetation is not effective at deterring unauthorized access, additional fencing may be required to be added by the spineflower preserve manager or qualified biologist. Fencing is not required in areas bordered by large parcels of conserved natural open space areas or the Santa Clara River riparian corridor, as installing fencing in these areas would be unnecessary and damaging to existing vegetation and wildlife corridors. Fencing must extend a minimum of 4 feet above grade and include wood-doweled split rail fencing, exterior grade heavy-duty vinyl three-railed fencing, three-strand non-barbed wire, or approved alternate. Fencing installed adjacent to native vegetation communities and natural open space areas will allow for the passage of animals.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-70 Outdoor all-weather signs measuring approximately 12 by 16 inches shall be posted on all spineflower preserve access gates and along spineflower preserve fencing at approximately 800 feet on center, except adjacent to road crossings, where signs will be posted. The placement will take topography into account, emphasizing placement on ridgelines where signs will be visible to emergency fire personnel and others. Signs shall state in English and Spanish that the area is a biological preserve that hosts a state-listed endangered and federal candidate plant species and that trespassing is prohibited (in accordance with Newhall Ranch Specific Plan Program EIR Mitigation Measure SP 4.6-68). Signs shall indicate that fuel modification and management work is not allowed within the spineflower preserve (including buffer areas). The signage shall state that people who do not abide by these rules or who damage the protected species will be subject to prosecution, including fines and/or imprisonment. All signage shall include emergency contact information and shall be reviewed and approved by the spineflower preserve manager or qualified biologist. MV 4.3-71 Storm drain outfalls from proposed development areas shall only be installed uphill from spineflower preserve areas where necessary to retain pre-construction hydrological conditions within the spineflower preserves, sustain existing riparian and wetland vegetation communities, and/or allow for the restoration of currently disturbed areas to native riparian/alluvial vegetation communities. When located in a spineflower preserve area, storm drains must meet the following criteria: • Storm drains must not impact spineflower either directly or indirectly, and • Under no circumstances shall storm drains daylight onto steeply sloped areas or other areas that would cause erosion.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-72 Any surface water entering a spineflower preserve area from development areas during construction is required to pass through BMP measures, which will be described in the SWPPP. Storm drain outlets must contain hydrologic controls (e.g., adequate energy dissipaters) to prevent downstream erosion and stream channel down-cutting. Additionally, storm drain outlets must be designed based on pre- and post-construction hydrological studies (in accordance with Newhall Ranch Specific Plan Program EIR Mitigation Measure SP 4.6-69). Storm drains and permanent structural BMPs shall be designed by a licensed civil engineer. Requirements of MV 4.3-62 and MV 4.3-71, where applicable, shall be incorporated into the facility design and shall be subject to approval by the spineflower manager or qualified biologist. Long-term maintenance of storm drain BMPs will be the responsibility of the designated maintenance entity.	
	MV 4.3-73 Disturbed portions (*i.e.*, agricultural lands, disturbed lands, and developed lands) of the spineflower preserves, including buffers, will be restored through revegetation with native plant communities. In summary, areas that have greater than 30 percent relative cover by weeds will be restored to have relative cover comparable to that of existing occupied spineflower habitat. Habitat restoration and enhancement plans (including restoration plans) for areas within the preserves shall be prepared at the direction of the preserve manager by a qualified biologist and submitted to the County and CDFG for approval prior to implementation. In addition, Cal-IPC List A and B plants that are present within the spineflower preserve will be controlled. Restoration and enhancement efforts within the spineflower preserve areas shall be in conformance with the Spineflower Conservation Plan and will not include permanent irrigation.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-74 In the event that a spineflower preserve, or buffer, or a portion of a spineflower preserve, or buffer burns in a wildfire or suffers from mass movements (*e.g.*, landslides, slope sloughing, or other geologic events), the spineflower preserve manager and the Applicant shall promptly review the site and determine what action, if any, should be taken. The primary anticipated post-fire spineflower preserve management activity involves monitoring the site and controlling annual weeds that may invade burned areas following a fire event, especially when such weeds (that were not previously present or not present in similar densities) exceed the 30 percent maximum threshold (see **MV 4.3-73**). If fire-control lines or other forms of bulldozer damage occur in the spineflower preserves, these areas will be repaired and revegetated to pre-burn conditions or better. An emergency fire response plan will be prepared (in accordance with Mitigation Measure SP-4.6-72) prior to the establishment of the spineflower preserves and approved by CDFG and Los Angeles County Fire Department. The preserve manager will contact the Los Angeles County Fire Department at least once every 5 years to review the plan and consult with them on implementation of the plan. The same methods will be applied to mass-movement, landslide, or slope-sloughing types of events. This measure shall be implemented in conformance with the Spineflower Conservation Plan.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-75 Focused surveys for the undescribed species of everlasting (a special-status plant species) shall be conducted by a qualified botanist prior to the commencement of grading/construction activities wherever suitable habitat (primarily river terraces) could be affected by direct, indirect, or secondary construction impacts. The surveys shall be conducted no more than one year prior to commencement of construction activities within suitable habitat, and the surveys shall be conducted at a time of year when the plants can be located and identified. Should the species be documented within the project boundary, avoidance measures shall be implemented to minimize impacts to individual plants wherever feasible. These measures shall include minor adjustments to the boundaries/location of haul routes and other project features. If, due to project design constraints, avoidance of all plants is not possible, then further measures, described in **MV 4.3-76**, shall be implemented to salvage seeds and/or transplant individual plants. All seed collection and/or transplantation methods, as well as the location of the receptor site for seeds/plants (assumed to be within preserved open space areas of Newhall Ranch along the Santa Clara River), shall be coordinated with CDFG prior to impacting known occurrences of the undescribed everlasting. MV 4.3-76 For any individual project, or any phase of an individual project, to be located where undescribed everlasting plants may occur, the Applicant shall prepare and implement an Undescribed Everlasting Mitigation and Monitoring Plan prior to the issuance of grading permits.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-76 (continued) The Plan shall provide for replacement of individual plants to be removed at a minimum 1:1 ratio, within suitable habitat at a site where no future construction-related disturbance will occur. The plan shall specify the following: (1) the location of the mitigation site in protected/preserved areas within the Specific Plan site; (2) methods for harvesting seeds or salvaging and transplantation of individual plants to be impacted; (3) measures for propagating plants (from seed or cuttings) or transferring living specimens from the salvage site to the introduction site; (4) site preparation procedures for the mitigation site; (5) a schedule and action plan to maintain and monitor the mitigation area; (6) the list of criteria and performance standards by which to measure the success of the mitigation site (below); (7) measures to exclude unauthorized entry into the mitigation areas; and (8) contingency measures such as erosion control, replanting, or weeding to implement in the event that mitigation efforts are not successful. The performance standards for the Undescribed Everlasting Mitigation and Monitoring Plan shall be the following: (a) Within four years after reintroducing the undescribed everlasting to the mitigation site, the extent of occupied acreage and the number of established, reproductive plants will be no smaller than at the site lost for project construction. (b) Non-native species cover will be no more than 5 percent absolute cover through the term of the restoration. (c) Giant reed (*Arundo donax*), tamarisk (*Tamarix ramosissima*), perennial pepperweed (*Lepidium latifolium*), tree of heaven (*Ailanthus altissimus*), pampas grass (*Cortaderia selloana*), and any species listed on the California State Agricultural list (CDFA 2009) or Cal-IPC list of noxious weeds (Cal-IPC 2006, 2007) will not be present on the revegetation site as of the date of completion approval.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-77 A cowbird trapping program shall be implemented once vegetation clearing begins and maintained throughout the construction, maintenance, and monitoring period of the riparian restoration sites. A minimum of five traps shall be utilized, with at least one trap adjacent to the project site and one or two traps located at feeding areas or other CDFG-approved location. The trapping contractor may consult with CDFG to request modification of the trap location(s). CDFG must approve any relocation of the traps. Traps will be maintained beginning each year on April 1 and concluding on/or about November 1 (may conclude earlier, depending upon weather conditions and results of capture). The trapping contractor may also consult CDFG on a modified, CDFG-approved trapping schedule modification. The applicant shall follow CDFG and USFWS protocol. In the event that trapping is terminated after the first few years, subsequent phases of the development will require initiation of trapping surveys to determine whether re-establishment of the trapping program is necessary.	
	MV 4.3-78 Bridge and culvert designs, where practicable, shall provide roosting habitat for bats. A qualified biologist shall work with the project engineer in identifying and incorporating structures into the design that provide suitable roosting habitat for bat species occurring in the project area. The final design of the roosting structures would be chosen in consultation with CDFG.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-79 To preclude the invasion of Argentine ants into the spineflower preserves and their associated buffers, controls will be implemented using an integrated pest management (IPM) approach in accordance with the approved SCP. The controls include (1) P~~p~~roviding "dry zones" between urban development and spineflower populations, where typical soil moistures are maintained at levels below about 10% soil saturation, which will deter the establishment of nesting colonies of ants; and providing dry zone buffers of sufficient width to reduce the potential for Argentine ant activity within core habitat areas.~~;~~ (2) Where feasible, and/or appropriate, dry areas such as parking lots and roadways shall be built next to preserve boundaries. These will be designed to slope away from the preserve to avoid runoff entering the preserve.~~; (2) building dry areas such as parking lots and roadways next to preserve boundaries, and sloping these areas away from the spineflower preserves~~; (3)~~ constructing~~ Ppedestrian pathways placed next to preserves shall consist of decomposed granite or other gravel to minimize the holding of moisture, thereby preventing establishment of suitable habitat for Argentine ant colonies~~out of decomposed granite or other gravel to minimize the holding of moisture;~~; (4) E~~e~~nsuring that landscape container plants installed within 200 feet of spineflower preserves are ant free prior to installation~~;~~ to reduce the chance of colonies establishing in areas close to the preserves. (5) M~~m~~aintaining natural hydrological conditions in the spineflower preserves, including the buffers, through project design features~~; and~~ for roadways, French drains, irrigation systems, underground utilities, drainage pipes and fencing, storm drains, and any other BMP measures that apply to surface water entering the preserve areas. (6) ~~u~~Using drought-resistant plants in FMZs and minimizing irrigation to the extent feasible.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-80 The mitigation program shall incorporate applicable principles from the interagency Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks (60 FR 58605–58614) to the extent feasible and appropriate, particularly the guidance on administration and accounting. Nothing in the section 404 or section 2081 Permit or section 1605 Agreement shall preclude the applicant from selling mitigation credits to other parties wishing to use those permits or that agreement for a project and/or maintenance activity included in the permits/agreement. MV 4.3-81 The 1,518-acre Salt Creek area shall be offered for phased dedication to the public pursuant to Condition 42 of the approved Specific Plan. Using a "rough step" land dedication approach, irrevocable offers of dedication will be provided to CDFG for identified impact offsets in accordance with the Comprehensive Mitigation Implementation Plan (**MV 4.3-23**). The Salt Creek area includes approximately 629 acres of coastal scrub communities within both Ventura and Los Angeles counties. This land dedication shall be managed in conjunction with the 4,205-acre High Country SMA (containing 1,314 acres of coastal scrub communities). a. To facilitate wildlife movement between the north side of SR-126 and the Salt Creek area, enhancements will be made to the existing agricultural undercrossing and to the agricultural land at the base of Salt Creek as discussed in **MV 4.3-84**. A Wildlife Movement Enhancement Plan shall be submitted to the Corps and CDFG for approval prior to implementation. The plan shall include at the minimum the following:	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-81 (continued) i. A portion of the agricultural field on the north side of SR-126 will be dedicated to wildlife movement. Trees and/or scrubs will be planted in the agricultural field to guide wildlife into the existing undercrossing. ii. On the south side of SR-126 two rows of trees/scrubs will be planted to guide wildlife to the Santa Clara River. iii. A wildlife corridor will be created through the agricultural fields at the base of Salt Creek Canyon. (The second part of this mitigation measure (a.i. through a.iii.) has been identified to offset cumulative impacts to wildlife habitat, including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area but is not required for implementation with the Mission Village tract map.)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-82 Supplemental restoration of coastal scrub shall be conducted as an adaptive management measure pursuant to **MV 4.3-24**. Eight areas were identified in the Draft Newhall Ranch Mitigation Feasibility Report in the High Country SMA, Salt Creek area, and River Corridor SMA (Dudek 2007A) for coastal scrub restoration. In the event that coastal scrub restoration is required pursuant to **MV 4.3-24**, the applicant shall develop a Coastal Scrub Restoration Plan, subject to the approval of CDFG. The plan shall specify, at a minimum, the following: (1) the location of mitigation sites to be selected from suitable mitigation land in the High Country and Salt Creek areas identified in the Feasibility Study; (2) a description of "target" vegetation (native shrubland) to include estimated cover and abundance of native shrubs; (3) site preparation measures to include topsoil treatment, soil decompaction, erosion control, temporary irrigation systems, or other measures as appropriate; (4) methods for the removal of non-native plants (*e.g.*, mowing, weeding, raking, herbicide application, or burning); (5) the source of all plant propagules (*e.g.*, seed, potted nursery stock, *etc.* collected from within five miles of the restoration site), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-82 (continued) Habitat restoration/enhancement will be judged successful when: (1) percent cover and species richness of native species reach 50% of cover and species richness at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation. MV 4.3-83 a. As a supplement to **MV 4.3-1, MV 4.3-23** and **MV 4.3-31** through **MV 4.3-43**, and **MV 4.3-80**, additional habitat mitigation through replacement or enhancement of nesting/foraging habitat for least Bell's vireo will be provided for certain key habitat zones at higher ratios (identified as "key population areas" in **Figure 4.5-86**, Alternative 2 Impacts to Least Bell's Vireo Habitat). Southern willow scrub, southern cottonwood–willow riparian, arrow weed scrub, mulefat scrub, and Mexican elderberry scrub and woodland that provide nesting/foraging habitat for least Bell's vireo in "key population areas" shall be replaced or enhanced. All permanent loss to nesting/foraging habitat in key population areas shall be mitigated at a 5:1 ratio unless otherwise authorized by CDFG or USFWS. Temporary habitat loss of foraging/nesting habitat in key population areas shall be mitigated at a 2:1 ratio. The requirements for replacing habitat by either creating new habitat or removing exotic species from existing habitat shall follow the procedures outlined **in MV 4.3-1, MV 4.3-23** and **MV 4.3-31** through **MV 4.3-43**, and **MV 4.3-80**. To replace the lost functions of habitat located adjacent to the Santa Clara River due to noise impacts, all nesting/foraging habitat within the 60 dBA sound contour (associated with development site roadway improvements) shall be considered degraded. Nesting/foraging habitat within this area shall be mitigated at a ratio of 2:1.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-83 (continued) b. The loss of documented occupied nesting habitat for coastal California gnatcatcher shall be mitigated. If the coastal California gnatcatcher is identified nesting on site, the applicant will acquire or preserve nesting coastal California gnatcatcher habitat at a 3:1 ratio for impacts to documented occupied habitat, or by the ratio specified in **MV 4.3-31**, whichever is greater. Mitigation acquisition shall occur at an agreed-upon location as approved by the USFWS upon consultation. The applicant shall enter into a binding legal agreement regarding the preservation of occupied habitat describing the terms of the acquisition, enhancement, and management of those lands.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-84 Road undercrossings will be built in accordance with accepted design criteria to allow the passage of mountain lions and mule deer. The applicant shall prepare a Wildlife Movement Corridor Plan that specifically addresses wildlife movement corridors at San Martinez Grande, Chiquito Canyon, and Castaic Creek, which shall be monitored for one year prior to construction of the SR-126 widenings. The Plan shall address current movement that is occurring, the methods that will be implemented to provide for passage, including lighting, fencing, vegetation planting, the installation of bubblers to encourage wildlife usage, and the size of the passage. The applicant shall install motion cameras at these locations in consultation with CDFG and monitor these passages for a period of two years subsequent to constructing improvements. A report of the wildlife documented to utilize these crossings shall be provided to CDFG annually. In addition, the Salt Creek crossing west of the Project area will be enhanced prior to initiation of construction in Long Canyon (southern portion of the Homestead Village). This crossing will be monitored for one year at the initiation of RMDP development, for two years at the time the crossing is enhanced, and then for three years after Project buildout. Prior to the construction of adjacent developments, signs will be placed along the roads indicating potential wildlife crossings where mountain lions and mule deer are likely to cross. (This mitigation measure has been identified to offset cumulative impacts to wildlife habitat (including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area, but is not required for implementation with the Mission Village tract map.)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-85 At least 1,900 acres of Open Area within the Specific Plan area shall be offered for dedication to an NLMO in fee and/or by conservation easement. These 1,900 acres of the Open Area will be left as natural vegetation. Dedication of open areas lands shall be reported annually to CDFG. MV 4.3-86 Pre-construction surveys for San Emigdio blue butterfly shall occur in all areas containing host plants in sufficient density to support this species. A qualified Lepidoptera biologist shall conduct focused surveys at a time of year and during weather conditions when the detection of eggs, larvae, or adults is possible. All occupied habitat shall be mapped and the locations provided to CDFG. Should the removal of quail brush or other documented host plants from occupied San Emigdio blue butterfly habitat in Potrero Canyon or other areas be required, the plants shall be removed when eggs and larvae are not present (*i.e.,* mid-September to March). Removal of quail brush plants from the documented habitat in Potrero Canyon may only be conducted from April through early September if it is determined by a qualified biologist that eggs and/or larvae are not present on the plants to be removed. MV 4.3-87 The removal of quail brush or other documented host plants from any occupied San Emigdio blue butterfly habitat in Potrero Canyon or other areas shall be replaced at a minimum of a 1.5:1 ratio. The replacement plants shall be planted contiguous to the existing quail brush plants associated with the San Emigdio blue butterfly habitat. The success of the replanting shall be monitored for survival and vigor consistent with survivorship requirements of Mitigation Measure **MV 4.3-35** and **MV 4.3-36**.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-88 Prior to any construction activities occurring within 200 feet of any occupied San Emigdio blue butterfly habitat in Potrero Canyon or other areas, the boundaries of preserved areas of the habitat shall be clearly marked with flagging. The flagging would serve to identify the boundaries of the habitat to construction personnel and to prevent the inadvertent construction-related loss of quail brush or other host plants associated with the habitat. Construction personnel working in the area shall be informed that the removal of or damage to any flagged quail brush or other host plants located outside the disturbance footprint is prohibited. MV 4.3-89 The Newhall Ranch JPA will have overall responsibility for recreation within and conservation of the High Country. The Newhall Ranch JPA and ~~Project applicant and/or~~ NLMO shall develop and implement a conservation education and citizen awareness program for the High Country SMA informing the public of the special-status resources present within the High Country SMA and providing information on common threats posed by the presence of people and pets to those resources. The NLMO shall install trailhead and trail signage indicating the High Country SMA is a biological conservation area and ~~requesting~~ advising that people and their animals must stay on existing trails at all times and that violators may be cited. The NLMO shall provide quarterly maintenance patrols to remove litter and monitor trail expansion and fire hazards within the High Country SMA, funded by the JPA.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-90 The status of the Potrero Canyon San Emigdio blue butterfly colony shall be monitored by a qualified biologist for a period of five years after Potrero Canyon Road construction completion/operation commencement to evaluate whether the operation of the road may be contributing to a population decline in the colony. Should it be determined that a population decline is occurring, habitat creation for the San Emigdio blue butterfly shall be implemented in suitable locations contiguous to the habitat but away from the road. A habitat creation plan will be prepared that details the location and methods for creating habitat, that specifies success criteria, and that describes measures that will be implemented in the event that the habitat creation does not stabilize the San Emigdio blue butterfly population. MV 4.3-91 The installation of new, or relocation of existing, utility poles and phone and cell towers shall be coordinated with CDFG where located in the High Country SMA and Salt Creek area. The applicant or SCE shall install utility poles, phone, and cell towers in conformance with APLIC standards for collision-reducing techniques as outlined in Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (APLIC 2006). MV 4.3-92 a. All surfaces on new antennae and phone/utility towers shall be designed and operated with anti-perching devices in conformance with APLIC standards to deter California condors and other raptors from perching. During construction the area shall be kept clean of debris, such as cable, trash, and construction materials. The applicant shall collect all microtrash and litter (anything shiny, such as broken glass), vehicle fluids, and food waste from the Project area on a daily basis. Workers will be trained on the issue of microtrash: what constitutes microtrash, its potential effects on California condors, and how to avoid the deposition of microtrash.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-92 (continued) b. The applicant shall retain a qualified biologist with knowledge of California condors to monitor construction activities within the Project area. The resumes of the proposed biologist(s) will be provided to CDFG for concurrence. This biologist(s) will be referred to as the authorized biologist hereafter. During clearing and grubbing of construction areas, the qualified biologist shall be present at all times. During mass grading, construction sites shall be monitored on a daily basis. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed. If condors are observed landing in the Project area, the applicant shall avoid further construction within 500 feet of the sighting until the animals have left the area, or as otherwise authorized by CDFG and USFWS. All condor sightings in the Project area will be reported to CDFG and USFWS within 24 hours of the sighting. Should condors be found roosting within 0.5 mile of the construction area, no construction activity shall occur between one hour before sunset to one hour after sunrise, or until the condors leave the area, or as otherwise directed by USFWS. Should condors be found nesting within 1.5 miles of the construction area, no construction activity will occur until further authorization occurs from CDFG and USFWS.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.3 BIOTA (CONTINUED)		
	MV 4.3-92 (continued) c. To further protect California condor potentially foraging in the Project area over the long term from negative interactions with humans and/or artificial structures, the applicant or the JPA or the NLMO shall remove dead cattle that are found or reported within 1,000 feet of a residential or commercial development boundary. Dead cattle shall be relocated to a predetermined location within the High Country SMA or Salt Creek area. The locations where carcasses shall be placed shall be a minimum of 1,000 feet from a development area boundary. Appropriate locations for transfer of carcasses include open grasslands and oak/grassland areas where condors can readily detect carcasses and easily land and take off without encountering physical obstacles such as powerlines and other utility structures. The proposed locations would be selected and approved by the CDFG and USFWS. Pursuant to this measure, a telephone number for reporting dead cattle shall be provided and actively maintained. Any cattle carcasses transferred to the relocation areas shall be reported to the USFWS Condor group.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 VISUAL QUALITIES		
The Mission Village project would significantly alter the visual characteristics of the Santa Clara River/SR-126 visual corridor, the Interstate 5 (I-5) visual corridor, Airport Mesa, and the scenic vistas visible from various vantage points surrounding the project site. While the Mission Village project, for the most part, is not removing or replacing prominent visual features, the images of residential development, roadways, bridges, and other human activity would be a significant change from the existing site characteristics, which could be viewed as a substantial adverse effect. Such development would also introduce sources of outdoor illumination that do not presently exist. Outdoor lighting, such as streetlights and traffic signals, are essential safety features in development projects that include construction of new streets and intersections, and such lighting cannot be eliminated if the proposed project is implemented. Chapters 3 and 4 of the Specific Plan contain Development Regulations and Design Guidelines, respectively, that apply to the Mission Village project. These regulations and guidelines address grading, lighting, fencing, landscaping, signage, architecture, and site planning for subsequent subdivisions within the Newhall Ranch Specific Plan. Despite such features, the identified significant visual impacts would still result from the change in the visual character of the site from rural to urban. There is no feasible mitigation beyond that already adopted as part of the Newhall Ranch Specific Plan Program EIR to reduce the identified impacts to a level below significant. Consequently, such significant visual impacts would remain significant and unavoidable, as found in the Newhall Ranch Specific Plan Program EIR.	SP 4.7-1 In conjunction with the development review process set forth in Chapter 5 of the Specific Plan, all future subdivision maps and other discretionary permits which allow construction shall incorporate the Development Guidelines (Specific Plan, Chapter 3) and Design Guidelines (Specific Plan, Chapter 4), and the design themes and view considerations listed in the Specific Plan. *(Mission Village Vesting Tentative Tract Map 61105 and the applicable related discretionary permits incorporate the Specific Plan Development and Design Guidelines consistent with the requirements of the Specific Plan and this mitigation measure.)* SP 4.7-2 In design of residential tentative tract maps and site planning of multifamily areas and Commercial and Mixed-Use land use designations along SR-126, the following Design Guidelines shall be utilized: • Where the elevations of buildings will obstruct the views from SR-126 to the south, the location and configuration of individual buildings, driveways, parking, streets, signs and pathways shall be designed to provide view corridors of the river, bluffs, and the ridge lines south of the river. Those view corridors may be perpendicular to SR-126 or oblique to it in order to provide for views of passengers within moving vehicles on SR-126. • The Community Park between SR-126 and the Santa Clara River shall be designed to promote views from SR-126 of the river, bluffs, and ridge lines to the south of the river. (This requirement is not applicable to Mission Village.) • Residential site planning guidelines set forth in Section 4.3.1, Residential and Architectural Guidelines, set forth [in] Section 4.4.1, Residential, shall be employed to ensure that the views from SR-126 are aesthetically pleasing and that views of the river, bluffs, and ridge lines south of the river are preserved to the extent practicable.	After implementation of the recommended mitigation measures, visual quality impacts would remain significant and unavoidable.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.4 VISUAL QUALITIES (continued)		
	SP 4.7-2 (continued) • Mixed-Use and the Commercial site planning guidelines set forth in Section 4.3.2 and Architectural Guidelines set forth Section 4.4.2 shall be incorporated to the extent practicable in the design of the Riverwood Village Mixed-Use and Commercial land use designations to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs, and ridge lines south of the river. (This requirement is not applicable to Mission Village.) • Landscape improvements along SR-126 shall incorporate the Landscape Design guidelines, set forth in Section 4.6 in order to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs, and ridge lines south of the river. *(This requirement is not applicable to Mission Village.)* *(To the extent the requirements of this mitigation measure apply to the Mission Village project, the Mission Village site plan has been designed to retain view corridors consistent with the measure's requirements.)*	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS			
This section presents an analysis of the impacts of the proposed project relative to traffic/access. The analysis presented here is based upon the traffic technical report prepared for the proposed Mission Village project by Austin-Foust Associates, Inc., dated October 1, 2010, as supplemented by the following technical memoranda: Mission Village Traffic Impact Analysis - Supplemental Freeway Analysis, AFA (November 16, 2010); Long-Range Buildout Conditions Without Potrero Canyon Road Bridge, AFA (February 22, 2011); Mission Village Traffic Impact Analysis - Existing Plus Project Scenario, AFA (March 1, 2011); Mission Village (Newhall Ranch) I-5 Share Calculations, AFA (March 8, 2011); Mission Village Revised Project Trip Generation Estimates, AFA (March 8, 2011); and Mission Village - Responses to Comments Analysis, AFA (April 29, 2011).~~which is included in its entirety~~ A copy of the Traffic Analysis is in ***Appendix 4.5*** *of this EIR. A copy of each of the supplemental AFA technical memoranda is included in Final EIR,* ***Appendix F4.5****.* a. Construction Impacts *During construction of the Mission Village project, trucks to deliver construction equipment and building supplies and to haul away demolition debris potentially would disrupt traffic on local roadways resulting in a short-term impact that could adversely affect regional or local roadway operations. With implementation of traffic management controls for construction vehicles where necessary, no significant traffic impacts associated with construction of the project would occur.*	SP 4.8-1	The applicants for future subdivision maps which permit construction shall be responsible for funding and constructing all on-site traffic improvements except as otherwise provided below. The obligation to construct improvements shall not preclude the applicant's ability to seek local, state, or federal funding for these facilities. *(All on-site traffic improvements included as part of the Mission Village project will be funded and/or constructed by the project applicant.)*	With implementation of the identified mitigation measures, the proposed project's traffic/access impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
	SP 4.8-2	Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall indicate the specific improvements for all on-site roadways which are necessary to provide adequate roadway and intersection capacity as well as adequate right-of-way for the subdivision and other expected traffic. Transportation performance evaluations shall be approved by Los Angeles County Department of Public Works according to standards and policies in effect at that time. The transportation performance evaluation shall form the basis for specific conditions of approval for the subdivision. *(This EIR,* ***Section 4.5****, provides the required transportation performance evaluation and, in combination with* ***Project Description, Section 1.0****, indicates the on-site roadway improvements necessary to provide adequate capacity.)*	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
b. Operational Impacts *At project buildout, which is anticipated in Year 2021, Mission Village would generate approximately 58,000 average daily vehicle trips. Consistent with County of Los Angeles, City of Santa Clarita, and Caltrans traffic impact analysis guidelines, the impacts of the proposed project relative to the capacity of the surrounding roadways were analyzed under ~~three~~ four different scenarios: (1) existing plus ambient plus project conditions; (2) 2021 project buildout cumulative conditions; and (3) long-range (2035) cumulative conditions.* *Under existing plus ambient plus project conditions, the project plus ambient traffic would result in significant impacts at the Commerce Center Drive and SR-126 intersection. Mitigation is proposed that would reduce the identified impact to a level below significant.*		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
Under 2021 project buildout cumulative conditions, the project, in combination with cumulative traffic, would result in significant impacts at the following intersections (the applicable jurisdiction is listed in parenthetical): • *I-5 SB Ramps & Henry Mayo Drive (SR-126) (Caltrans/County);* • *I-5 SB Ramps & Valencia Boulevard (Caltrans/County);* • *The Old Road & Rye Canyon Road (County);* • *The Old Road & McBean Parkway (County);* • *McBean Parkway & Magic Mountain Parkway (City);* • *McBean Parkway & Newhall Ranch Road (City);* • *Orchard Village Road & McBean Parkway (City);* • *Bouquet Canyon Road & Newhall Ranch Road (City); and,* • Commerce Center Drive & SR-126 (County). *Mitigation in the form of roadway capacity improvements is proposed that would reduce the identified impacts to a level below significant.* *Lastly, under long-range (2035) cumulative conditions, the project would contribute to significant long-term cumulative impacts at the following intersections:* • *I-5 SB Ramps & SR-126 (Caltrans/County);* • *The Old Road & I-5 SB Ramps (Caltrans/County);* • *I-5 SB Ramps & Magic Mountain Parkway (Caltrans/County);* • *I-5 NB Ramps & Magic Mountain Parkway (Caltrans/City);* • *I-5 SB Ramps & Valencia Boulevard (Caltrans/County);* • *I-5 SB Ramps & McBean Parkway (Caltrans/County);*	SP 4.8-3 The applicants for future subdivisions shall provide the traffic signals at the 15 locations labeled "B" through "P" in Figure 4.8-17 [of the Newhall Ranch Specific Plan Final EIR] as well as any additional signals warranted by future subdivision design. Signal warrants shall be prepared as part of the transportation performance evaluations noted in Mitigation Measure 4.8-2 [of the Newhall Ranch Specific Plan Final EIR]**.** *[Ten (10) intersections located within the Mission Village site will be signalized intersections, including the three (3) intersections depicted as signalized by* Specific Plan *Figure 4.8-17: Commerce Center Drive and "A" Street, Commerce Center Drive and Magic Mountain Parkway, and Magic Mountain Parkway and "A" Street. This EIR,* ***Section 4.5****, in combination with the traffic analysis presented in EIR* ***Appendix 4.5****, provides the required signal warrants.]* SP 4.8-4 All development within the *Specific Plan* shall conform to the requirements of the Los Angeles County Transportation Demand Management (TDM) Ordinance SP 4.8-5 The applicants for all future subdivision maps which permit construction shall consult with the local transit provider regarding the need for, and locations of, bus pull-ins on highways within the *Specific Plan* area. All bus pull-in locations shall be approved by the Department of Public Works, and approved bus pull-ins shall be constructed by the applicant.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
• *I-5 SB Ramps/Marriott Way & Pico Canyon Road (Caltrans/County);* • *I-5 NB On/Off & Lyons Avenue (Caltrans/City);* • *The Old Road & Rye Canyon Road (County);* • *The Old Road & Magic Mountain Parkway (County);* • *The Old Road & McBean Parkway (County);* • *Tourney Road & Magic Mountain Parkway (City);* • *McBean Parkway & Magic Mountain Parkway (City);* • *McBean Parkway & Newhall Ranch Road (City);* • *Wiley Canyon Road & Lyons Avenue (City);* • *Orchard Village Road & Wiley Canyon (City);* • *Orchard Village Road & McBean (City);* • *Valencia Boulevard & Magic Mountain Parkway (City);* • *Bouquet Canyon Road & Newhall Ranch Road (City); and* • *Commerce Center Drive & SR-126 (County/Caltrans).* *Mitigation in the form of capacity improvements is proposed that would reduce the project's contribution to the identified impacts to a level below significant.* *No significant impacts would occur to Congestion Management Program (CMP) intersections or CMP freeway segments, or to the Interstate 5 (I-5) mainline. With respect to transit, the project potentially would increase demand for transit ridership beyond the capacity of existing services, thereby resulting in a potentially significant impact. Mitigation is proposed that would reduce the identified impacts to a level below significant.*	SP 4.8-6 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall determine the specific improvements needed to each off-site arterial and related costs in order to provide adequate roadway and intersection capacity for the expected Specific Plan and General Plan buildout traffic trips. The transportation performance evaluation shall be based on the Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant shall be required to fund its fair share of improvements to these arterials, as stated on Table 4.8-18 [of the Newhall Ranch Specific Plan Final EIR]. The applicants' total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor-Serving, Mixed-Use, and Commercial) in the *Specific Plan*, and shall be a fee to be paid to the County and/or the City at each building permit. For off-site areas within the County unincorporated area, the applicant may construct improvements for credit against or in lieu of paying the fee. (*This mitigation measure may or may not be applicable depending upon approval of other Newhall Ranch Specific Plan subdivisions in process.)*	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)			
Under existing plus project conditions, which is a hypothetical scenario that assumes immediate full project buildout and does not account for cumulative traffic growth and future roadway improvements and, therefore, is presented for information purposes only, the project would result in significant impacts at the following intersections and freeway segments: • *The Old Road & Rye Canyon Road (County [impacts mitigated by EIR mitigation])* • *McBean Parkway & Magic Mountain Parkway (City [impacts mitigated by EIR mitigation])* • *McBean Parkway & Newhall Ranch Road (City [impacts mitigated by EIR mitigation])* • *Bouquet Canyon Road & Newhall Ranch Road (City [impacts mitigated by EIR mitigation])* • *Commerce Center Drive & SR-126 (Caltrans/County [impacts mitigated by EIR mitigation])* • So*uthbound I-5 between Calgrove & SR-14 (Caltrans [impacts mitigated by I-5 Improvement Project])* • *I-5 South of SR-14 between SR-14 and I-210 (Caltrans [impacts mitigated by completion of I-5/SR-14 Direc*t HOV Connector project]) *As noted, the impacts identified under this scenario would be mitigated to a level below significant with implementation of EIR mitigation improvements, or improvements presently being constructed or programmed for construction.*	SP 4.8-7	Each future performance evaluation which shows that a future subdivision map will create significant impacts on SR-126 shall analyze the need for additional travel lanes on SR-126. If adequate lane capacity is not available at the time of subdivision, the applicant of the subdivision shall fund or construct the improvements necessary to serve the proposed increment of development. Construction or funding of any required facilities shall not preclude the applicant's ability to seek state, federal, or local funding for these facilities. *(The future performance evaluation presented in this EIR, **Section 4.5**, determined that the Mission Village project would cause significant impacts at the Chiquito Canyon Road/SR-126 intersection under the Stage 1 plus Related Projects scenario, and at the Commerce Center Drive/SR-126 intersection at buildout, and that the project would be responsible for its fair-share of improvements to these intersections.)*	
	SP 4.8-8	Project-specific environmental analysis for future subdivision maps which allow construction shall comply with the requirements of the CMP in effect at the time that subdivision map is filed. *(The future performance evaluation presented in this EIR, **Section 4.5**, complies with the requirements of the Congestion Management Program presently in effect.)*	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	SP 4.8-9 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation evaluation including all of the Specific Plan land uses which shall determine the specific improvements needed to the following intersections with SR-126 in the City of Fillmore and community of Piru in Ventura County: "A," "B," "C," "D," and "E" Streets, Old Telegraph, Olive, Central, Santa Clara, Mountain View, El Dorado Road, and Pole Creek (Fillmore), and Main/Torrey and Center (Piru). The related costs of those intersection improvements and the project's fair share shall be estimated based upon the expected Specific Plan traffic volumes. The transportation performance evaluation shall be based on the Los Angeles County Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant's total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor Center, Mixed Use, and Commercial) in the *Specific Plan*, and shall be a fee to be paid to the City of Fillmore and the County of Ventura at each building permit. (*This mitigation measure may or may not be applicable depending upon approval other Newhall Ranch Specific Plan subdivisions in process.)*	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	SP 4.8-10 The Specific Plan is responsible to construct or fund its fair-share of the intersections and interchange improvements indicated on Table 4.8-18 [of the Newhall Ranch Specific Plan Final EIR]. Each future transportation performance evaluation required by **Mitigation Measure 4.8-2** [of the Newhall Ranch Specific Plan Final EIR] which identifies a significant impact at these locations due to subdivision map-generated traffic shall address the need for additional capacity at each of these locations. If adequate capacity is not available at the time of subdivision map recordation, the performance evaluation shall determine the improvements necessary to carry Specific Plan generated traffic, as well as the fair share cost to construct such improvements. If the future subdivision is conditioned to construct a phase of improvements which results in an overpayment of the fair-share cost of the improvement, then an appropriate adjustment (offset) to the fees paid to Los Angeles County and/or City of Santa Clarita pursuant to **Mitigation Measure 4.8-6**, above, shall be made. *(The transportation performance evaluation presented in this EIR, **Section 4.5**, fulfills the requirements of this* Specific Plan *mitigation measure relative to Mission Village.)*	
	SP-4.8-11 The applicant of the Newhall Ranch Specific Plan shall participate in an I-5 developer fee program, if adopted by the Board of Supervisors for the Santa Clarita Valley. *(The Board of Supervisors has not adopted a developer fee program for the Santa Clarita Valley. However, the applicant currently is in negotiations with Caltrans regarding a funding agreement.).*	
	SP-4.8-12 The applicant of the Newhall Ranch Specific Plan shall participate in a transit fee program, if adopted for the entire Santa Clarita Valley by Los Angeles County and City of Santa Clarita. *(The applicant will be required to pay the applicable transit fees in place at the time of map recordation.)*	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)			
	SP-4.8-13	Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a traffic analysis approved by the Los Angeles County Department of Public Works. The analysis will assess project and cumulative development (including an existing plus cumulative development scenario under the County's Traffic Impact Analysis Report Guidelines [TIA] and its Development Monitoring System [DMS]). In response to the traffic analysis, the applicant may construct off-site traffic improvements for credit against, or in lieu of paying, the mitigation fees described in **Mitigation Measure 4.8-6** [of the Newhall Ranch Specific Plan Final EIR]. If future subdivision maps are developed in phases, a traffic study for each phase of the subdivision map may be submitted to determine the improvements needed to be constructed with that phase of development. *(The traffic analysis presented in this **Section 4.5** fulfills the requirements of this* Specific Plan *mitigation measure.)*	
	MV 4.5-1	28. The Old Road & McBean Parkway - Consistent with the milestones established in the most current County Department of Public Works (DPW) approved Westside Roadway Phasing Analysis, the project applicant shall stripe a third southbound through lane and a westbound right-turn lane at the intersection. Detailed signing and striping plans and traffic signal plans shall be submitted to the County Department of Public Works for review and approval. (*The Mission Village project's fair-share responsibility for the improvements identified in this mitigation measure is 27% in the cumulative condition. This fair-share information is provided to facilitate any future action by the Project applicant to seek participatory funding from other development unrelated to the Mission Village project. Please refer to EIR **Appendix 4.5**, AFA Traffic Impact Analysis, Appendix J, for fair-share calculations.*)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-2 94. Commerce Center Drive & SR-126 - The project applicant shall reconstruct the existing intersection as a grade-separated interchange prior to issuance of building permits for the 2,780th residential unit and 935,000 square feet of non-residential commercial uses (or an equivalent traffic-generating combination thereof), or as otherwise provided in the most current County DPW approved Westside Roadway Phasing Analysis, whichever would require reconstruction of the intersection first. Detailed signing and striping plans and traffic signal plans shall be submitted to the County Department of Public Works for review and approval. (*The Mission Village project's fair-share responsibility for the improvements identified in this mitigation measure is 44.8% in the cumulative condition. This fair-share information is provided to facilitate any future action by the Project applicant to seek participatory funding from other development unrelated to the Mission Village project. Please refer to EIR* ***Appendix 4.5****, AFA Traffic Impact Analysis, Appendix J, for fair-share calculations.*)	
	MV 4.5-3 7. I-5 Southbound Ramps & SR-126 – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to stripe a fourth westbound through lane. (Project Share = 14.3 percent) Please refer to EIR **Appendix 4.5**, AFA Traffic Impacts Analysis, Appendix J, for fair-share calculations.)	
	MV 4.5-4 12. I-5 Southbound Ramps & Valencia Boulevard - Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to re-stripe the second westbound free-flow right-turn lane to a third westbound through lane/shared free-flow right-turn lane. (Project Share = 7.5 percent)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-5 25. The Old Road & Rye Canyon Road - Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to: (i) add a second northbound through lane and a second southbound left-turn lane; and (ii) convert the northbound and westbound free-flow right-turn lanes to conventional right-turn lanes with overlap phasing. (Project Share = 7.1 percent) 28. The Old Road & McBean Parkway - The project's compliance with **mitigation MV 4.5-1** would mitigate the project's contribution to the identified significant impact and no further mitigation is required. MV 4.5-6 45. McBean Parkway/Magic Mountain Parkway – The improvements recommended to mitigate the project's identified significant impacts at this intersection are to re-stripe for a third eastbound through lane and add a right-turn overlap phase for a westbound right-turn lane. These improvements are located within the Valencia B&T District and~~,~~ therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvement and, under such scenario, shall be entitled to reimbursement from the Valencia B&T District for the full cost of the improvement, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis.~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-7 48. McBean Parkway/Newhall Ranch Road – The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) Re-stripe for a fourth westbound through lane; and (ii) ~~Reconstruct~~ Re-stripe the northbound approach to provide dual right-turn lanes in conjunction with appropriate pedestrian safety enhancements ~~remove the pork-chop island and reconfigure as conventional dual right-turn lanes~~. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (7%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis.~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-8 55. Orchard Village & McBean Parkway – The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) add a separate southbound left-turn lane; (ii) add a separate southbound through lane; (iii) add a separate southbound right-turn lane; and (iv) reconfigure the existing southbound right-turn lane as a shared left-turn through lane, as identified in the mitigation for the Henry Mayo Newhall Memorial Hospital expansion project. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the project applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (3%) and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. ~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~ (Note: In the event the above improvements are implemented as part of the Henry Mayo Newhall Memorial Hospital expansion project, Mission Village would no longer result in significant impacts at this intersection and no mitigation would be necessary.)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-9 66. Bouquet Canyon Road & Newhall Ranch Road – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to reconfigure the second eastbound right-turn lane to a shared through/right-turn-lane ~~stripe a third eastbound through lane while maintaining three eastbound left-turn lanes and two eastbound right-turn lanes~~. This improvement is located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (4%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis.~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	94. Commerce Center Drive & SR-126 - The project's compliance with **Mitigation MV 4.5-2** would mitigate the project's contribution to the identified significant impact and no further mitigation is required. MV 4.5-10~~6~~ Applicable transit mitigation fees shall be paid by the project applicant at the time of building permit issuance, unless modified by an approved transit mitigation agreement. MV 4.5-11~~7~~ Prior to the commencement of project construction activities, the project applicant shall institute construction traffic management controls in accordance with the California Department of Transportation (Caltrans) traffic manual. These traffic management controls shall include measures determined on the basis of site-specific conditions including, as appropriate, the use of construction signs (e.g., "Construction Ahead") and delineators, and private driveway and cross-street closures.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-12~~8~~ Traffic signals shall be installed at the following intersections within the project site. The design and construction of the traffic signals shall be the sole responsibility of the project. The signals shall be in place to the satisfaction of the County Department of Public Works. Detailed signing and striping plans and traffic signal plans shall be submitted to Public Works for review and approval: • B Street at Magic Mountain Parkway; • A Street at Magic Mountain Parkway; • Commerce Center Drive at A Street; • KK Drive/HH Street at Magic Mountain Parkway; • II Drive at Magic Mountain Parkway; • Westridge Parkway at Magic Mountain Parkway; • Commerce Center Drive at Magic Mountain Parkway; • Commerce Center Drive at DD Drive; • Commerce Center Drive at GG Street; and • Westridge Parkway at QQ Street (Fire Station Signal). MV 4.5-13~~9~~ The project applicant, or the current owner of the development, shall monitor the following intersections for the installation of traffic signals once the Mission Village elementary school is opened and every year thereafter for up to five years after the certificate of occupancy of the last residential unit of Mission Village (excluding age restricted/qualified residential units and residential units within the Saugus School District) is issued and the full planned occupancy of 900 students for the school is reached (or fewer students if official documentation from the Newhall School District shows no increase in student enrollment for five consecutive school years): • A Street at B Street/CC Drive; • Q1 Street at A Street; and • HH Street/R Street at A Street.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-13~~9~~ (continued) The referenced monitoring shall include the submittal of annual traffic signal warrant analyses to the County Department of Public Works for review and approval. At the time, if any, traffic signals are warranted, the applicant shall enter into a secured agreement/bond with Public Works to guarantee the installation of traffic signals, design the necessary striping and signal plans, and construct the signals to the satisfaction of Public Works. Any security for the traffic signal construction submitted will be returned once the construction is completed to the satisfaction of Public Works or at the expiration of the referenced monitoring program. MV 4.5-14~~0~~ The project shall install a traffic signal at the following location after detailed signing and striping plans and traffic signal plans have been reviewed and approved by the County Department of Public Works: • Westridge Parkway at Old Rock Road.\ MV 4.5-15~~1~~ Prior to recordation of the first tract map in Mission Village, a revised Westside Roadway Phasing Analysis (RPA), prepared and submitted by the project applicant, shall be reviewed and approved by the County Department of Public Works (DPW). This RPA shall update the previously approved RPA and identify the necessary improvements and residential unit thresholds (timing requirements) for those improvements for Mission Village based on then-current phasing assumptions. The revised RPA shall include actual traffic counts on newly constructed roadways and/or at intersections where traffic mitigation measures have been carried out. Subsequent updates of the RPA shall be prepared based on the following development thresholds: i) 3,176 residential units and 13.17 million square feet non-residential uses; ii) 6,066 residential units and 14.87 million square feet non-residential uses;	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-15~~1~~ (continued) iii) 14,515 residential units and 16.00 million square feet non-residential uses; iv) 21,373 residential units and 17.65 million square feet non-residential uses; v) 25,001 residential units and 19.78 million square feet non-residential uses; and vi) 27,615 residential units and 22.08 million square feet non-residential uses. In addition, the applicant shall submit to DPW for review and approval an annual report, due January 30th for the prior year, identifying the number and type of residential and commercial building permits issued for Mission Village (and any other development within the Westside Santa Clarita area). The purpose of this annual report will be to track development progress against the thresholds identified in the AFA Traffic Impact Analysis and the then-current RPA. 7. I-5 SB Ramps & Henry Mayo Drive (SR-126) - The project's compliance with **mitigation MV 4.5-3** would mitigate the project's contribution to the identified significant impact and no further mitigation is required. MV 4.5-16~~2~~ 9. The Old Road & I-5 SB Ramps – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to: (i) add a second northbound right-turn lane; (ii) add a second southbound left-turn lane; (iii) add a third southbound through lane; and (iv) convert the shared westbound left/right-turn lane to a second westbound left-turn lane and add a right-turn lane. (Project Share = 1.4 percent. Please refer to EIR **Appendix 4.5**, AFA Traffic Impacts Analysis, Appendix J, for fair-share calculations.)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-17~~3~~ 10. I-5 SB Ramps & Magic Mountain Parkway – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to re-stripe the shared southbound left-turn/through lane to a left-turn lane and the first southbound right-turn lane to a shared through/left-turn lane (Project Share = 19.7 percent) MV 4.5-18~~4~~ 11. I-5 NB Ramps & Magic Mountain Parkway – ~~Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost~~ The improvement recommended to mitigate the project's identified significant impacts at this intersection is to re-stripe the shared northbound through/right-turn lane to a shared left-turn/through/right-turn lane. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvements and, under such scenario, shall be entitled to reimbursement from the Valencia B&T District for the full cost of the improvements, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis. ~~(Project Share = 17.6 percent)~~ 12. I-5 SB Ramps & Valencia Boulevard - The project's compliance with **mitigation MV 4.5-4** would mitigate the project's contribution to the identified significant impact and no further mitigation is required.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-19~~5~~ 14. I-5 SB Ramps & McBean Parkway - Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the costs to add a second southbound left-turn lane. (Project Share = 12.6%.)	
	MV 4.5-20~~16~~ 16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue - Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the costs to add: (i) a left-turn phase for the westbound left-turn lane (can be protected/permissive configuration); and (ii) right-turn overlap phasing for the northbound right-turn lane. (Project Share = 4.7% percent.)	
	MV 4.5-22~~17~~ 25. The Old Road & Rye Canyon Road – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, and in addition to compliance with mitigation MV 4.5-5, the project applicant shall fund its fair share of the costs to: (i) add a third northbound through lane; (ii) add a third southbound through lane; and (iii) add a second and third westbound left-turn lane. (Project Share = 7.1 percent) (Note: This mitigation is supplemental to **mitigation MV 4.5-5**.)	
	MV 4.5-23~~18~~ 26. The Old Road & Magic Mountain Parkway - Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to add right-turn overlap phasing for the southbound right-turn lane. (Project Share = 21.1)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	28. The Old Road & McBean Pkwy – The project's compliance with **mitigation MV 4.5-1** would mitigate the project's contribution to the identified significant impact and no further mitigation is required. MV 4.5-24 37. Tourney & Magic Mountain Parkway – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to stripe a fourth eastbound through lane. This improvement is located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvement and, under such scenario, shall be entitled to reimbursement from the Valencia B&T District for the full cost of the improvement, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis. ~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	45. McBean Parkway & Magic Mountain Parkway – The project's compliance with mitigation MV 4.5-6 would mitigate the project's contribution to the identified significant impact and no further mitigation is required.~~The improvements recommended to mitigate the project's identified significant impacts at this intersection are to re-stripe for a third eastbound through lane and add a right-turn overlap phase for a westbound right-turn lane. These improvements are located within and will be constructed through the Valencia B&T District. Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~ 48. McBean Parkway & Newhall Ranch Road – The project's compliance with mitigation MV 4.5-7 would mitigate the project's contribution to the identified significant impact and no further mitigation is required.~~ The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) Re-stripe for a fourth westbound through lane; and (ii) Reconstruct the northbound approach to remove the pork-chop island and reconfigure as conventional dual right-turn lanes. These improvements are located within and will be constructed through the Valencia B&T District. Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-25 51. Wiley Canyon & Lyons – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to re-stripe the eastbound right-turn lane to a third through lane (shared through/right-turn lane). This improvement is located within the Via Princessa B&T District and, therefore, it is expected the improvements will be constructed through the Via Princessa B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvement and, under such scenario, shall be entitled to reimbursement from the Via Princessa B&T District for the full cost of the improvement, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis.~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-26 54. Orchard Village & Wiley Canyon – The improvement recommended to mitigate the project's identified significant impact at this intersection is to stripe a northbound right-turn lane. This improvement is located within the Via Princessa B&T District and, therefore, it is expected the improvement will be constructed through the Via Princessa B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (2%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. ~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~ (Note: In the event a northbound right-turn lane is striped as part of the Henry Mayo Newhall Memorial Hospital expansion project, the improvement recommended to mitigate the project's identified significant impact at this intersection is to add a second southbound left-turn lane and remove the existing southbound right-turn lane.)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	55. Orchard Village & McBean Parkway – The project's compliance with mitigation MV 4.5-8 would mitigate the project's contribution to the identified significant impact and no further mitigation is required.~~The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) add a separate southbound left-turn lane; (ii) add a separate southbound through lane; (iii) add a separate southbound right-turn lane; and (iv) reconfigure the existing southbound right-turn lane as a shared left-turn through lane, as identified in the mitigation for the Hospital expansion project. These improvements are located within and will be constructed through the Valencia B&T District. Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-27 57. Valencia Boulevard & Magic Mountain Parkway – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to add a second westbound left-turn lane by removing or relocating the existing east leg raised median. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (6%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. ~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~ (Note: In the event a second westbound left-turn lane is added as part of the Henry Mayo Newhall Memorial Hospital expansion project, the improvement recommended to mitigate the project's identified significant impact at this intersection is to reinstate a dedicated westbound right-turn lane (the Hospital project would remove the existing right-turn lane) and add a third eastbound through lane.)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	MV 4.5-28 66. Bouquet Canyon Road & Newhall Ranch Road – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to restripe ~~a third~~ the eastbound approach to consist of two ~~through lane while maintaining three~~ eastbound left-turn lanes, four eastbound through lanes, and two eastbound right-turn lanes. This improvement is located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvement as calculated based on project traffic volumes (4%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. ~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~ (Note: This mitigation is supplemental to mitigation MV 4.5-9.)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.5 TRAFFIC/ACCESS (CONTINUED)		
	94. Commerce Center Drive & SR-126 - The project's compliance with **mitigation MV 4.5-2** would mitigate the project's contribution to the identified significant impact and no further mitigation is required. MV 4.5-~~12~~9 State Highways. The applicant shall work cooperatively with Caltrans to determine and provide transportation mitigation needed on State Highway facilities. The applicant shall construct mitigation improvements or pay an equitable share for mitigation projects to the satisfaction of Caltrans. The applicant shall enter into a traffic mitigation agreement with Caltrans before or within six months of certification of the EIR. Subsequent to circulation of the Draft EIR, Caltrans and the project applicant worked together to prepare an agreement under which the applicant will pay to Caltrans, at the time of issuance of project building permits, the project's pro-rata share of the I-5 Improvement Project, as determined by an I-5 shares analysis conducted as part of the agreement. Under the agreement, Caltrans acknowledges that the applicant's full payment of its proportionate share amount satisfies its mitigation obligations to Caltrans relative to the project. A copy of the agreement, which has been executed by the project applicant, and the corresponding shares analysis are included in the Final EIR. (See **Appendix F4.5,** Traffic Mitigation Agreement Fair Share Payment, and, Mission Village I-5 Share Calculations, AFA (March 8, 2011).) Should the County certify this EIR as adequate under CEQA and approve the Mission Village project, Caltrans, as a responsible agency, would utilize the certified EIR as the basis for executing the agreement.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE		
Development of the Mission Village site over an approximate 96-month period would involve clearing and grading of approximately 29.5 million cubic yards of earthen material and up to 372,000 cubic yards for the SCE substations in a balanced cut and fill operation, and the building of the proposed improvements. These activities involve the temporary use of heavy equipment, smaller equipment, and motor vehicles, which generate both steady state and episodic noise. This noise would primarily affect the occupants of on-site uses constructed in the earlier phases of the development, as well as residents of the off-site Westridge development, resulting in potentially significant impacts that would be mitigated to a level below significant. While this construction activity noise could be audible to occupants of Travel Village when construction activities would occur on the northwestern portion of the site, the increased noise levels would not exceed the applicable thresholds of significance and, therefore, would not result in significant impacts. *Daytime pile driving in the Santa Clara Riverbed, should it occur during the construction of the proposed Commerce Center Drive Bridge, would be audible to occupants of on-site uses constructed prior to the bridge, and to the occupants of Travel Village and nearby non-residential uses, including visitors and employees of Magic Mountain Theme Park. The potential range of significant noise impacts from this activity for sensitive receptors would be approximately 4,000 feet from the pile-driving site for a period of approximately 9–12 months during the later phases of the construction, assuming no attenuation by*	SP 4.9-1 All construction activity occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the "County of Los Angeles Construction Equipment Noise Standards," County of Los Angeles Ordinance No. 11743, Section 12.08.440 as identified in [Specific Plan Program EIR] Table 4.9-3. SP 4.9-2 Limit all construction activities near occupied residences to between the hours of 6:30 AM and 8:00 PM, and exclude all Sundays and legal holidays pursuant to County Department of Public Works, Construction Division standards. SP 4.9-3 When construction operations occur adjacent to occupied residential areas, implement appropriate additional noise reduction measures that include changing the location of stationary construction equipment, shutting off idling equipment, notifying adjacent residences in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources. SP 4.9-4 Locate construction staging areas on site to maximize the distance between staging areas and occupied residential areas. SP 4.9-5 Where new single-family residential buildings are to be constructed within an exterior noise contour of 60 dB(A) CNEL or greater, or where any multi-family buildings are to be constructed within an exterior noise contour of 65 dB(A) CNEL or greater, an acoustic analysis shall be completed prior to approval of building permits. The acoustical analysis shall show that the building is designed so that interior noise levels resulting from outside sources will be no greater than 45 dB(A) CNEL. *(The noise impacts analysis presented in this EIR* ***Section 4.6****, and the information contained in* ***Appendix 4.6****, provide the acoustical analysis required by this mitigation measure.)*	Mitigation measures recommended to reduce construction- and operational-related noise impacts would reduce the ~~magnitude of those~~ identified impacts to a level below significant and no significant and unavoidable impacts would result. Specific to pile-driving related impacts, the use of pile drilling or hydrohammer pile driving equipment or an equivalent methodology would reduce on-site and off-site pile driving noise impacts to less than significant levels, and mitigation would reduce related potential vibration impacts to a level below significant.~~; however, should pile driving be required to construct the Commerce Center Drive Bridge, and should the project applicant not find it feasible to complete the pile driving prior to occupancy of on-site noise sensitive uses within 4,000 feet of the pile driving, an unavoidable significant construction noise impact would occur.~~

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE (CONTINUED)		
terrain, structures, or vegetation. Noise-sensitive receptors proposed on the site within this 4,000-foot range could include persons that would reside in apartments, condominiums, and single-family residences constructed prior to the bridge. Off-site sensitive receptors within this 4,000-foot range would include occupants of the eastern half of Travel Village. ~~Although mitigation is proposed, s~~Should pile driving be necessary in connection with bridge construction, the ~~potentially significant~~ noise impacts attributable to pile driving would be significant without mitigation ~~and unavoidable~~. Mitigation is included that would require the project applicant to use pile drilling techniques or a hydrohammer or an equivalent method, which would result in substantially reduced noise levels, in those circumstances in which sensitive receptors are located within 4,000 feet of pile driving activities. With this mitigation, on site and off site pile driving impacts would be reduced to less than significant levels. Pile driving noise impacts on future residents of Landmark Village, should Landmark Village be constructed before the Commerce Center Drive Bridge, would be less than significant.	SP 4.9-6 For single-family residential lots located within the 60 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 60 dB(A) CNEL or less. *(The noise impacts analysis presented in this EIR **Section 4.6**, and the information contained in **Appendix 4.6**, provide the acoustical analysis required by this mitigation measure.)*	
	SP 4.9-7 For multi-family residential lots located within the 65 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 65 dB(A) CNEL or less. *(The noise impacts analysis presented in this EIR **Section 4.6**, and the information contained in **Appendix 4.6**, provide the acoustical analysis required by this mitigation measure.)*	
Although the piles would be driven into alluvial deposits, which tend to have a dampening effect on vibrations, vibration from the pile driving would result in potentially significant impacts to within 500 feet of pile driving activity ~~surrounding inhabitants and to those non-residential uses that may employ vibration-sensitive equipment~~. Mitigation is included that would reduce the identified impacts to a level below significant.	SP 4.9-8 For school sites located within the 70 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that noise at exterior play areas will be reduced to 70 dB(A) CNEL or less. *(The noise impacts analysis presented in this EIR **Section 4.6**, and the information contained in **Appendix 4.6**, provide the acoustical analysis required by this mitigation measure.)*	
Because project construction activities could cause noise and vibration levels at nearby existing and future receptors to exceed the Noise Ordinance standards, construction noise and vibration impacts are considered significant without mitigation.	SP 4.9-9 All residential air conditioning equipment installed within the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Residential Air Conditioning and Refrigeration Noise Standards, County of Los Angeles Ordinance No. 11743, Section 12.08.530.	
After project completion, traffic along Commerce Center Drive and Magic Mountain Parkway would cause significant noise impacts at several future on-site single-family and multi-family residences that would back onto these roadways. Lots 85,86, and 87 planned for single-family residences, and 468 and 512, planned for apartment/condominiums, would also experience significant noise impacts. There is also potential for some multi-family residences in lots designated Mixed Use		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE (CONTINUED)		
Commercial (such as Lot 512) to experience significant noise impacts from traffic along these roadways, depending upon their location and orientation within each lot. Noise levels would be reduced to less than significant through the incorporation of mitigation measures.	SP 4.9-10 All stationary and point sources of noise occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Ordinance No. 11743, Section 12.08.390 as identified in [Specific Plan Program EIR] Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources.	
Traffic volumes along Westridge Parkway through the project site would be less than half of those along Magic Mountain Parkway and Commerce Center Drive (individually) and, as a result, noise levels along Westridge Parkway would not result in significant noise impacts on future on-site noise-sensitive receptors along this roadway or to residential land use located to the south near the Westridge Parkway and Valencia Boulevard intersections.	SP 4.9-11 Loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 PM and 6:00 AM in such a manner as to cause a noise disturbance is prohibited in accordance with the County of Los Angeles Ordinance No. 11743, Section 12.08.460.	
Noise from the adjacent Magic Mountain Theme Park would be audible to receptors on the eastern edge of Mission Village. The theme park is operational year-round with most activity taking place during the summer months. With a few exceptions, the park closes by 10:00 PM, but may remain open as late as 1:00 AM. Noise monitoring along the eastern edge of the Mission Village site demonstrates that noise levels from the theme park on the developed portion of the project site would be less than 60 dB(A) L_{eq} and not incompatible with the land uses proposed along the eastern portion of the site. As a result, noise impacts from activities at the theme park would be less than significant.	SP 4.9-12 Loading zones and trash receptacles in commercial and Business Park areas shall be located away from adjacent residential areas, or provide attenuation so that noise levels at residential uses do not exceed the standards identified in Section 12.08.460 of the Ordinance No. 11743.	
Periodic fireworks displays are expected to continue at the theme park. These displays occur predominantly during holidays and at Thanksgiving and Christmas. With the exception of the display on July 4th, which typically lasts 15 minutes, the displays last between 1 and 2 minutes. All displays occur before 10:00 PM. Fireworks are an impulsive noise source, which means, under Section 12.08.190 of the County's Noise Ordinance, that it is of short duration, usually less than one second and of high intensity,	SP 4.9-13 Where residential lots are located with direct lines of sight to the Magic Mountain Theme Park, an acoustic analysis shall be submitted to show that exterior noise on the residential lots generated by activities at the park do not exceed the standards identified in Section 12.08.390 of the Ordinance No. 11743 as identified in Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources. *(The noise impacts analysis presented in this EIR **Section 4.6**, and the information contained in **Appendix 4.6**, provide the acoustical analysis required by this mitigation measure.)*	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.6 NOISE (CONTINUED)			
with an abrupt onset and rapid decay. As a result, potential noise impacts attributable to the fireworks displays are considered less than significant. *Post-project buildout mobile source noise levels at Travel Village from traffic along SR-126 would exceed 70.0 dB(A) Community Noise Equivalent Level (CNEL) at locations where recreational vehicles are inhabited. Pursuant to Mitigation Measure 4.9-14 from the Newhall Ranch Specific Plan Program EIR, the project applicant is required to construct a noise abatement barrier to reduce noise levels at Travel Village to 70 dB(A) CNEL or less. This wall will be built as part of the proposed Landmark Village project as Landmark Village traffic will contribute to Travel Village noise levels exceeding 70 dB(A) CNEL several years prior to Mission Village traffic.*	SP 4.9-14	After the time that occupancy of uses on the Newhall Ranch Specific Plan site occurs, AND when noise levels at Travel Village reach 70 dB(A) CNEL at locations where recreational vehicles are inhabited, the applicant shall construct a noise abatement barrier to reduce noise levels at Travel Village to 70 dB(A) CNEL or less. *(The noise impacts analysis presented in this EIR **Section 4.6** determined that Year 2013 roadway noise levels at Travel Village would exceed 70 dB(A) CNEL with project build out. This mitigation measure may or may not be applicable depending upon approval of other Newhall Ranch Specific Plan subdivisions in process.*	
	SP 4.9-15	Despite the absence of a significant impact, applicants for all building permits of Residential, Mixed-Use, Commercial, and Business Park land uses (Project) shall pay to the Santa Clara Elementary School District, prior to issuance of building permits, the Project's pro rata share of the cost of a sound wall to be located between SR-126 and the Little Red School House. The Project's pro rata share shall be determined by multiplying the estimated cost of the sound wall by the ratio of the project's estimated contribution of average daily trips on SR-126 (ADT) at the Little Red School House (numerator) to the total projected cumulative ADT increase at that location (denominator).[8] The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-126[9] from the projected cumulative trips as shown in Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling west of the City of Fillmore. *(The applicant will pay its pro-rata fee prior to the issuance of building permits in accordance with this mitigation measure.)*	

8 Cost of Sound Wall X (Project ADT on SR-126 @ LRSH*/Total Projected Cumulative ADT Increase on SR-126 @ LRSH*) * LRSH = Little Red School House.

9 25,165 ADT using linear extrapolation from Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE (CONTINUED)		
	SP 4.9-16 Despite the absence of a significant impact, the applicant for all building permits of Residential, Mixed-Use, Commercial and Business Park land uses (Project) shall participate on a fair-share basis in noise attenuation programs developed and implemented by the City of Moorpark to attenuate vehicular noise on SR-23 just north of Casey Road for the existing single-family homes which front SR-23. The mitigation criteria shall be to reduce noise levels to satisfy State noise compatibility standards. The Project's pro rata share shall be determined by multiplying the estimated cost of attenuation by the ratio of the project's estimated contribution of average daily trips on SR-23 (ADT) north of the intersection of SR-23 and Casey Road (numerator) to the total projected cumulative ADT increase at that location (denominator).[10] The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-23 north of Casey Road[11] from the projected cumulative trips as shown in Topical Response 5 – Traffic Impacts of the Program EIR to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling south of the City of Fillmore. *(The applicant will pay its pro-rata fee prior to the issuance of building permits in accordance with this mitigation measure.)*	

10 Cost of mitigation x (Project ADT on SR-23 north of Casey Road/Total Projected cumulative ADT Increase on SR-23 north of Casey Road).

11 ADT using linear extrapolation from Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE (CONTINUED)		
	SP 4.9-17 Prior to the approval of any subdivision map which permits construction within the Specific Plan area, the applicant for that map shall prepare an acoustical analysis assessing project and cumulative development (including an existing plus project analysis, and an existing plus cumulative development analysis including the project). The acoustical analysis shall be based upon state noise land use compatibility criteria and shall be approved by the Los Angeles County Department of Health Services. *(The noise impacts analysis presented in this EIR **Section 4.6**, and the information contained in **Appendix 4.6**, provide the acoustical analysis required by this mitigation measure.)* In order to mitigate any future impacts resulting from the project's contribution to significant cumulative noise impacts to development in existence as of the adoption of the Newhall Ranch Specific Plan and caused by vehicular traffic on off-site roadways, the applicant for building permits of Residential, Mixed-Use, Commercial, Visitor Serving and Business Park land uses shall, prior to issuance of building permits, pay a fee to Los Angeles County, Ventura County, the City of Fillmore or the City of Santa Clarita. The amount of the fee shall be the project's fair-share under any jurisdiction-wide or Santa Clarita Valley-wide noise programs adopted by any of the above jurisdictions. *(The proposed Mission Village project would contribute to a significant cumulative noise impact to the Travel Village Recreational Vehicle Park; however, the project would not contribute to significant cumulative noise impacts to other development in existence as of the adoption of the Newhall Ranch Specific Plan and caused by vehicular traffic on off-site roadways. Mitigation Measure SP 4.9-14 requires that the project applicant construct a noise abatement barrier to reduce noise levels at Travel Village to 70 dB(A) CNEL or less.* *Because the noise abatement barrier would mitigate the identified significant impact, no further mitigation is required. In addition, the*	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE (CONTINUED)		
	SP 4.9-17 (continued) *mitigation measure is not applicable because neither Los Angeles County nor the City of Santa Clarita has adopted a countywide or citywide noise program.)* MV 4.6-1 The project applicant, or its designee, shall not undertake construction activities that can generate noise levels in excess of the County's *Noise Ordinance* on Sundays or legal holidays. MV 4.6-2 When construction operations occur in close proximity to on- or off-site occupied residences, and if it is determined by County staff during routine construction site inspections that the construction equipment could generate a noise level at the residences that would be in excess of the *Noise Ordinance*, the project applicant, or its designee, shall implement appropriate additional noise reduction measures. These measures shall include, among other things, changing the location of stationary construction equipment, shutting off idling equipment, notifying residents in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources. MV 4.6-3 ~~To the extent feasible,~~ In lieu of conventional pile driving, t~~T~~he project developer shall utilize cast-in-drilled-hole piles, or hydrohammer pile driving equipment with noise reduction, or an alternative methodology that would achieve equivalent noise level reductions, ~~in lieu of pile driving if residential units are constructed~~ in those circumstances in which pile-driving activities would occur within 4,000 feet of sensitive receptors ~~the Commerce Center Drive Bridge prior to any pile driving activity~~.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE (CONTINUED)		
	MV 4.6-3 (continued) Pile drilling is an alternate method of pile installation where a hole is drilled into the ground up to the required elevations and concrete is then cast into it. The estimated noise level of pile drilling at 50 feet is 80 to 95 dB(A) L_{eq} compared to 90 to 105 dB(A) L_{eq} of conventional pile driving.[12] Therefore, pile drilling generally produces noise levels approximately 10 to 15 decibels lower than pile driving. Hydrohammer pile driving equipment uses an enclosed hydraulically driven hammer with noise reduction. Noise can be reduced to less than 80 dB(A) at 25 feet, 70 dB(A) at 80 feet, 65 dB(A) at 150 feet, and 60 dB(A) at 250 feet.	

12 U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, December 1971.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE (CONTINUED)		
	MV 4.6-4 If pile driving is ~~necessary~~ utilized for the Commerce Center Drive Bridge construction consistent with the limitations imposed by Mitigation Measure MV 4.6-3,, the project applicant shall, to the extent ~~feasible~~necessary, reduce the level of vibration impact by: • identifying all uses in the vicinity, if any, at which the vibration perception threshold may exceed permissible County limits identified in Section 12.08.560 of the County's *Noise Ordinance* ~~that may be adversely affected by the vibrations, including Travel Village, residences built in earlier phases of Mission Village, non-residential land uses that may use vibration-sensitive equipment, etc~~; and • installing seismographs at the aforementioned sensitive locations, if any, to ensure that Section 12.08.560 of the County's *Noise Ordinance* is not exceeded, and/or that the pile driving would not cause structural damage or adversely affect vibration-sensitive equipment; and • if the seismographs determine the permissible perception threshold is exceeded at any of the uses, adjusting vibration amplitudes of the pile driving on the conditions of the affected structures, the sensitivity of equipment, and/or human tolerance to reduce the vibration level to permissible limits.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE (CONTINUED)		
	MV 4.6-5 To mitigate the noise impacts on Lots 85, 86, and 87 (Area A2) (single-family residential) that back onto Commerce Center Drive from traffic on the proposed Commerce Center Drive extension through the site, the project applicant shall, prior to occupancy, construct a 5-foot solid wall along the rear lot lines of these lots. The wall may be constructed of 3/8 or 5/8-inch Plexiglas or other material of similar acoustic performance, and shall be continuous with no breaks or gaps. MV 4.6-6 To mitigate the noise impacts on Lot 468 (Area D1) (apartment/condominium) from traffic on the proposed Commerce Center Drive extension through the site, the project applicant shall, prior to occupancy, construct a 5-foot berm/solid wall along the property line that abuts Commerce Center Drive. Alternatively, the project applicant shall place planned frequent use areas in the interior of the lot and separated from the roadway by structures.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE (CONTINUED)		
	MV 4.6-7 To mitigate the noise impacts on Lot 508 (Mixed Use Commercial) from traffic on the proposed Commerce Center Drive extension through the site, the project applicant shall place planned frequent use areas for the residential component if any in the interior of the lot and separated from the roadway by structures. Alternatively, if residential uses are proposed, the project applicant shall construct a 5-foot berm/solid wall along the property line that abuts Commerce Center Drive.	
	MV 4.6-8 To mitigate the noise impacts on Lot 512 (Mixed Use Residential/Commercial) from traffic on the proposed Magic Mountain Parkway extension through the site, the project applicant shall place planned frequent use areas for the residential component in the interior of the lot and separated from the roadway by structures. Alternatively, the project applicant shall construct a 5-foot berm/solid wall along the property line that abuts Commerce Center Drive.	
	MV 4.6-9 When the final plans for the Mixed-use Residential/Commercial lots are complete showing the locations and orientations of the residences within the lots are complete, acoustic analyses shall be conducted by a qualified acoustic consultant to ensure that interior noise levels of any residences within the commercial lots can be feasibly reduced to 45 dB(A).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE (CONTINUED)		
	MV 4.6-10 All residences located within Mixed-Use Residential/Commercial areas and within 200 feet of the centerlines of Commerce Center Drive and/or Magic Mountain Parkway shall incorporate the following roadway noise-reducing measures into the exterior wall that faces onto those roadways: (a) All windows, both fixed and operable, shall consist of either double-strength glass or double-paned glass. All windows facing sound waves generated from the mobile source noise shall be manufactured and installed to specifications that prevent any sound from window vibration caused by the noise source. (b) Doors shall be solid core and shall be acoustically designed with gasketed stops and integral drop seals. (c) If necessitated by the architectural design of a structure, special insulation or design features shall be installed to meet the required interior ambient noise level. The specifications in this measure shall be refined when the final plans showing the locations and orientations of the residences within the lots along Commerce Center Drive and Magic Mountain Parkway are completed. Interior noise levels of all residences within lots designated for Mix Use shall not exceed of 45 dB(A) CNEL. MV 4.6-11 Air conditioning units shall be installed to serve all living areas of all residences located with direct lines of sight to Commerce Center Drive and/or Magic Mountain Parkway so that windows may remain closed without compromising the comfort of the occupants.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.6 NOISE (CONTINUED)		
	MV 4.6-12 If residential lots abut portions of commercial lots where delivery truck/garbage truck activities would occur, a method of noise attenuation shall be specified by a qualified acoustic consultant that reduces noise to a level within normally acceptable levels identified in the applicable compatibility guidelines.	
	MV 4.6-13 All HVAC units within commercial lots adjacent to residential uses shall be enclosed so that noise levels from the units are no greater than 60 dB(A) at the property line when in proximity to single-family residences, and no greater than 65 dB(A) at the property line when in proximity to multi-family residences (apartments and condominiums).	
	MV 4.6-14 Balconies with direct lines of sight to Commerce Center Drive and/or Magic Mountain Parkway shall be discouraged from exposure to exterior noise levels greater than the 60 dB(A) CNEL standard for single-family residences or the 65 dB(A) CNEL standard for multi-family residences through architectural or site design. Alternatively, balconies shall be enclosed by solid noise barriers, such as 3/8-inch glass or 5/8-inch Plexiglas to a height specified by a qualified noise consultant that results in noise levels within normally acceptable levels identified in the applicable compatibility guidelines.	
	MV 4.6-15 Prior to all home sales and rentals within Mission Village, the project applicant, or its designee, shall inform prospective buyers and renters that fireworks displays periodically occur at Magic Mountain Theme Park and that instantaneous noise levels at the eastern boundary of Mission Village could exceed 90 dB(A) for the duration of the displays. The disclosure statement shall include information on the current permits to conduct fireworks displays on the theme park, including dates of the fireworks, estimated times, and durations.	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.7 AIR QUALITY			
Implementation of the Mission Village project would generate both construction and operational air pollutant emissions. Construction-related emissions would be generated by on-site stationary sources, on- and off-road heavy-duty construction vehicles, and construction worker vehicles. Operation-related emissions would be generated by on-site and off-site stationary sources and by mobile sources. During project construction, emissions of volatile organic compounds (VOC), oxides of nitrogen (NO_X), respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) would exceed the thresholds of significance recommended by the South Coast Air Quality Management District (SCAQMD). The analysis of localized significance threshold (LST) impacts suggests that PM_{10} emissions would exceed the limitations in SCAQMD Rule 403 and that the nitrogen dioxide (NO_2) concentrations would exceed the LST thresholds. At project buildout, operational emissions of VOC, NO_X, PM_{10}, and $PM_{2.5}$ would exceed SCAQMD thresholds, primarily due to emissions from mobile sources and use of consumer products.	SP 4.10-1	The Specific Plan will provide Commercial and Service Uses in close proximity to residential subdivisions. *(Mission Village provides commercial uses in close proximity to residential subdivisions).*	No feasible mitigation exists that would reduce all of these emissions to below the SCAQMD's recommended thresholds of significance. The project's construction-related emissions of VOCs, NO_X, PM_{10}, and $PM_{2.5}$ and operation-related emissions of VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$ are considered significant and unavoidable.
	SP 4.10-2	The Specific Plan will locate residential uses in close proximity to Commercial Uses, Mixed-Uses, and Business Parks. *(Mission Village locates residential uses in close proximity to Commercial Uses and Mixed Uses).*	
	SP 4.10-3	Bus pull-ins will be constructed throughout the Specific Plan site. *(Mission Village provides for bus stops at designated locations).*	
	SP 4.10-4	Pedestrian facilities, such as sidewalks, and community regional, and local trails, will be provided throughout the Specific Plan site. *(Pedestrian facilities, such as sidewalks, bike paths, and trails, will be constructed throughout Mission Village, with future connections to other on-site and off-site future developments and designated trails).*	
	SP 4.10-5	Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Specific Plan site connecting the individual Villages and community. *(Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Mission Village site with future connections to future developments within Newhall Ranch).*	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
Population growth attributed to the project is consistent with the approved Newhall Ranch Specific Plan and therefore is within growth forecasts contained in the 2004 Regional Transportation Plan (2004 RTP) prepared by the Southern California Association of Governments (SCAG). The 2004 RTP forms the basis for the land use and transportation control portions of the 2007 Air Quality Management Plan (2007 AQMP). Because the project is within the growth forecasts for the region, it would, consequently, be consistent with the 2007 AQMP, indicating that it would not jeopardize attainment of state and federal ambient air quality standards in the Santa Clarita Valley or throughout the South Coast Air Basin (SoCAB). *A health risk assessment also was prepared to evaluate the potential effects of project-related exposures to diesel particulate matter emitted by construction equipment. The assessment determined that the maximum anticipated cancer risks associated with the construction of the proposed project are 3.4, 1.2, and 0.3 in 1 million at maximally impacted residential, workplace, and student receptors, respectively. These cancer risk levels are below the threshold of significance of 10 in 1 million. The assessment also determined that the potential chronic health hazard impacts would be well below the adopted significance threshold. As to operational impacts, the proposed project would not result in substantial emissions of toxic air contaminants and, therefore, no significant impacts would occur. Therefore, potential health impacts associated with the construction and operation of the proposed project are less than significant.*	SP 4.10-6 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 - Nuisance, Rule 403 - Fugitive Dust, Rule 1113 - Architectural Coatings) and which are in effect at the time of development. The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (i.e., rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in Tables 1 and 2 of the Rule for each applicable source of fugitive dust and take certain notification and record keeping actions; or (2) obtain an approved Fugitive Dust Control Plan. A complete copy of the SCAQMD's Rule 403 Implementation Handbook, which has been included in Appendix 4.10 [of the *Newhall Ranch Specific Plan Program EIR*], provides guideline tables to demonstrate the typical mitigation program and record keeping required for grading operations (Tables 1 and 2 and sample record keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
Mitigation measures would be implemented that would reduce construction-related and operational-related emissions to the maximum extent feasible. However, no feasible mitigation exists that would reduce the project's construction-related emissions of VOC, NO_X, PM_{10}, or $PM_{2.5}$ to below the SCAQMD's recommended thresholds of significance. Additionally, no feasible mitigation exists to reduce the project's operational emissions of VOC, NO_X, PM_{10}, or $PM_{2.5}$ to less-than-significant levels. Therefore, the project's construction-related and operation-related emissions would be considered significant and unavoidable. *The relevant SCAQMD's criteria were used to assess cumulative air quality impacts. Based on this analysis, cumulative air quality impacts would be significant given the cumulative project thresholds of significance found in the SCAQMD's California Environmental Quality Act (CEQA) Air Quality Handbook,*[13] *and the fact that the project-specific impacts, even with all feasible mitigation, would represent a cumulatively considerable contribution to poor air quality in the SoCAB.* *All source materials cited and summarized in this section are incorporated by reference. Copies of these documents are available for public inspection and review at the County of Los Angeles (County) Department of Regional Planning, 320 South Temple Street, Los Angeles, California.*	SP 4.10-6 (continued) Each future subdivision proposed in association with the *Newhall Ranch Specific Plan* shall implement the following if found applicable and feasible for that subdivision: a. Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more). b. Replace groundcover in disturbed areas as quickly as possible. c. Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications, to exposed piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content. d. Water active sites at least twice daily. e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph. f. Monitor for particulate emissions according to district-specified procedures. g. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of CVC Section 23114.	**Cumulative Impacts** While the proposed project is consistent with regional growth projections, the project's mitigated construction- and operational-related VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions exceed the SCAQMD's recommended daily emission thresholds of significance for these pollutants. In addition, because the Basin is already in nonattainment for ozone (VOC and NO_X as ozone precursors), PM_{10}, $PM_{2.5}$, and CO (Los Angeles County), any increases in these emissions by the project are considered significant and unavoidable cumulative air quality impacts.

13 The *CEQA Air Quality Handbook* is in the process of being revised. As of April 2010, the SCAQMD has revised portions of the handbook, revised the air quality significance thresholds, and added a new procedure referred to as "localized significance thresholds."

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	SP 4.10-6 (continued) **Paved Roads** h. Sweep paved streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water). i. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. **Unpaved Roads** j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces. k. Reduce traffic speeds on all unpaved roads to 15 mph or less. l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles. m. Pave all construction access roads at least 100 feet on to the site from the main road. n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips. These measures control PM_{10} emissions and would also control $PM_{2.5}$ emissions. The effectiveness of these measures at reducing PM_{10} emissions ranges from 7 to 92.5 percent. For the purposes of this impact analysis, and to be consistent with URBEMIS2002 methodology, it is assumed that implementation of these measures would reduce $PM_{2.5}$ and PM_{10} emissions by a maximum of 68 percent.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	SP 4.10-7 Prior to the approval of each future subdivision proposed in association with the *Newhall Ranch Specific Plan*, each of the construction emission reduction measures indicated below (and in Tables 11-2 and 11-3 of the SCAQMD's *CEQA Air Quality Handbook*, as amended) shall be implemented if found applicable and feasible for that subdivision: **On-Road Mobile Source Construction Emissions** a. Configure construction parking to minimize traffic interference. b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours). c. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM and between 10:00 AM and 3:00 PM). d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees. e. Implement a shuttle service to and from retail services and food establishments during lunch hours. f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets: • Rerouting construction traffic off congested streets; • Consolidating truck deliveries; and • Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site. g. Prohibit truck idling in excess of 2 minutes.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	SP 4.10-7 (continued) **Off-Road Mobile Source Construction Emissions** h. Use methanol-fueled pile drivers. i. Suspend use of all construction equipment operations during second stage smog alerts. j. Prevent trucks from idling longer than 2 minutes. k. Use electricity from power poles rather than temporary diesel-powered generators. l. Use electricity from power poles rather than temporary gasoline-powered generators. m. Use methanol- or natural gas-powered mobile equipment instead of diesel. n. Use propane- or butane-powered on-site mobile equipment instead of gasoline. **Operational Mitigation Measures** **(a) Point Source Operational Emissions** SP 4.10-8 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 - Nuisance, Rule 461 - Gasoline Transfer And Dispensing, Rule 1102 - Petroleum Solvent Dry Cleaners, Rule 1111 – NO_x Emissions from Natural Gas-Fired, Fan-Type Central Furnaces, Rule 1138 - Control Of Emissions From Restaurant Operations, Rule 1146 - Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters) and which are in effect at the time of occupancy permit issuance.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	(b) Mobile Source Operational Emissions SP 4.10-9 Prior to the approval of each future subdivision proposed in association with the *Newhall Ranch Specific Plan*, each of the operational emission reduction measures indicated below (and in Tables 11-6 and 11-7 of the SCAQMD's *CEQA Air Quality Handbook*, as amended) shall be implemented if found applicable and feasible for that subdivision. **On Road Mobile Source Operational Emissions** ***Residential Uses*** a. ~~Include satellite telecommunications centers in residential subdivisions.~~ (Removed as growth of Internet allows residents to telecommute from home using personal computers.) b. Establish shuttle service from residential subdivision to commercial core areas. *(Residences are proposed in walking distance to many proposed commercial areas.)* c. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters). d. Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks. e. Include retail services within or adjacent to residential subdivisions. *(Retail services will be available in proximity to residential areas.)* f. Provide shuttles to major rail transit centers or multi-modal stations. (Not applicable because the project site is already served by two SCT routes that connect to McBean Transfer Station.) g. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	SP 4.10-9 (continued) h. Synchronize traffic lights on streets impacted by development. i. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes. ***Commercial/Office Uses*** j. Provide preferential parking spaces for carpools and vanpools and provide 7 feet 2 inches minimum vertical clearance in parking facilities for vanpool access. k. Not applicable. l. Not applicable. m. Not applicable. n. Not applicable. o. ~~Implement home dispatching system where employees receive routing schedule by phone instead of driving to work.~~*(Removed as growth of Internet allows employers to establish websites where such information can be posted and accessed by employees at home on personal computers.)* p. Not applicable. q. Not applicable. r. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202). (Rule 2202 applies to employers with more than 250 employees on a single work site. The Mission Village project is not anticipated to include uses that would generate significant levels of employment at a single location. Furthermore, the project applicant cannot enforce this measure on individual businesses. In the event that a business would employ more than 250 employees, the business itself would be required to comply with Rule 2202.)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	SP 4.10-9 (continued) s. Implement a lunch shuttle service from a worksite(s) to food establishments. t. Not applicable. u. Not applicable. ~~v. Utilize satellite offices rather than regular worksite to reduce VMT.~~ (Removed as growth of Internet allows employees to work from home on personal computers.) w. Establish a home-based telecommuting program. (Communication technology allows employees to work from remote locations.) x. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance. y. Not applicable. z. Not applicable. aa. Establish a shuttle service from residential core areas to the worksite. ab. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters). ac. Not applicable. ad. Include residential units within a commercial project. *(Residential uses would be in proximity to commercial uses.)* ae. Not applicable.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	SP 4.10-9 (continued) af. Any two of the following: • Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths. • Include bicycle parking facilities, such as bicycle lockers and racks. • Include showers for bicycling employees' use. ag. Any two of the following: • Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks. • Construct on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths. • ~~Include showers for pedestrian employees' use.~~ *(Not applicable because the project applicant cannot enforce this measure on individual businesses).* ah. Not applicable. ai. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). aj. Not applicable. ak. Synchronize traffic lights on streets impacted by development. al. Not applicable. am. Not applicable. an. Not applicable. ao. Implement or contribute to public outreach programs.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	SP 4.10-9 (continued) ap. Not applicable. aq. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes. ***Industrial Uses*** ar. Not applicable. as. Not applicable. at. Not applicable. au. Not applicable. av. Not applicable. aw. Not applicable. ax. Not applicable. ay. Not applicable. az. Not applicable. ba. Not applicable. bb. Not applicable. bc. Not applicable. bd. Not applicable. be. Not applicable. bf. Not applicable. bg. Not applicable. bh. Not applicable. bi. Not applicable. bj. Not applicable. bk. Not applicable. bl. Not applicable.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	SP 4.10-9 (continued) bm. Not applicable. bn. Not applicable. bo. Not applicable. bp. Not applicable. bq. Not applicable. br. Not applicable. **Stationary Source Operational Emissions** ***Residential*** bs. Use solar or low emission water heaters. bt. Not applicable. bu. Use built-in energy-efficient appliances. bv. Provide shade trees to reduce building heating/cooling needs. bw. Use energy-efficient and automated controls for air conditioners. bx. Use double-paned windows. by. Not applicable. bc. Use lighting controls and energy-efficient lighting. ca. Not applicable. cb. Not applicable. cb. Use light-colored roofing materials to reflect heat. cd. Increase walls and attic insulation beyond Title 24 requirements	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	SP 4.10-9 (continued) ***Commercial/Office Uses*** ce. Use solar or low emission water heaters. cf. Use central water heating systems. cg. Provide shade trees to reduce building heating/cooling needs. ch. Use energy-efficient and automated controls for air conditioners. ci. Use double-paned windows. cj. Use energy-efficient low-sodium parking lot lights. ck. Use lighting controls and energy-efficient lighting. cl. Use light-colored roofing materials to reflect heat. cm. Increase walls and attic insulation beyond Title 24 requirements. cn. Not applicable. ***Industrial Uses*** co. Not applicable. cp. Not applicable. cq. Not applicable. cr. Not applicable. cs. Not applicable. ct. Not applicable. cu. Not applicable. cv. Not applicable. cw. Not applicable. cx. Not applicable. cy. Not applicable. cz. Not applicable.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	SP 4.10-10 All non-residential development of 25,000 gross square feet or more shall comply with the County's Transportation Demand Management (TDM) Ordinance (Ordinance No. 93-0028M) in effect at the time of subdivision. The sizes and configurations of the *Specific Plan's* non-residential uses are not known at this time and the Ordinance specifies different requirements based on the size of the project under review. All current provisions of the ordinance are summarized in Appendix 4.10 of the *Newhall Ranch Specific Plan Program EIR*.	
	SP 4.10-11 Subdivisions and buildings shall comply with Title 24 of the *California Code of Regulations* which are current at the time of development.	
	SP 4.10-12 Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage.	
	SP 4.10-13 Any on-site subterranean parking structures shall provide adequate ventilation systems to disperse pollutants and preclude the potential for a pollutant concentration to occur.	
	SP 4.10-14 The sellers of new residential units shall be required to distribute brochures and other relevant information published by the SCAQMD or similar organization to new homeowners regarding the importance of reducing vehicle miles traveled and related air quality impacts, as well as on local opportunities for public transit and ridesharing.	
	MV 4.7-1 The project applicant shall require that prior to the commencement of construction its contractors shall develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles including, but not limited to, scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	MV 4.7-2 The project applicant shall require that its contractors suspend the use of all construction equipment during first-stage smog alerts.	
	MV 4.7-3 The project applicant shall require that its contractors maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.	
	MV 4.7-4 The project applicant shall require that its contractors use electric welders to avoid emissions from gas or diesel welders.	
	MV 4.7-5 The project applicant shall require that its contractors reduce traffic speeds on all unpaved roads to 15 miles per hour or less.	
	MV-4.7-6 The project applicant shall require that its contractors water active sites at least three times daily during dry weather.	
	MV 4.7-7 The project applicant shall require that its contractors replace ground cover as quickly as possible.	
	MV 4.7-8 The project applicant shall require that its contractors schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM and between 10:00 AM and 3:00 PM).	
	MV 4.7-9 The project applicant shall require the contractor to provide temporary controls, such as a flag person, during all phases of construction to maintain smooth traffic flow.	
	MV 4.7-10 The project applicant shall require the contractor route construction trucks away from congested streets and sensitive receptor areas (e.g., residences, schools, hospitals, etc.).	
	MV-4.7-11 The project applicant shall install shaker plates at construction site exits, to minimize dirt track out and dust generation.	
	MV-4.7-12 The project applicant shall operate street sweepers that comply with SCAQMD Rules 1186 and 1186.1 on roads adjacent to the construction site in a nearly conitnuous manner so as to minimize dust emissions. Paved parking and staging areas shall be swept daily.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	MV 4.7-13 The project applicant shall all on-site construction equipment to meet U.S. EPA Tier 2 of higher emissions standards according to the following: • **April 2010 through December 31, 2011**: All offroad diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 offroad emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. • **January 1, 2012 through December 31, 2014**: All offroad diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 3 offroad emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. • **Post-January 1, 2015**: All offroad diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 4 offroad emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.7 AIR QUALITY (CONTINUED)		
	MV 4.7-14 An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. Any reasonable complaints shall be rectified within 24 hours of their receipt. **Operational Mitigation Measures** **(a) Point Source Operational Emissions** MV4.7-15 Any dry cleaners proposing to locate on site shall utilize the services of off-site cleaning operations at already SCAQMD-permitted locations. No on-site dry cleaning operations utilizing perchloroethylene or any other cleaning solvent containing toxic air contaminants shall be permitted within Mission Village. **(b) Mobile Source Operational Emissions** MV4.7-16 The project developer(s) shall coordinate with Santa Clarita Transit to identify appropriate bus stop/turnout locations. MV4.7-17 Kiosks containing transit information shall be constructed by the project applicant adjacent to selected future bus stops prior to initiation of bus service to the site. **(c) Area Source Operational Emissions** MV4.7-18 Wood-burning fireplaces and stoves shall be prohibited in all residential units. Use of wood in fireplaces shall be prohibited through project Covenants, Conditions, and Restrictions (CC&Rs).	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.8 WATER SERVICE			
The proposed Mission Village project would generate a total water demand of 2,919 acre-feet per year (afy), 1,676 afy of potable water demand, and 1,243 afy of non-potable demand. Potable water demand (1,676 afy) would be met by the Valencia Water Company through the use of the project applicant's rights to 7,038 afy of groundwater from the Alluvial aquifer, which is presently used by the applicant for agricultural irrigation. Because this water is already used to support the applicant's existing agricultural uses, there would be no significant environmental effects resulting from the use of such water to meet the potable demands of the Mission Village project, which is part of the approved Newhall Ranch Specific Plan area. In addition, due to project conditions of approval, the amount of groundwater that will be used to meet the potable demands of the Newhall Ranch Specific Plan, including the Mission Village project, cannot exceed the amount of water historically and presently used by the applicant for agricultural uses. Therefore, no net increase in groundwater use will occur with implementation of this project pursuant to the Specific Plan. *Non-potable water demand (1,243 afy) would be met through the use of recycled (reclaimed) water from the initial phase of the Newhall Ranch Water Reclamation Plant (WRP), with buildout of the WRP occurring over time as demand for treatment increases with implementation of the Newhall Ranch Specific Plan. Alternatively, if the Newhall Ranch WRP is not operating at the time of project occupancy, the non-potable water demand would be met through the use of recycled water from the existing Valencia WRP, located upstream of the Mission Village project site.*	SP 4.11-1	The proposed Specific Plan shall implement a water reclamation system in order to reduce the Specific Plan's demand for imported potable water. The Specific Plan shall install a distribution system to deliver non-potable reclaimed water to irrigate land uses suitable to accept reclaimed water, pursuant to Los Angeles County Department of Health Standards. (*Consistent with this measure, the Project Description section of this EIR discusses the fact that the Mission Village project will install and implement a recycled water delivery system in order to reduce the project's demand for imported potable water. As required by this measure, recycled (reclaimed) water would be used to irrigate land uses suitable to accept recycled water, pursuant to Los Angeles County Department of Health standards.*)	With implementation of the identified mitigation measures, the proposed project's water resources impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
	SP 4.11-2	Landscape concept plans shall include a palette rich in drought-tolerant and native plants. *(Consistent with this measure, the Mission Village project's landscape plans shall include a palette rich in drought-tolerant and native plants.)*	
	SP 4.11-3	Major manufactured slopes shall be landscaped with materials that will eventually naturalize, requiring minimal irrigation. (*Consistent with this measure, the Mission Village project's grading/landscape plans shall include a note requiring landscaping with materials that will eventually naturalize, requiring minimal irrigation.*)	
	SP 4.11-4	Water conservation measures as required by the State of California shall be incorporated into all irrigation systems. (*Consistent with this measure, the Mission Village project shall incorporate into all of its irrigation systems, water conservation measures required by the State of California.*)	
	SP 4.11-5	Not applicable.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.8 WATER SERVICE (CONTINUED)		
Accordingly, the proposed project's water demand would be met by relying on two primary sources of water supply, namely, the applicant's agricultural water supplies and recycled water supplied by the Newhall Ranch WRP or the existing Valencia WRP. Because these two independent water sources meet the water needs of the proposed project, no potable water would be needed from the existing or planned water supplies of Castaic Lake Water Agency (CLWA), including imported water from CLWA's State Water Project (SWP) supplies. Nonetheless, CLWA's water supplies, including imported water from the SWP, and other non-SWP supplies, are assessed in this EIR for information purposes. *Based on the information presented, an adequate supply of water is available to serve the Mission Village project, and the project will not contribute to any significant cumulative water supply impacts in the Santa Clarita Valley, because it would rely on local groundwater and recycled water from local water reclamation plants and not use or rely on CLWA's SWP supplies. No significant water supply or water quality impacts are expected from supplying available water to meet the demands of the Mission Village project. No significant cumulative water supply impacts are expected to result from supplying water to the Mission Village project, because it would not use or rely on CLWA's SWP supplies.* *Over the past several years, questions have been raised regarding the reliability of SWP water delivered by CLWA, the ability of local water purveyors to deliver an adequate and reliable supply of water to its customers, and the extent to which ammonium perchlorate discovered in local groundwater reduces the amount of local water available in the Santa Clarita Valley.*	SP 4.11-6 In conjunction with the submittal of applications for tentative tract maps or parcel maps which permit construction, and prior to approval of any such tentative maps, and in accordance with the requirements of the Los Angeles County General Plan DMS, as amended, Los Angeles County shall require the applicant of the map to obtain written confirmation from the retail water agency identifying the source(s) of water available to serve the map concurrent with need. If the applicant of such map cannot obtain confirmation that a water source(s) is available for buildout of the map, the map shall be phased with the timing of an available water source(s), consistent with the County's DMS requirements. (*Consistent with this measure, Valencia Water Company, the retail water purveyor for the Mission Village project, has issued its Mission Village WSA for the project, confirming the availability of water to serve the project concurrent with need.*) SP 4.11-7 Prior to commencement of use, all uses of recycled water shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services. (*Consistent with this measure, the Mission Village project's recycled water delivery system shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services.*) SP 4.11-8 Prior to the issuance of building permits that allow construction, the applicant of the subdivision shall finance the expansion costs of water service extension to the subdivision through the payment of connection fees to the appropriate water agency(ies). (*Consistent with this measure, prior to issuance of building permits, the applicant for the Mission Village project shall pay for and construct the required water service extension to the Mission Village subdivision.*)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.8 WATER SERVICE (CONTINUED)		
	SP 4.11-9 Pursuant to Public Resources Code Section 21081(a)(2), the County shall recommend that the Upper Santa Clara Water Committee (or Santa Clarita Valley Water Purveyors), made up of the Castaic Lake Water Agency, Los Angeles County Waterworks District No. 36, Newhall County Water District, Santa Clarita Water Division of CLWA and the Valencia Water Company, prepare an annual water report that will discuss the status of groundwater within the Alluvial and Saugus Aquifers, and State Water Project water supplies as they relate to the Santa Clarita Valley. The report will also include an annual update of the actions taken by CLWA to enhance the quality and reliability of existing and planned water supplies for the Santa Clarita Valley. In those years when the Committee or purveyors do not prepare such a report, the applicant at its expense shall cause the preparation of such a report that is acceptable to the County to address these issues. This annual report shall be provided to Los Angeles County who will consider the report as part of its local land use decision-making process. (*As an update, a total of 10 annual water reports have been prepared and provided to the County of Los Angeles, the City of Santa Clarita and other interested persons and organizations from 1998 through 2008. The latest 2009 Water Report is included in* ***Appendix 4.8***.)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.8 WATER SERVICE (CONTINUED)		
	SP 4.11-10 Pursuant to Public Resources Code Section 21081(a)(2), the County shall recommend that Castaic Lake Water Agency (CLWA), in cooperation with other Santa Clarita Valley retail water providers, continue to update the *UWMP* for Santa Clarita Valley once every five years (on or before December 31) to ensure that the County receives up-to-date information about the existing and planned water supplies in the Santa Clarita Valley. The County will consider the information contained in the updated *UWMP* in connection with the County's future local land use decision-making process. The County will also consider the information contained in the updated *UWMP* in connection with the County's future consideration of any Newhall Ranch tentative subdivision maps allowing construction. (*CLWA and other local retail water purveyors have completed the 2005 UWMP in the fall 2005. The County will consider the information contained in the adopted 2005 UWMP in connection with the Mission Village project.*)	
	SP 4.11-11 Not applicable	
	SP 4.11-12 Not applicable	
	SP 4.11-13 Not applicable	
	SP 4.11-14 Not applicable	
	SP 4.11-15 Groundwater historically and presently used for crop irrigation on the Newhall Ranch Specific Plan site and elsewhere in Los Angeles County shall be made available by the Newhall Land and Farming Company, or its assignee, to partially meet the potable water demands of the Newhall Ranch Specific Plan. The amount of groundwater pumped for this purpose shall not exceed 7,038 afy. This is the amount of groundwater pumped historically and presently by the Newhall Land and Farming Company in Los Angeles County to support its agricultural operations. Pumping this amount will not result in a net increase in groundwater use in the Santa Clarita Valley.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.8 WATER SERVICE (CONTINUED)		
	SP 4.11-15 (continued) To monitor groundwater use, the Newhall Land and Farming Company, or its assignee, shall provide the County an annual report indicating the amount of groundwater used in Los Angeles County and the specific land upon which that groundwater was historically used for irrigation. For agricultural land located off the Newhall Ranch Specific Plan site in Los Angeles County, at the time agricultural groundwater is transferred from agricultural uses on that land to Specific Plan uses, The Newhall Land and Farming Company, or its assignee, shall provide a verified statement to the County's Department of Regional Planning that Alluvial aquifer water rights on that land will now be used to meet Specific Plan demand. (*Consistent with this measure, the applicant has provided the County with the annual reports, and the reports are included in Draft EIR* ***Appendix 4.8***.) SP 4.11-16 The agricultural groundwater used to meet the needs of the Specific Plan shall meet the drinking water quality standards required under Title 22 prior to use. (*Consistent with this measure, the agricultural groundwater used to meet the needs of the Mission Village project shall meet the drinking water quality standards required under Title 22 prior to use.*)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.8 WATER SERVICE (CONTINUED)		
	SP 4.11-17 In conjunction with each project-specific subdivision map for the Newhall Ranch Specific Plan, the County shall require the applicant of that map to cause to be prepared a supplemental or subsequent Environmental Impact Report, as appropriate, pursuant to CEQA requirements. By imposing this EIR requirement on each Newhall Ranch tentative subdivision map application allowing construction, the County will ensure that, among other things, the water needed for each proposed subdivision is confirmed as part of the County's subdivision map application process. This mitigation requirement shall be read and applied in combination with the requirements set forth in revised Mitigation Measure 4.11-6, above, and in Senate Bills 221 and 610, as applicable, regardless of the number of lots in a subdivision map. (*This measure has been satisfied by the County requiring preparation of this EIR for the Mission Village project.*)	
	SP 4.11-18 The storage capacity purchased in the Semitropic Groundwater Banking Project by the Newhall Ranch Specific Plan applicant shall be used in conjunction with the provision of water to the Newhall Ranch Specific Plan. The applicant, or entity responsible for storing Newhall Ranch water in this groundwater bank, shall prepare an annual status report indicating the amount of water placed in storage in the groundwater bank. This report shall be made available annually and used by Los Angeles County in its decision-making processes relating to buildout of the Newhall Ranch Specific Plan. (*This measure is not applicable to the Mission Village project, because the water to be stored in the Semitropic Groundwater Banking Project is not needed to satisfy the water demand of the project or cumulative development in the Santa Clarita Valley; however, as requested by the County, the applicant provided the annual status report to County staff in 2010 (see EIR* ***Appendix 4.8*** *for the applicant's status report letter.*)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.8 WATER SERVICE (CONTINUED)		
	SP 4.11-19 A Memorandum of Understanding (MOU) and Water Resource Monitoring Program has been entered into between United Water Conservation District and the Upper Basin Water Purveyors, effective August 20, 2001. The MOU/Water Resource Monitoring Program, when executed, will put in place a joint water resource monitoring program that will be an effective regional water management tool for both the Upper and Lower Santa Clara River areas as further information is developed, consistent with the MOU. This monitoring program will result in a database addressing water usage in the Saugus and Alluvium aquifers over various representative water cycles. The parties to the MOU intend to utilize this database to further identify surface water and groundwater impacts on the Santa Clara River Valley. The applicant, or its designee, shall cooperate in good faith with the continuing efforts to implement the MOU and Water Resource Monitoring Program. As part of the MOU process, the United Water Conservation District and the applicant have also entered into a "Settlement and Mutual Release" agreement, which is intended to continue to develop data as part of an ongoing process for providing information about surface and groundwater resources in the Santa Clara River Valley. In that agreement, the County and the applicant have agreed to the following: *4.3 Los Angeles County and Newhall will each in good faith cooperate with the parties to the MOU and will assist them as requested in the development of the database calibrating water usage in the Saugus and Alluvium aquifers over multi-year water cycles. Such cooperation will include, but not be limited to, providing the parties to the MOU with historical well data and other data concerning surface water and groundwater in the Santa Clara River and, in the case of Newhall, providing Valencia Water Company*	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.8 WATER SERVICE (CONTINUED)		
	SP 4.11-19 (continued) *with access to wells for the collection of well data for the MOU.* *4.4 Los Angeles County and Newhall further agree that the County of Los Angeles will be provided with, and consider, the then-existing data produced by the MOU's monitoring program in connection with, and prior to, all future Newhall Ranch subdivision approvals or any other future land use entitlements implementing the Newhall Ranch Specific Plan. If the then-existing data produced by the MOU's monitoring program identifies significant impacts to surface water or groundwater resources in the Santa Clara River Valley, Los Angeles County will identify those impacts and adopt feasible mitigation measures in accordance with the California Environmental Quality Act.* *(Since the MOU was signed in 2001, the United Water Conservation District and the Upper Basin Water Purveyors (CLWA, Los Angeles County Waterworks District #36, CLWA Santa Clarita Water Division, NCWD and Valencia Water Company) have worked together to accomplish the stated purpose and objectives of the MOU. The MOU has resulted in the collection and analysis of groundwater and other hydrologic data, along with construction and calibration of a sophisticated regional groundwater flow model for the Upper Basin. These efforts benefit the service areas of both the United Water Conservation District and the Upper Basin water purveyors.)* SP 4.11-20 Not Applicable SP 4.11-21 The applicant, in coordination with RWQCB staff, shall select a representative location upstream and downstream of the Newhall Ranch Specific Plan and sample surface and groundwater quality. Sampling from these two locations	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.8 WATER SERVICE (CONTINUED)		
	SP 4.11-21 (continued) would begin upon approval of the first subdivision map and be provided annually to the RWQCB and County for the purpose of monitoring water quality impacts of the Specific Plan over time. If the sampling data results in the identification of significant new or additional water quality impacts resulting from the Specific Plan, which were not previously known or identified, additional mitigation shall be required at the subdivision map level. (*This measure is not applicable until subdivision map approval for the Mission Village project.*) SP 4.11-22 Beginning with the filing of the first subdivision map allowing construction on the Specific Plan site and with the filing of each subsequent subdivision map allowing construction, the Specific Plan applicant, or its designee, shall provide documentation to the County of Los Angeles identifying the specific portion(s) of irrigated farmland in the County of Los Angeles proposed to be retired from irrigated production to make agricultural water available to serve the subdivision. As a condition of subdivision approval, the applicant or its designee, shall provide proof to the County that the agricultural land has been retired prior to issuance of building permits for the subdivision. (*Consistent with this measure, the applicant of the Mission Village project has provided the County with this documentation. As a condition of approval of the Mission Village tract map, the applicant will provide proof to the County that the agricultural land in the County proposed to be retired from irrigated production, in fact, has been retired prior to issuance of building permits for the Mission Village subdivision.*) MV 4.8-1 Upon the issuance of building permits associated with each subdivision map allowing construction within the Mission Village site, the applicant shall pay Facility Capacity Fees to the Castaic Lake Water Agency (CLWA) in accordance with CLWA policies and procedures.	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.9 WASTEWATER DISPOSAL			
Construction impacts would be less than significant, as portable, on-site sanitation facilities would be utilized during construction activities. *Once project construction is complete, the proposed Mission Village project would generate a worst-case average total of 0.96~~1.13~~ million gallons per day (mgd) of wastewater. Of the total project wastewater generation, approximately 0.695~~884~~ mgd would be treated by the Newhall Ranch County Sanitation District (NRCSD) at the Newhall Ranch (WRP) once WRP construction is complete. Due to gravitational limitations, the remaining approximately 0.266~~41~~ mgd would be permanently treated at the Valencia WRP, subject to conditions specified in a Joint Sewerage Services Agreement to be executed between NRCSD and the Santa Clarita Valley Sanitation District (SCVSD. The treatment capacity of the Newhall Ranch WRP would be 6.8 mgd, with a maximum flow of 13.8 mgd. Until the development of the Newhall Ranch WRP is complete, there are three potential scenarios for the interim conveyance and treatment of the portion of wastewater generated by the Mission Village project that ultimately would be permanently treated at the Newhall Ranch WRP. The first scenario is to construct an initial phase of the Newhall Ranch WRP to serve the Mission Village project site, with buildout of the WRP occurring over time as demand for treatment increases. Under this scenario, the initial phase of the WRP would be designed and constructed to accommodate the project's predicted wastewater generation. The second scenario would temporarily direct all wastewater flows from the Mission Village project by pipeline across the Commerce Center Drive Bridge to the Valencia WRP until the first phase of the Newhall Ranch WRP is complete.*	SP 4.12-1	The Specific Plan shall reserve a site of sufficient size to accommodate a water reclamation plant to serve the Newhall Ranch Specific Plan. (*This measure has been implemented by the Board of Supervisors' approval in May 2003, of the Newhall Ranch WRP within the boundary of the Specific Plan.*)	With implementation of the identified mitigation measures, the proposed project's wastewater disposal impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
	SP 4.12-2	A 5.8 to 6.9 mgd water reclamation plant shall be constructed on the Specific Plan site, pursuant to County, State, and Federal design standards, to serve the Newhall Ranch Specific Plan. (*This measure will be implemented pursuant to the project-level analysis already completed for the Newhall Ranch WRP in the certified Newhall Ranch Specific Plan EIR.*)	
	SP 4.12-3	The Conceptual Backbone Sewer Plan shall be implemented pursuant to County, State, and Federal design standards. *(The proposed Mission Village sewer system would implement the previously adopted Conceptual Backbone Sewer Plan relative to the Mission Village portion of the Specific Plan.)*	
	SP 4.12-4	Prior to recordation of each subdivision permitting construction, the applicant of each subdivision shall obtain a letter from the new County sanitation district stating that treatment capacity will be adequate for that subdivision. *(This mitigation measure, as it applies to Mission Village, will be implemented concurrent with project development.)*	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.9 WASTEWATER DISPOSAL (CONTINUED)			
The third scenario assumes that the Commerce Center Drive Bridge is not constructed until after occupancy of some of the land uses in the Mission Village project, and an interim pump station would be constructed that would direct wastewater to the existing Valencia WRP. Under both the second and third scenarios, wastewater from the Mission Village project would be pumped temporarily to the Valencia WRP until such time as the first phase of the Newhall Ranch WRP is constructed and operational. (Under an agreement with the SCVSD, the Valencia WRP could temporarily treat wastewater from Mission Village (and Landmark Village) until such time as the Newhall Ranch WRP is constructed and operational. Based on the County Sanitation Districts of Los Angeles County (CSDLAC) future wastewater generation estimates and the planned expansion of the Saugus and Valencia WRPs, the Valencia WRP would have sufficient capacity to temporarily accommodate the Mission Village project's total predicted wastewater generation of ~~1.13~~0.96 mgd. For these reasons, wastewater disposal impacts associated with Mission Village would be less than significant.	SP 4.12-5	All facilities of the sanitary sewer system will be designed and constructed for maintenance by the County of Los Angeles Department of Public Works and the County Sanitation Districts of Los Angeles County, and/or the new County sanitation district or similar entity in accordance with their manuals, criteria, and requirements. *(This mitigation measure, as it applies to Mission Village, will be implemented concurrent with project development.)*	
	SP 4.12-6	Pursuant to Los Angeles County Code, Title 20, Division 2, all industrial waste pretreatment facilities shall, prior to the issuance of building permits, be reviewed by the County of Los Angeles Department of Public Works, Industrial Waste Planning and Control Section and/or the new County sanitation district, to determine if they would be subject to an Industrial Wastewater Disposal Permit. *(To the extent this mitigation measure applies to Mission Village, it will be implemented concurrent with project development.)*	
	SP 4.12-7	Each subdivision permitting construction shall be required to be annexed into the Los Angeles County Consolidated Sewer Maintenance District. *(This mitigation measure, as it applies to Mission Village, will be implemented concurrent with project development.)*	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.10 SOLID WASTE SERVICES			
Site preparation (vegetation removal and grading activities) and construction activities required to develop the Mission Village project would generate a total of approximately 166,869 tons of construction waste, or an average of approximately 23,838 tons of waste per year over the seven year buildout of the project. Assuming a 50 percent diversion/recycling rate, the development of the Mission Village project would result in the generation of approximately 11,919 tons of construction waste per year for seven years. Upon buildout, the Mission Village project would generate approximately 46,305 pounds of municipal solid waste per day, or approximately 8,451 tons per year, assuming no solid waste from the project is recycled (a worst-case scenario). The project would also generate household hazardous wastes, such as used batteries, paint, etc. Cumulative development within the Santa Clarita Valley would generate 395,553 tons per year of solid waste, as well as hazardous waste, assuming no recycling. The project's share of 8,451 tons per year would represent 2.1 percent of this total.	SP 4.15-1	Each future subdivision which allows construction within the Newhall Ranch Specific Plan shall meet the requirements of all applicable solid waste diversion, storage, and disposal regulations that are in effect at the time of subdivision review. Current applicable regulations include recycling areas that are: • compatible with nearby structures; • secured and protected against adverse environmental conditions; • clearly marked, and adequate in capacity, number and distribution; • in conformance with local building code requirements for garbage collection access and clearance; • designed, placed and maintained to protect adjacent developments and transportation corridors from adverse impacts, such as noise, odors, vectors, or glare; • in compliance with federal, state, or local laws relating to fire, building, access, transportation, circulation, or safety; and • convenient for persons who deposit, collect, and load the materials.	Even with mitigation, the project's solid and hazardous waste impacts would be considered significant and unavoidable. In addition, cumulative solid and hazardous waste impacts would be considered significant and unavoidable.

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.10 SOLID WASTE SERVICES (CONTINUED)			
Mitigation has been identified to reduce construction and operation waste to the extent feasible. The capacity of Los Angeles County's (County) landfills has been assessed and is approved to provide adequate capacity to service the existing population and planned growth until year 2023. Capacity is projected to extend beyond year 2023 when combined with other events that have expanded landfill capacity within the County, such as County disposal agreements and recycling programs. Additionally, there is a potential for alternative solid waste disposal technologies to be developed and legislatively approved in the future, given the market forces that drive the solid waste industry, which could substantially reduce landfill disposal. However, because land suitable for landfill development or expansion currently is quantitatively finite and limited due to numerous environmental, regulatory, and political constraints, until other disposal alternatives adequate to serve existing and future uses for the foreseeable future are employed, the potential project and cumulative impacts relating to solid and hazardous waste disposal are considered significant and unavoidable.	SP 4.15-2	Future multi-family, commercial, and industrial projects within the Newhall Ranch Specific Plan shall provide accessible and convenient areas for collecting and loading recyclable materials. These areas are to be clearly marked and adequate in capacity, number, and distribution to serve the development.	
	SP 4.15-3	The first purchaser of each residential unit within the Newhall Ranch Specific Plan shall be given educational or instructional materials which will describe what constitutes recyclable and hazardous materials, how to separate recyclable and hazardous materials, how to avoid the use of hazardous materials, and what procedures exist to collect such materials.	
	SP 4.15-4	The applicant of all subdivision maps which allow construction within the Newhall Ranch Specific Plan shall comply with all applicable future state and Los Angeles County regulations and procedures for the use, collection and disposal of solid and hazardous wastes.	
	MV 4.10-1	Prior to the issuance of grading permits, the project applicant shall prepare a Waste Management Plan pursuant to Los Angeles County Code, Title 20, Chapter 20.87, Construction and Demolition Debris Recycling. The Waste Management Plan shall include provisions for the recycling of a minimum of 50 percent of the construction and demolition debris, and the submittal of corresponding reports to the Los Angeles County Environmental Programs Division.	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.11 SHERIFF SERVICES			
The Los Angeles County Sheriff's Department provides the primary police protection service for the Specific Plan site, including the proposed Mission Village site, and the surrounding Santa Clarita Valley area. Additionally, the Department of the California Highway Patrol (CHP) provides traffic regulation enforcement; emergency incident management; and service and assistance on Interstate 5 (I-5), State Route 126 (SR-126), SR-14, and other major roadways in the unincorporated portions of the Santa Clarita Valley area. The Sheriff's Department current deputy-to-resident ratio without the proposed project is less than the desired level of service set by the County. The Newhall Area CHP Station is currently able to adequately provide service to the Mission Village Project site and the Santa Clarita Valley and the station does not anticipate any increase or a need to increase it's equipment in the future, and no upgrades to the CHP station are planned. *Buildout of the Mission Village project would significantly increase the demand for police protection and traffic-related services on the project site and in the local vicinity. Based on the Department's standard deputy-to-resident ratio, the proposed project would require the services of an additional 11 sworn Sheriff's Department officers. Payment of the applicable law enforcement facilities fees and new tax revenues generated by the project would provide the funds necessary to employ and equip the additional officers and mitigate impacts to the Sheriff's Department to a less than significant level. Additionally, although not made necessary by the project, the applicant has entered into negotiations with the Sheriff's Department for the provision of a Sheriff station site that would serve the entire Specific Plan site. Thus, by facilitating establishment of a Sheriff's station in the project vicinity, the proposed project would mitigate any cumulatively considerable impacts to sheriff services.*	SP 4.17-1	As subdivision maps are submitted to the County for approval in the future, the applicant shall incorporate County Sheriff's Department design requirements (such as those pertaining to site access, site security lighting, etc.) which will reduce demands for Sheriff's Department service to the subdivisions and which will help ensure adequate public safety features within the tract designs.	With implementation of the identified mitigation measures, the proposed project's Sheriff services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
	MV 4.11-1	Prior to the commencement of construction activities, the project applicant, or its designee, shall enter into an agreement with the California Highway Patrol for traffic control services during project construction. Such traffic control shall include the posting of reduced construction zone speed limit signs as necessary.	
	MV 4.11-2	Prior to the commencement of construction activities, the project applicant, or its designee, shall retain the services of a private security company to patrol the construction site(s), as necessary, to minimize the potential for trespass, theft and other unlawful activity associated with construction-related activities.	
	MV 4.11-3	Prior to the commencement of construction activities, the project applicant, or its designee, shall prepare an approved traffic management plan for construction activities affecting rights-of-way within the jurisdiction of the California Department of Transportation (Caltrans) and the Los Angeles County Department of Public Works.	
	MV 4.11-4	Prior to the issuance of building permits or certificates of occupancy as applicable, the project applicant, or its designee, shall pay to the County the applicable law enforcement facilities fee required by Los Angeles County Code section 22.74.010, et seq., or, in the alternative, shall enter into an agreement with the County for the in lieu payment of such fees.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.11 SHERIFF SERVICES (CONTINUED)		
The proposed project would also increase demands for CHP services in the project area. However, through increased revenues generated by the proposed project (via motor vehicle registration fees and drivers license fees paid by new on-site residents and businesses), the project would generate more than sufficient funding for the additional staffing and equipment that would be needed to serve the project area, This funding can and should be allocated by the state CHP to the local Santa Clarita Valley Station, consistent with present funding practices, to meet projected demands. Therefore, the proposed project would not result in significant project impacts to CHP services, nor would the project contribute to any cumulatively considerable impacts to CHP services. *Construction of the proposed project would increase the incidence of petty crimes on the site and also would increase construction traffic on SR-126 that may potentially delay emergency vehicles traveling through the area. However, by retaining the services of a private security company to patrol the project construction site, and by implementing a construction traffic control plan, any potentially significant construction-related impacts to law enforcement services would be reduced to a level below significant.* *Finally, new resident and daytime populations (employees and visitors) at the project site would be subject to the same potential hazards as existing County residents. It is expected that State and County emergency evacuation plans would be implemented (and amended as necessary) to provide for the safe evacuation of all County residents and employees. Therefore, no significant impacts would occur relative to emergency evacuation in the event of a natural or man-made disaster.*	MV 4.11-5 Prior to the issuance of building permits or certificates of occupancy as applicable, the project applicant, or its designee, shall incorporate the following crime prevention measures into the proposed Project: - Provide lighting in open areas and parking lots; - Ensure the visibility of doors and windows from the street; - Ensure that the required building address numbers are lighted and readily apparent from the street for emergency response agencies; - Provide knox box entry key system for law enforcement if a gated community, gated apartments or gated town homes are planned in the project boundary.	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES			
Fire protection and emergency medical response services for the Mission Village project and the surrounding area are provided by the County's Fire District. ~~Fourteen~~ Thirteen fire stations and ~~three~~ four fire camps provide fire protection services for the Santa Clarita Valley area. The closest station to the project site is Fire Station 76, located at 27223 Henry Mayo Drive in Valencia. The closest available district response units would provide fire protection services. Should a significant incident occur, the entire resources of the Fire Department, not just the stations closest to the site, would serve the project. The County's Fire Department and a franchise private ambulance company also provide paramedic services to the area. *The Mission Village project site is located in an area that has been designated as a Very High Fire Hazard Severity Zone (formerly called Fire Zone 4) by the County of Los Angeles Fire Department, which denotes the County Forester's highest fire hazard potential.*	SP 4.18-1	At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a Wildfire Fuel Modification Plan shall be prepared and submitted for approval by the County Fire Department. The Wildfire Fuel Modification Plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to County Fire Department requirements. The wildfire fuel modification plan shall depict a fuel modification zone in conformance with the Fuel Modification Ordinance in effect at the time of subdivision. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the County Forester. Fire resistant plant species containing habitat value may be planted in the fuel modification zone. *(The proposed Mission Village project provides standards that are parallel with standards as presented by the Wildfire Fuel Modification Program. Construction vehicles used during the construction of the Mission Village Project would incorporate the use of spark arrestors on all machinery to prevent fires, along with a lookout for fires during welding and activities that could produce large amounts of sparks)*	**Project and Cumulative** With implementation of each of the identified mitigation measures, the proposed project's fire protection services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Pursuant to mitigation adopted by the County as part of its approval of the Newhall Ranch Specific Plan, and project specific mitigation proposed by this EIR, the applicant is currently in discussions with the County's Fire District with respect to the required MOU for Newhall Ranch, Entrada, and Legacy Village, which collectively comprise "the Project Area" for the Memorandum of Understanding (MOU), which would result in the construction of additional fire stations on the Newhall Ranch site, generally, and specifically a new fire station on the Mission Village site. A fire station is to be constructed on the Mission Village site (Fire Station 177) that would ultimately provide fire protection services for the Mission Village site. ~~It is expected that the additional fire station to be constructed southwest of the Mission Village site would ultimately provide fire protection services for the Mission Village site. The project applicant intends to complete construction of Fire Station 177 such that the station is operational upon issuance of the 5,000th certificate of occupancy for Project Area as defined in the project MOU.~~ Until such time as that station is completed, existing Fire Stations 76 and Fire Station 124 would be available to serve the project site.		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES (CONTINUED)		
Additionally, the proposed project would be required to meet all County codes and requirements relative to providing adequate fire protection services to the site during both the construction and operational stages of the project. As a result, the project would not diminish the staffing or the response times of existing fire stations in the Santa Clarita Valley, nor would it create a special fire protection requirement on the site that would result in a decline in existing service levels. Therefore, by implementing the adopted Specific Plan mitigation measures in combination with the recommended project-specific mitigation, the proposed project would not have a significant project or cumulative impact on fire protection services or fire hazards in Santa Clarita Valley.	SP 4.18-2 Each subdivision and site plan for the proposed Specific Plan shall provide sufficient capacity for fire flows of 1,250 gpm at 20 pounds psi residual pressure for a 2-hour duration for single-family residential units, and 5,000 gpm at 20 psi residual pressure for a 5-hour duration for multi-family residential units and commercial/retail uses, or whatever fire flow requirement is in effect at the time of subdivision and site plan approval. (*All development within the Mission Village project area will be required to comply with the fire flow standards for single-family residential, multi-family residential, commercial uses, and industrial uses as provided in the Los Angeles County Municipal Code, as adopted through the 2006 California Fire Code.*) SP 4.18-3 Each subdivision map and site plan for the proposed Specific Plan shall comply with all applicable building and fire codes and hazard reduction programs for Fire Zones 3 and 4 that are in effect at the time of subdivision map and site plan approval. (*The proposed Mission Village Project will include development standards for construction of residential and commercial uses that would provide for the reduction of fire threats.)* SP 4.18-4 The developer will provide funding for three fire stations to the Consolidated Fire Protection District of Los Angeles County (the "Fire District") in lieu of developer fees. The developer will dedicate two fire station sites for the two fire stations located in Newhall Ranch. The Fire District will dedicate the site for the fire station to be located at the Del Valle Training Facility. Each fire station site will have a building pad consisting of a net buildable area of 1 acre. If the cost of constructing the three fire stations, providing and dedicating the two fire station sites, and providing three engines, one paramedic squad and 63 percent of a truck company exceeds the developer's developer fee obligation for the Newhall Ranch development as determined by the Fire District, the Fire District will fund the costs in excess of the fee obligation.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES (CONTINUED)		
	SP 4.18-4 (continued) Two of the three fire stations to be funded by the developer will not exceed 6,000 square feet; the third fire station to be funded by the developer will not exceed 8,500 square feet. The Fire District will fund the cost of any space/square footage of improvement in excess of these amounts as well as the cost of the necessary fire apparatus for any such excess square footage of improvements. The cost of three fire engines, a proportionate share of a truck and one squad to be provided by the developer will be determined based upon the apparatus cost at the time the apparatus is placed in service. The Fire District and the developer will mutually agree to the requirements of first-phase protection requirements based upon projected response/travel coverage. Such mutual agreement regarding first-phase fire protection requirements ("fire protection plan") and the criteria for timing the development of each of the three fire stations will be defined in a Memorandum of Understanding between the developer and the Fire District. Delivery of fire service for Newhall Ranch will be either from existing fire stations or one of the three fire stations to be provided by the developer pursuant to this section. Prior to the commencement of the operation of any of the three fire stations, fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the developer at mutually agreed-upon locations, to be replaced by the permanent stations which will be located within the Newhall Ranch development. The developer and the Fire District will annually review the fire protection plan to evaluate development and market conditions and modify the Memorandum of Understanding accordingly. (*The Mission Village Project Site will be required to comply with the MOU for the development of Fire Station 177 as specifically provided by Mitigation Measure MV 4.12-2*)	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES (CONTINUED)		
	MV 4.12-1 Prior to approval of a final subdivision map for the project, the applicant must prepare and submit for approval by the County Fire Department a preliminary fuel modification plan, a preliminary landscape plan, and a preliminary irrigation plan for the project, as required by Section 1117.2.1 of the County of Los Angeles Fire Code. MV 4.12-2 The applicant shall construct a fire station on the Mission Village site, including all ancillary requirements for normal fire station operation such as landscaping, parking, fuel tanks, storage rooms, etc. The applicant also shall provide funding for the purchase of one Fire District standard, fully equipped fire pumper engine, and one Tiller Truck/Quint to be housed at the fire station. Upon completion of construction, the fire station, including the underlying land and equipment, shall be conveyed to the Consolidated Fire Protection District of Los Angeles County (Fire District) in lieu of the payment of any/all developer fees otherwise required of the project. The applicant and the Fire District shall enter into a memorandum of understanding (MOU) detailing the terms of the agreement as generally set forth in this mitigation measure. The fire station will be constructed on a minimum 1.5-acre site located south of Magic Mountain Parkway at the intersection of Westridge Parkway and "QQ" Street; the location and configuration of the site shall be approved by the Fire District. The fire station shall be approximately 13,500 GSF in size and include a 3,600 GSF apparatus storage building; future changes in federal, state, or local requirements may affect this minimum size. The Fire District shall approve all plans and designs for the fire station prior to the commencement of construction.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES (CONTINUED)		
	MV 4.12-2 (continued) The Fire District will evaluate with the applicant the requirements of first-phase protection based upon projected response/travel coverage with the goal of achieving 5-minute response coverage. The results of such evaluation shall include requirements for first-phase fire protection ("fire protection plan"), and the criteria for timing the development of the fire station shall be outlined in the MOU. Prior to the commencement of operation of the fire station, fire service may be delivered to Mission Village from existing fire stations or from temporary fire stations to be provided by the applicant at mutually agreed-upon locations, to be replaced by the permanent station. The use of such temporary fire stations shall be approved by the Fire District and detailed in the MOU. (*This mitigation measure implements mitigation previously adopted by the County in connection with development of the Newhall Ranch Specific Plan and does not impose upon the applicant an obligation to fund or construct additional fire stations beyond those obligations previously imposed by the County*.) MV 4.12-3 The proposed development shall provide multiple ingress/egress access for the circulation of traffic, and emergency response issues. Said determinations shall be approved through the tentative map approval. MV 4.12-4 The development of this project shall comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants. Specifics for said requirements shall be established during the review and approval process of the tentative map. MV 4.12-5 This property is located within the area described by the Forester and Fire Warden as a Fire Zone 4, Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES (CONTINUED)		
	MV 4.12-6 Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.	
	MV 4.12-7 Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width and indicated on the Tentative or Exhibit "A" maps. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.	
	MV 4.12-8 Access roads shall be maintained with a minimum of 10 feet of brush clearance on each side. Fire access roads shall have an unobstructed vertical clearance clear-to-sky with the exception of protected tree species. Protected tree species overhanging fire access roads shall be maintained to provide a vertical clearance of 13 feet, 6 inches. Applicant to obtain all necessary permits prior to the commencement of trimming of any protected tree species.	
	MV 4.12-9 The maximum allowable grade shall not exceed 15 percent except where topography makes it impractical to keep within such grade; in such cases, an absolute maximum of 20 percent will be allowed for up to 150 feet in distance. The average maximum allowed grade, including topographical difficulties, shall be no more than 17 percent. Grade breaks shall not exceed 10 percent in 10 feet.	
	MV 4.12-10 Requirements for access, fire flows, and hydrants are to be addressed at the Los Angeles County Subdivision Committee meeting during the subdivision tentative map stage.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES (CONTINUED)		
	MV 4.12-11 Fire sprinkler systems shall be installed ~~are required~~ in ~~some~~ residential and ~~most~~ commercial occupancies consistent with applicable code and ordinance requirements. For those occupancies not requiring fire sprinkler systems, it is encouraged that fire sprinkler systems be installed. This will reduce potential fire and life losses. MV 4.12-12 Prior to construction, the following items shall be addressed: a. Installation and inspection of the required all weather access to be provided as determined by either the tentative map review process or building penult issuance. b. Fire hydrants shall be installed and tested prior to the clearance for the commencement of construction. **INSTITUTIONAL:** MV 4.12-13 The development may require fire flows up to 8,000 gallons per minute at 20 pounds per square inch residual pressure for up to a 4-hour duration as outlined in the 2002 County of Los Angeles Fire Code Appendix III-AA. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used. MV 4.12-14 Fire hydrant spacing shall be based on fire flow requirements as outlined in the 2002 County of Los Angeles Fire Code Appendix III-BB. Additional hydrants will be required if hydrant spacing exceeds specified distances. MV 4.12-15 All access devices and gates shall comply with California Code of Regulations, Title 19, Article 3.05 and Article 3.16. Los Angeles County Fire Department Regulation #5.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES (CONTINUED)		
	COMMERCIAL/HIGH-DENSITY RESIDENTIAL: MV 4.12-16 The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a 5-hour duration. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used. Fire flows shall be established as part of the tentative map review process with the submittal of architectural details to determine actual flow requirement. If adequate architectural detail is unavailable during the tentative map review process, maximum fire flows will be established with the ability of the fire flow to be changed during the actual architectural plan review by Fire Prevention Engineering for building permit issuance. MV 4.12-17 Fire hydrant spacing shall be 300 feet and shall meet the following requirements: a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant. b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant. c. Additional hydrants will be required if hydrant spacing exceeds specified distances. d. When cul-de-sac depth exceeds 200 feet on a commercial street, hydrants shall be required at the corner and mid block. e. A cul-de-sac shall not be more than 500 feet in length, when serving land zoned for commercial use. MV 4.12-18 Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES (CONTINUED)		
	MV 4.12-19 All on-site driveways/roadways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. The centerline of the access driveway shall be located parallel to, and within 30 feet of an exterior wall on one side of the proposed structure. MV 4.12-20 Driveway width for non-residential developments shall be increased when any of the following conditions will exist: a. Provide 34 feet in width, when parallel parking is allowed on one side of the access roadway/driveway. Preference is that such parking is not adjacent to the structure. b. Provide 36 feet in width, when parallel parking is allowed on each side of the access roadway/driveway. For buildings in excess of 35 feet, minimum paved fire access is 28 feet. c. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans. d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in 3-inch-high letters. Driveway labeling is necessary to endure access for Fire Department use.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES (CONTINUED)		
	SINGLE-FAMILY/TWO-FAMILY DWELLING UNITS: MV 4.12-21 Single-family detached homes shall require a minimum fire flow of 1,250 gallons per minute at 20 pounds per square inch residual pressure for a 2-hour duration. Two-family dwelling units (duplexes) shall require a fire flow of 1,500 gallons per minute at 20 pounds per square inch residual pressure for a 2-hour duration. When there are five or more condominium units are taking access on a single driveway, the minimum fire flow shall be increased to 1,500 gallons per minute at 20 pounds per square inch residual pressure for a 2-hour duration. MV 4.12-22 Fire hydrant spacing shall be 600 feet and shall meet the following requirements: a. No portion of lot frontage shall be more than 450 feet via vehicular access from a public fire hydrant. b. Lots of 1 acre or more shall place no portion of a structure where it exceeds 750 feet via vehicular access from a properly spaced public fire hydrant. c. When cul-de-sac depth exceeds 450 feet on a residential street, fire hydrants shall be required at the corner and mid block. d. Additional hydrants will be required if hydrant spacing exceeds specified distances during the tentative map review process or building permit plan check.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES (CONTINUED)		
	MV-4.12-23 Streets or driveways within the development shall be provided with the following: a. Provide 36 feet in width on all streets where parking is allowed on both sides. b. Provide 34 feet in width on cul-de-sacs up to 700 feet in length. This allows parking on both sides of the street. c. Provide 36 feet in width on cul-de-sacs from 701 to 1,000 feet in length. This allows parking on both sides of the street. d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in 3-inch-high letters. Driveway labeling is necessary to ensure access for Fire Department use. e. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. MV 4.12-24 A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.12 FIRE PROTECTION SERVICES (CONTINUED)		
	LIMITED ACCESS DEVICES (GATES, ETC.): MV 4.12-25 All access devices and gates shall meet the following requirements: a. Any single-gated opening used for ingress and egress shall be a minimum of 26 feet in width, clear-to-sky. b. Any divided gate opening (when each gate is used for a single-direction of travel, i.e., ingress or egress) shall be a minimum width of 20 feet clear-to-sky. c. Gates and/or control devices shall be positioned a minimum of 50 feet from a public right-of-way, and shall be provided with a turnaround having a minimum of 32 feet of turning radius. If an intercom system is used, the 50 feet shall be measured from the right-of-way to the intercom control device. d. All limited access devices shall be of a type approved by the Fire Department. e. Gate detail plans shall be submitted for review and approval to the Fire Department as part of the tentative map submittal or prior to installation. These plans shall show all locations, widths, and details of the proposed gates.	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.13 EDUCATION			
The Newhall School District (Newhall District), Saugus Union Elementary School District (Saugus District) and the William S. Hart Union High School District (Hart District) currently provide public elementary, junior high/middle school, and senior high school education in the Mission Village project area. The Newhall and Saugus District's provide elementary school service (Kindergarten and grades 1–6) to the project site. The Hart District provides junior high school service (grades 7 and 8) and senior high school (grades 9–12) service to the project site. The Mission Village project would generate an estimated 969 elementary students, ~~187~~ 267 middle school students, and ~~321~~ 378 senior high school students for the three districts at buildout. *The "School Facilities Funding Agreement entered into between the Newhall District and Newhall Land and Farming Company" (Newhall School Funding Agreement), effective ~~January 22, 2010~~December 1, 2009, and included in this EIR (**Appendix 4.13**), would mitigate Mission Village impacts on education facilities in the Newhall District to a level below significant. Under the Newhall School Funding Agreement, Newhall guarantees to the Newhall District that there will be adequate school facilities available to accommodate every student within the Specific Plan.*	SP 4.16-1	The Specific Plan developer shall reserve five elementary schools sites, one junior high school site and one high school site, of 7 to 10, 20 to 25, and 40 to 45 acres in size, respectively, depending upon adjacency to local public parks and joint use agreements. *(The Mission Village project includes the reservation of a 9.5-acre elementary school site.)*	With implementation of the identified mitigation measures, the proposed project's education impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
	SP 4.16-2	The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Newhall School District. *(This measure is applicable to the Mission Village project.)*	
	SP 4.16-3	The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the William S. Hart Union High School District. *(This measure is applicable to the Mission Village project.)*	
	SP 4.16-4	Not applicable.	
	SP 4.16-5	Not applicable.	
	MV 4.13-1	The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Saugus Union School District.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.13 EDUCATION (CONTINUED)		
*The "School Facilities Funding Agreement Between the Saugus Union School District and Newhall Land and Farming Company" (Saugus School Funding Agreement), effective February 18, 1997, and included in this EIR (**Appendix 4.13**), would mitigate the proposed Mission Village project's impacts on the Saugus District. Under the Saugus School Funding Agreement, the applicant and the Saugus District have agreed to a financing schedule and a financing plan, in combination with certain mitigation payments, which will provide permanent facilities, including land, buildings, furnishings and equipment to house grades K–6 students who will reside in the Newhall Ranch Specific Plan area. Once implemented, the Saugus School Funding Agreement would fully mitigate Mission Village's*		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.13 EDUCATION (CONTINUED)		
direct and cumulative impacts on the Saugus School District's educational facilities. *Project impacts on the Hart District would be mitigated through the "School Facilities Funding Agreement Between the William S. Hart Union High School District and The Newhall Land and Farming Company" (Hart School Funding Agreement), effective October 1998, and included in this EIR (**Appendix 4.13**). The Hart School Funding Agreement conditionally obligates The Newhall Land and Farming Company to provide up to three additional junior high schools and two additional senior high schools to the Hart District. Once implemented, the Hart School Funding Agreement would fully mitigate Mission Village's direct and cumulative impacts on the Hart District's educational facilities.* *Cumulative student generation under the Development Monitoring System (DMS) Build-Out Scenario and the Santa Clarita Valley Build-Out Scenario cannot be accommodated by existing or presently planned facilities that serve the valley; therefore, the impacts of cumulative development on the school districts would be potentially significant if no additional facilities were constructed. However, compliance, as appropriate, with existing School Facilities Funding Agreements and other mechanisms (e.g., Senate Bill [SB] 50, the Valley-Wide Joint Fee Resolution, and/or new school facilities funding agreements), which require that future development pay its fair-share towards the construction of new school facilities to accommodate the increased population, would reduce potential cumulative development impacts on the school districts to below a level of significance. Moreover, because the direct impacts of the proposed project would be fully mitigated, the project's contribution to any cumulative impacts would not be cumulatively considerable. No significant unavoidable impacts would result from implementation of the proposed Mission Village project.*		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.14 PARKS AND RECREATION		
The proposed Mission Village project includes a public 20-net acre Community Park, which is consistent with the Specific Plan's Land Use Overlay Community Park designation for the area and would be located along the eastern side of the proposed Commerce Center Drive near the eastern site boundary. It should be noted that the park locations in the Newhall Ranch Specific Plan are overlay designations. The overlay designation allows park location flexibility to situate parks in the best locations to serve future residents as the property develops over time. The proposed project also includes a 5-acre public neighborhood park, 6.9-acre private Community Recreation Center, 4.6 acres of private recreation area, and 2.9-acre private park. The proposed project further provides a hierarchy of community, local and pathway trails, as identified in the Specific Plan, connecting to the Specific Plan's Regional River Trail, which traverses the Santa Clara River. These trails include 18,980 linear feet of community trails, 12,900 linear feet of local trails, and 9,200 linear feet of pathways (7.5 miles of trails). In addition, the project includes 217 acres of River Corridor dedication. The Specific Plan allows a 10 percent (21.7 acres) park land credit for River Corridor dedication. In sum, the proposed project includes a total of 70~~.4~~ acres of park and recreational space. *Implementation of these project components would result in a parkland provision equivalent to approximately 10.2 ~~9.4~~ acres per 1,000 persons, which is greater than the Los Angeles County (County) and Quimby Act requirements of 3.0 acres per 1,000 persons. The basic Quimby Act park land obligation for the proposed project is 29.7 net acres of park land; pursuant to the Newhall Ranch Specific Plan, ~~the 71.86 acres~~ any acreage by which the proposed project exceeds its Quimby obligation will be credited against other subdivisions within the Specific Plan area. Measured against the identified significance thresholds, the proposed Mission Village project meets County parkland requirements, exceeds Quimby Act parkland standards, and would not result in significant impacts to local parks and*	SP 4.20-1 Development of the Newhall Ranch Specific Plan will provide the following acreages of parks and open area: • Ten public Neighborhood Parks totaling 55 acres; • Open Areas totaling 1,106 acres of which 186 acres are Community Parks; • High Country Special Management Area of 4,214 acres; • River Corridor Special Management Area of 819 acres; • A 15-acre lake; • An 18-hole golf course; and • A trail system consisting of: – Regional River Trail; – Salt Creek Corridor; – Community trails; and – Unimproved trails. SP 4.20-2 Prior to the construction of the proposed trail system, the Specific Plan applicant shall finalize the alignment of trails with the County Department of Parks and Recreation. SP 4.20-3 Trail construction shall be in accordance with the County of Los Angeles Department of Parks and Recreation trail system standards.	With implementation of the identified mitigation measures, the proposed project's parks and recreation impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.14 PARKS AND RECREATION (CONTINUED)		
recreation facilities by causing substantial physical deterioration to existing recreational facilities. Additionally, the proposed project does not include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. *Implementation of cumulative projects would incrementally increase demand for local park facilities. However, the proposed project would meet County parkland requirements and exceed the Quimby Act parkland standards. Further, future development projects would be subject to the Quimby Act and County requirements, which would mitigate the demand associated with each future project. As a result, no significant cumulative impacts on County parks and recreation facilities would occur with implementation of the proposed project.* *Because the proposed Mission Village project meets the County parkland requirements and exceeds the Quimby Act requirements, no further mitigation measures are required for the proposed project beyond those adopted as part of the Newhall Ranch Specific Plan.*	The Specific Plan identifies two neighborhood parks within the Mission Village tract map site; however, the proposed project will provide only one neighborhood park. The credits generated by the proposed project exceed the Quimby Obligation, thus allowing only the provision for one neighborhood park within the tract map site. In addition to the above mitigation measures, the Specific Plan's neighborhood parks and the active areas of the Community Parks are required to be improved pursuant to the revised Specific Plan's list of specified park improvements. The park improvements are required to be provided in accordance with the final park plan approved by the County's Department of Parks and Recreation. See, Specific Plan, May 2003, Section 2.8, p. 2-145. As a Board of Supervisors' imposed Condition of Approval, approximately 1,517 acres of land encompassing the Salt Creek watershed in Ventura County are required to be dedicated in fee and/or by conservation easement, as determined by the County in its sole discretion, to the joint powers authority, which is responsible for overall recreation and conservation of the Newhall Ranch High County SMA. Said land is to be managed in conjunction with and in the same manner as the High Country SMA.	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.15 LIBRARY SERVICES			
The Mission Village project site is located in the Valencia Library service area of the County of Los Angeles Public Library (County Library). In addition to the Valencia Library, the Santa Clarita Valley area is served by three other County libraries (Newhall Library, Canyon Country Jo Anne Darcy Library, and Castaic Library) and the Santa Clarita Valley Bookmobile. Existing library facility space in the Santa Clarita Valley does not meet the County Library's service level guidelines. *As part of the County's approval of the Newhall Ranch Specific Plan, the County adopted a library mitigation measure requiring that the developer dedicate up to two library sites and provide funding for the construction and development of library facilities on the Specific Plan site. The total library building square footage to be funded by the developer will not exceed 0.35net square feet per person. Consistent with that mitigation, the proposed Mission Village project includes a 3.3-acre site for development of a public library in the Village Center area of the project. The Specific Plan mitigation measure also provides that, prior to issuance of the first residential building permit on Newhall Ranch, the County Librarian and developer must develop a mutually acceptable "Library Construction Plan." The plan must outline the library construction requirements and define elements such as location, size, funding, and timing of facilities construction. The Library Construction Plan, a completion schedule, land dedication criteria, and a funding plan must be defined and set forth in a MOU between the developer and County Librarian. With implementation of the Specific Plan mitigation, any potential impacts to library services resulting from the Mission Village project would be reduced to less than significant levels.*	SP 4.19-1	The developer will provide funding for a maximum of two libraries (including the site(s), construction, furniture, fixtures, equipment, and materials) to the County Librarian. The developer will dedicate a maximum of two library sites for a maximum of two libraries located in Newhall Ranch in lieu of the land component of the County's library facilities mitigation fee, in accordance with the provisions of Section 22.72.090 of Section 2 of Ordinance No. 98-0068. The actual net buildable library site area required and provided by the developer will be determined by the actual size of the library building(s), the Specific Plan parking requirements, the County Building Code, and other applicable rules. The total library building square footage to be funded by the developer will not exceed 0.35 net square feet per person. The developer's funding of construction of the library(s) and furnishings, fixtures, equipment and materials for the library(s) will be determined based on the cost factors in the library facilities mitigation fee in effect at the time of commencement of construction of the library(s). Prior to County's issuance of the first residential building permit of Newhall Ranch to the developer, the County Librarian and the developer will mutually agree upon the library construction requirements (location, size, funding, and time of construction) based upon the projected development schedule and the population of Newhall Ranch based on the applicable number of average persons per household included in the library facilities mitigation fee in effect at the time. Such mutual agreement regarding the library construction requirements ("Library Construction Plan") and the criteria for timing the completion of the library(s) will be defined in a Memorandum of Understanding (MOU) between the developer and the County Librarian.	With implementation of the identified mitigation measures, the proposed project's library services impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.15 LIBRARY SERVICES (CONTINUED)		
Based on the County Library's service level guidelines of 0.50 square foot of library facilities per capita and a collection size of 2.0 library material items (books, magazines, periodicals, audio, video, etc.) per capita for an opening day collection in a new library, the development of the proposed Mission Village project would require a total of 3,781 square feet of library facilities and 21,605 items. *With respect to cumulative impacts, new developments occurring within the Santa Clarita Valley would increase demand for books and library space. However, the project's impacts would be fully mitigated and would not contribute to cumulative impacts. Additionally, payment of the Library Developer Fee, $805.00 per residential unit (as of July 1, 2010), by other foreseeable regional projects would reduce potentially significant cumulative impacts on the County Library system to less -than -significant levels.*	4.19-1 (continued) Such MOU shall include an agreement by the developer to dedicate sufficient land and pay the agreed amount of fees on a schedule to allow completion of the library(s) as described below. The developer's funding for library facilities shall not exceed the developer's fee obligation at the time of construction under the developer fee schedule. If two libraries are to be constructed, the first library will be completed and operational by the time of County's issuance of the 8,000th residential building permit of Newhall Ranch, and the second library will be completed and operational by the time of County's issuance of the 15,000th residential building permit of Newhall Ranch. If the County Librarian decides that only one library will be constructed, the library will be completed and operational by the time of County's issuance of the 10,000th residential building permit of Newhall Ranch. No payment of any sort with respect to library facilities will be required under Section 2.5.3.d. of the Specific Plan in order for the developer to obtain building permits for nonresidential buildings.	

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.16 AGRICULTURAL RESOURCES			
Development of the proposed Mission Village tract map and related off-site improvements would convert 160.7 acres of Prime Farmland, 30.1 acres of Unique Farmland, 0.6 acres of Farmland of Statewide Importance, 2.5 acres of Farmland of Local Importance, and 875.6 acres of Grazing Land to non-agricultural urban land uses. The proposed project's irreversible loss of 160.7 acres of Prime Farmland and 30.1 acres of Unique Farmland, and 0.6 acre of Farmland of Statewide Importance is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and is considered a significant impact; based. Based on the applicable significance thresholds, the loss of Grazing Land is not considered a significant impact. No feasible mitigation exists to reduce the identified significant impacts resulting from the conversion of prime agricultural land to a less -than -significant level and, therefore, these impacts are significant and unavoidable. *With respect to forest resources, development of the proposed Mission Village tract map and related off-site improvements would not conflict with forestland or timberland zoning. In the past, the project site was zoned for agricultural uses; but, with approval of the Newhall Ranch Specific Plan on May 27, 2003, the Mission Village project site was re-zoned as non-agriculture. Therefore, development of the project site would not require a zone change from an existing forestland/timberland zone to a non-forestland/timberland zone, and there would be no related impacts.*	SP 4.4-1 SP 4.4-2 MV 4.16-1	Not applicable. Not applicable. In order to minimize the premature conversion of agricultural lands and to track that conversion, prior to issuance of the first grading permit in areas of Mission Village where agricultural soils designated as prime farmland, unique farmland, and/or farmland of statewide importance exist (Pub.Resources Code section 21060.1), Newhall Land shall prepare and submit to the County a phasing map to document the phased discontinuation of existing agricultural activities located within the Mission Village project area over the course of its development.	The project-specific impacts resulting from the loss of prime agricultural land are considered significant and unavoidable. In addition, the cumulative conversion of prime agricultural land to non-agricultural uses constitutes a loss of an irreplaceable resource and is considered a significant and unavoidable cumulative impact.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.16 AGRICULTURAL RESOURCES (CONTINUED)		
The Mission Village project site contains approximately 143.7 acres (approximately 7.75 percent of the 1,854.1-acre project site)[14] *of native trees (i.e., oak trees and cottonwood trees, which are considered Forest Land as defined by Public Resource Code section 12220(g)), of which 10.6 acres would be permanently disturbed and 28.9 acres would be temporarily disturbed. Therefore, approximately 0.57 percent (approximately 10.6 acres of native trees) of the 1,854.1-acre project site that contains native trees would be lost, due to development of the project. However, because mitigation is provided in* ***Section 4.3****,* ***Biota****, to mitigate the loss of these forest resources, any potentially significant impacts related to such loss would be reduced to a less than significant level.*		

14 This total -- 1,854.1 acres -- includes the tract map site and off-site improvement areas.

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.17 UTILITIES			
The Mission Village proposed project would require energy resources and infrastructure to serve the project site. Current projections for energy supply and demand by Southern California Edison (SCE) and the Southern California Gas Company (SCGC) indicate that these utility providers would have sufficient electricity and natural gas resources to serve the project site. In addition, the proposed project would exceed the statewide energy efficiency requirements set forth in Title 24 of the California Code of Regulations by 15 percent. Further, consistent with the Newhall Ranch Specific Plan Program Environmental Impact Report (EIR), providing electricity and natural gas to the Mission Village project site would not require a considerable extension of distribution infrastructure. *Importantly, several of Mission Village's design features would reduce its demand for energy resources, and further ensure that all impacts to utilities-related resources are less than significant. First, as indicated above, Mission Village's residential, commercial, and public buildings would exceed current state efficiency standards (i.e., Title 24 of the California Code of Regulations) by at least 15 percent, thereby reducing the overall demand for electricity and natural gas resources. (See Section 4.23, Global Climate Change, Mitigation Measures MV 4.23-1 and 4.23-2.) In addition, the project applicant may rely on renewable energy sources to meet a portion of the project's energy demands, and is evaluating the feasibility of energy efficient municipal lighting and smart meter programs. (See Section 4.23, Global Climate Change, Mitigation Measures MV 4.23-3 and 4.23-4 and discussion of potentially feasible programs regarding municipal lightings and smart meters). With implementation of the mitigation measures from the certified Newhall Ranch Specific Plan Program EIR, and implementation of the "green" project design features summarized above, the Mission Village project is anticipated to result in less than significant impacts to electricity and natural gas resources and infrastructure.*	SP 4.14-1	All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the *California Code of Regulations*).	With implementation of the identified mitigation measures, the proposed project's utilities impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.
	SP 4.14-2	Southern California Edison or other energy provider is to be notified of the nature and extent of future development on the Specific Plan site prior to recordation of all future subdivisions.	
	SP 4.14-3	All future tract maps are to comply with Southern California Edison or other energy provider guidelines for grading, construction, and development within SCE easements.	
	SP 4.14-4	Electrical infrastructure removals and relocations are to be coordinated between the Specific Plan engineer and Southern California Edison or other energy provider as each tract is designed and constructed.	
	SP 4.14-5	All future tract maps are to be reviewed by Los Angeles County to ensure adequate accessibility to Edison or other energy provider facilities as a condition of their approvals.	
	SP 4.14-6	Not applicable.	
	SP 4.13-1	All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the *California Code of Regulations*).	
	SP 4.13-2	A letter from the Southern California Gas Company or other gas provider is to be obtained prior to recordation of all future subdivisions stating that service can be provided to the subdivision under construction.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.17 UTILITIES (CONTINUED)		
	SP 4.13-3 The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within Southern California Gas Company easements. These requirements would be explicitly defined by SCGC at the future tentative map stage. SP 4.13-4 All potential buyers or tenants of property in the vicinity of Southern California Gas Company transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.18 MINERAL RESOURCES		
Portions of the Mission Village project site located along the banks of the Santa Clara River, and the sites of the proposed utility corridor and water quality basin, are located within a Mineral Resource Zone (MRZ) 2 zone, which identifies the area as a location with significant mineral deposits present, or a location with a high likelihood of the presence of mineral deposits. The majority of the remainder of the Mission Village site is located in the MRZ-3 zone, which indicates that mineral deposits are expected to occur in this area, but the extent of significance of such deposits is unknown at the present time. The off-site site locations for water tanks are also located in MRZ-3. Two alternative sites are proposed for the electrical substation; each is located in MRZ-1, which is an area characterized as having no significant mineral deposits present or judged to have little likelihood for the presence of minerals. The extension of Magic Mountain Parkway to the project site would traverse both MRZ-2 and MRZ-3. However, the tract map site, utility corridor, water quality basin, water tank, electrical substation, and the extension of Magic Mountain Parkway sites are not located in active mineral extraction operation areas. Further, the tract map site and proposed sites for the utility corridor, water quality basin, water tank, electrical substation, and extension of Magic Mountain Parkway are not identified as a "locally-important mineral resource recovery site" or a "regionally significant construction aggregate resource area" by the County of Los Angeles General Plan, Santa Clarita Valley Area Plan, or Newhall Ranch Specific Plan. In addition, at the time the Newhall Ranch site was designated by the County of Los Angeles as "Specific Plan," which serves as the zoning designation for the property, there were no areas within Newhall Ranch used for mineral extraction. Under the Specific Plan designation, the area currently is zoned for development of various Specific Plan land uses and not long-term mineral extraction activities.	No mitigation measures required.	Less than Significant

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.18 MINERAL RESOURCES (CONTINUED)		
The Specific Plan zoning designation allows for the development of a mixed-use planned community, with sand and gravel extraction activities allowed during tract grading and construction phases on the sites to be developed. Additionally, extraction activities are permitted in the Visitor-Serving (VS) and Open Area (OA) zones under a conditional use permit, which is not proposed. Thus, the current zoning designation for the project site allows the area to be available for mineral extraction uses on a limited basis in areas that are already proposed for, and in association with, development (i.e., on tentative tract map sites). Furthermore, the majority of mineral resources of value are expected to be located in the River Corridor and not on the project site, and the continued availability of these resources would not be significantly affected by the proposed project. Therefore, project implementation will not result in a significant impact in relation to the loss of availability of a known mineral resource or a locally important mineral resource recovery site.		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.19 ENVIRONMENTAL SAFETY		
The potential environmental safety impacts relative to development of the Mission Village project site include soil contamination attributable to past and present agricultural activities, on-site petroleum (i.e., oil) drilling and pipeline activities, and the disposal of on-site hazardous materials debris. Hazardous materials generally include petroleum products (including oil and gasoline), automotive fluids (antifreeze, hydraulic fluid), paint, cleaners (dry cleaning solvents, cleaning fluids), and pesticides from agricultural uses (at higher concentrations). Byproducts generated as a result of activities using hazardous materials (such as dry cleaning solvents, oil, and gasoline) are considered hazardous waste. Contamination usually takes the form of a hazardous materials or waste spill in soil. Such contamination can penetrate soils into the groundwater table, resulting in the pollution of a local water supply. Commercial uses, particularly those using underground storage tanks (UST), are most common in causing such contamination. Potential environmental safety impacts associated with the project site include observed stained soil (including possible petroleum hydrocarbon contamination) near abandoned oil wells and pipelines, aboveground storage tanks (ASTs) and equipment storage areas. Unless mitigated, these potentially contaminated soils could result in significant impacts, especially if construction utilizing these soils, or contamination within these soils, was permitted without proper monitoring and testing. When remediated to local, state and federal standards, including re-abandonment procedures for previously abandoned wells and pipelines, any potentially significant impacts relative to these conditions would be reduced to below a level of significance and, therefore, would not result in environmental safety hazards to Mission Village residents, employees and/or visitors or to adjacent properties.	SP 4.5-1 All final school locations are to comply with the California State Board of Education requirement that no schools be sited within 100 feet from the edge of the right-of-way of 100–110 kV lines; 150 feet from the 220–230 kV lines; and 250 feet from the 345 kV lines. *(The school proposed as part of the Mission Village project will not be sited within an electric transmission line restricted zone.)* SP 4.5-2 Only non-habitable structures shall be located within SCE easements. *(The Mission Village tract map does not locate any habitable structures within a Southern California Edison [SCE] easement.)* SP 4.5-3 Prior to issuance of grading permits, all abandoned oil and natural gas-related sites must be remediated to the satisfaction of the California Department of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region). *(All abandoned oil and natural gas-related sites on the Mission Village project site have been abandoned and remediated, as necessary, according to California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) standards. Furthermore, pursuant to project-specific mitigation measure **MV 4.19-1**, all former oil wells to be disturbed or located in an area of development on the Mission Village site shall be reabandoned according to DOGGR standards prior to the issuance of grading permits.)* SP 4.5-4 Not applicable.	With implementation of the identified mitigation measures, the proposed project's environmental safety impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.19 ENVIRONMENTAL SAFETY (CONTINUED)		
Related to potential soil contamination, soils contaminated with petroleum hydrocarbons in oil fields and near abandoned wells are capable of generating gasses, containing methane, total petroleum hydrocarbons (TPHs), and volatile organic compounds (VOCs) through anaerobic biodegradation. Soils contaminated with petroleum hydrocarbons in oil fields and near abandoned wells are capable of being emitted into the air via the process of anaerobic biodegradation. Unremediated, contaminated soil could pose a potentially significant impact to public health and safety, due to the potential for methane, TPH or VOC gasses to accumulate under structures, otherwise known as vapor intrusion. However, mitigation would reduce potential impacts due to vapor migration to less than significant. *Potential environmental safety impacts associated with the project site also include miscellaneous debris present on the project site that could contain previously unidentified hazardous materials. Mitigation is recommended requiring that unidentified structures or materials encountered during project construction be assessed and the appropriate action taken in accordance with applicable regulatory requirements. With mitigation, potential impacts relative to on-site debris would be reduced to a less than significant level.* *Electrical transmission line poles and transformers on the project site may contain polychlorinated biphenyls (PCBs), which could constitute a potentially significant impact. With mitigation, impacts relative to PCBs would be reduced to a less than significant level.*	SP 4.5-5 The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements. These requirements would be explicitly defined at the future tentative map stage. *(The Mission Village tentative tract map incorporates all applicable requirements of the Southern California Gas Company [SCGC] with respect to pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements.)* SP 4.5-6 All potential buyers or tenants of property in the vicinity of SCGC transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains. *(This mitigation measure will be implemented concurrent with project development.)* SP 4.5-7 Not applicable. SP 4.5-8 Not applicable. SP 4.5-9 In accordance with the provisions of the Los Angeles County Code, Title 11, Division 4, Underground Storage of Hazardous Materials regulations, the County of Los Angeles Department of Public Works shall review, prior to the issuance of building permits by the County of Los Angeles, any plans for underground hazardous materials storage facilities (e.g., gasoline) that may be constructed or installed within the Specific Plan. *(This mitigation measure will be implemented prior to the issuance of building permits.)* MV 4.19-1 During grading operation, all former oil wells located on the Mission Village development property shall be reabandoned and the sites remediated, if necessary, according to the requirements of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources, if such sites are to be disturbed or are located in an area of development.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.19 ENVIRONMENTAL SAFETY (CONTINUED)		
The presence of pesticides in the soils from historic agricultural operations, and the continuing use of pesticides in connection with ongoing agricultural activities, constitutes a potential impact, although the impact does not rise to a significant level. Soil sampling has been conducted to determine on-site concentrations of pesticides. The results conclude no concentration of hazardous pesticides exceeding the residential or industrial use Preliminary Remediation Goals. Additionally, no Proposition 65 pesticides have been used on the Mission Village project site. With respect to the future use of pesticides, due to the regulation of those pesticides used by agricultural activities occurring on Newhall Ranch, including the chemical and physical properties of those pesticides used, the requirement to use the pesticides in accordance with manufacturer specifications, and the mode of application of the pesticides, it is not expected that humans would be subject to either acute overexposure or chronic exposure to any of the pesticides used. Therefore, the on-site use of pesticides would not create a potential public health hazard, and would create no significant impact to the development property or its residents.		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.19 ENVIRONMENTAL SAFETY (CONTINUED)		
Other potential impacts, such as those associated with the presence of on-site ponds used for the disposal of hazardous wastes and water wells, would be reduced to a level that is less than significant with mitigation. *No potentially significant impacts were identified with regard to on-site high-pressure gas lines, electrical transmission lines, transport of hazardous materials on State Route (SR)-126, the Chiquita Canyon Landfill, and the Castaic Lake Dam inundation area. Therefore, no mitigation is required or recommended for these potential environmental safety impacts.*	MV 4.19-2 During grading operations, those areas of the Mission Village development property identified as formerly containing above-ground storage tanks, current agricultural storage areas and current soil staining by the *Phase I Environmental Site Assessment of Proposed The Mesas East, Valencia, California* (BA Environmental, February 2005), shall be investigated for the presence of petroleum hydrocarbons and hazardous materials and/or wastes, and, where necessary, shall be remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region). MV 4.19-3 During grading operations, all pipelines located on the Mission Village development property that will no longer be used to transport oil products shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources. The soil beneath these pipelines shall be assessed for petroleum hydrocarbons. Any identified contaminated soil shall be remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region). MV 4.19-4 During grading operations, all groundwater monitoring wells and production water wells not intended for future use shall be abandoned according to applicable federal, state, and local regulations.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.19 ENVIRONMENTAL SAFETY (CONTINUED)		
	MV 4.19-5 Prior to demolition or rehabilitation, all electrical poles and facilities to be demolished or rehabilitated shall be surveyed to determine if they contain PCBs. If PCBs are present, they shall be removed and disposed of by a licensed and certified PCB removal contractor, in accordance with all federal, state, and local regulations.	
	MV 4.19-6 Prior to the issuance of grading permits, all ponds located on the project site that may have been used for the treatment or disposal of hazardous wastes shall be tested for environmental hazards and remediated, if necessary, in accordance with all federal, state, and local regulations.	
	MV 4.19-7 Areas of visible soil staining not planned for excavation~~, or located in an area planned to be raised in grade,~~ shall be assessed for environmental hazards and treated, as necessary, in accordance with all federal, state, and local regulations. Areas of visible soil staining that are scheduled to be excavated shall have any visibly impacted soil disposed of in accordance with all federal, state, and local regulations.	
	MV 4.19-8 In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, underground storage tanks, sumps, debris, asbestos, septic tanks, cesspools or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities in the vicinity of the find shall cease immediately until the project site is evaluated by a qualified professional. Work shall not resume until appropriate actions recommended by the professional have been implemented and it has been demonstrated that the identified contaminants have been remediated or removed from the project site in accordance with applicable law.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.19 ENVIRONMENTAL SAFETY (CONTINUED)		
	MV 4.19-9 Soils excavated for construction of the unlined water quality control basin will not be used for construction of the basin. If discolored soil is encountered, it will be excavated and will not be used in construction of the basin. MV 4.19-10 In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, debris, or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities shall cease immediately until the affected area is evaluated by a qualified professional. A remediation plan shall be developed in consultation with the appropriate regulatory authorities and the remediation identified shall be completed. Work shall not resume in the affected area until appropriate actions have been implemented in accordance with the remediation plan. The remediation action plan shall include the following: • Remediation goals and cleanup criteria that could include, but are not necessarily limited to, excavation and on-site treatment, excavation and off-site treatment, and/or removal of contaminated soil and/or groundwater; • A detailed description of the access points and haul-out routes for remedial activities; remediation methods and procedures; mitigation of dust; minimization or avoidance of disturbance to sensitive ecosystems; and verification soil sampling and analysis.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.19 ENVIRONMENTAL SAFETY (CONTINUED)		
	MV 4.19-10 (continued) • Included in the discussion shall be information on disposal sites, transport and disposal methods, as well as recordkeeping methods for documenting remediation, regulatory compliance, and health and safety programs for on-site workers; and • Removal of oil development equipment and debris. MV 4.19-11 A Soil Management Plan for the residential development envelopes and recreational construction areas shall be developed and implemented, as appropriate. The objective of the Soil Management Plan is to provide guidance for the proper handling, on-site management, and disposal of impacted soil that may be encountered during construction activities (i.e., excavation and grading). The plan shall include practices that are consistent with the California Division of Occupational Safety and Health regulations, California Code of Regulations, title 8, as well as Certified Unified Program Agency remediation standards that are protective of the planned use. Appropriately trained professionals will be on site during preparation, grading, and related earthwork activities to monitor soil conditions encountered. In order to confirm the absence or presence of hazardous substances associated with former land use, a sampling strategy shall be implemented. The sampling strategy shall include procedures regarding logging/sampling and laboratory analyses. The Soil Management Plan will outline guidelines for the following: • Identifying impacted soil; • Assessing impacted soil; • Soil excavation; • Impacted soil storage; • Verification sampling; and • Impacted soil characterization and disposal.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.19 ENVIRONMENTAL SAFETY (CONTINUED)		
	MV 4.19-11 (continued) In the event that potentially contaminated soils are encountered within the footprint of construction, soils will be tested and stockpiled. The Certified Unified Program Agency will determine whether further assessment is warranted. The Certified Unified Program Agency shall determine and oversee the handling and disposal of impacted soils. MV 4.19-12 To reduce potentially hazardous conditions and minimize the impacts from handling potentially hazardous materials, the owner shall include the following in its construction contract documents prior to the initiation of construction activities: • The Contractor(s) shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains per the County's NPDES guidelines and as outlined in the Stormwater Pollution and Prevention Plan; and • The Contractor(s) shall prepare a Health and Safety Plan. The plan shall include measures to be taken in the event of an accidental spill. In addition, the Contractor(s) shall store all reserve fuel supplies only within the confines of a designated construction staging area, refuel equipment only within the designated construction staging area, and regularly inspect all construction equipment for leaks. MV 4.19-13 Prior to the initiation of grading activities, low level PCE impacted soil located on the Mission Village project site, as identified in Final EIR Appendix F4.19, shall be remediated pursuant to the practices set forth in the Soil Management Plan.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.19 ENVIRONMENTAL SAFETY (CONTINUED)		
	MV 4.19-14 Prior to the initiation of grading activities, surficial contamination, including asphalt, asphaltic sand, and scattered tar clumps located at former oil drilling locations, and the asphaltic sand located within the washes connected to Middle Canyon and Lyon Canyon, respectively, shall be remediated pursuant to the practices set forth in the Soil Management Plan. MV 4.19-15 During grading activities, any asphalt improved road and/or residual evidence of roads improved by the application of oil to the roadbed shall be remediated pursuant to the practices set forth in the Soil Management Plan and the contaminated soil is to be properly disposed of off-site. MV 4.19-16 During grading activities, any unidentified structures or pipelines shall be properly assessed and/or remediated in accordance pursuant to the practices set forth in the Soil Management Plan.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.20 CULTURAL/PALEONTOLOGICAL RESOURCES		
Phase I and II archaeological resource surveys within the Newhall Ranch Specific Plan area, including the Mission Village project area, were undertaken during preparation of the Newhall Ranch Specific Plan Program EIR. This information was reviewed at project-specific level for the Mission Village project to determine if there were archaeological or paleontological effects relative to Mission Village not examined or identified in the Newhall Ranch Specific Plan Program EIR. *The Phase I survey resulted in the discovery and recording of one prehistoric archaeological site, CA-LAN-2236, within the boundaries of the proposed Mission Village project. The Phase I survey also identified two historical sites within the vicinity of the Mission Village project - the site of the original Newhall Ranch headquarters (CA-LAN-961H) and the site of the Asistencia de San Francisco Xavier (CA-LAN-962H).*[15] *The site of the Newhall Ranch headquarters falls outside of the Mission Village development area and, therefore, would not be significantly impacted by the project. As to the Asistencia site, no development is proposed for the area, and the site will be dedicated to The Archaeological Conservancy. As such, implementation of the Mission Village project would not result in significant impacts to the Asistencia site.*	SP 4.3-1 Not applicable. SP 4.3-2 Not applicable. SP 4.3-3 In the unlikely event that additional artifacts are found during grading within the development area or future roadway extensions, an archaeologist will be notified to stabilize, recover and evaluate such finds. SP 4.3-4 As part of an inspection testing program, a Los Angeles County Natural History Museum-approved inspector is to be on site to salvage scientifically significant fossil remains. The duration of these inspections depends on the potential for the discovery of fossils, the rate of excavation, and the abundance of fossils. Geological formations (like the Saugus Formation) with a high potential will initially require full time monitoring during grading activities. Geologic formations (like the Quaternary terrace deposits) with a moderate potential will initially require half-time monitoring. If fossil production is lower than expected, the duration of monitoring efforts should be reduced. Because of known presence of microvertebrates in the Saugus Formation, samples of at least 2,000 pounds of rock shall be taken from likely horizons, including localities 13, 13A, 14, and 23. These samples can be stockpiled to allow processing later to avoid delays in grading activities. The frequency of these samples will be determined based on field conditions. Should the excavations yield significant paleontological resources, excavation is to be stopped or redirected until the extent of the find is established and the resources are salvaged. Because of the long duration of the Specific Plan,	With implementation of the identified mitigation measures, the proposed project's cultural/paleontological resources impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.

15 The proposed Mission Village project site is approximately 1,854.1 acres in size, including off-site project-related improvements (i.e., utility corridor, Magic Mountain Parkway roadway extension, water quality basin, three water tanks (portions of 2 would be located on-site), Southern California Edison electrical substation, conversion of an existing water tank to recycled water tank and grading associated with construction of the southerly extension of Westridge Parkway). The existing water tank area was not addressed in the Phase I and Phase II Archaeological Reports for the Newhall Ranch Specific Plan. However, the area around the existing water tank has been disturbed and is not in a natural state, thereby drastically reducing the possibility that new cultural or archaeological sites could be disturbed.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.20 CULTURAL/PALEONTOLOGICAL RESOURCES (CONTINUED)		
With respect to the prehistoric archaeological site, a Phase II archaeological study was conducted and CA-LAN-2236 was found to consist of a small, very low-density surface lithic scatter, measuring 300 square meters in size and consisting of six waste flakes found on the ground surface. No temporally diagnostic artifacts or chronometrically datable materials were found on this site, which appears to have served as a non-specialized stone chipping station, probably created in concert with some other economic activity, such as plant gathering or hunting. Phase II fieldwork at this site resulted in the collection of all extant archaeological artifacts from this locale. This has served to completely and adequately mitigate any significant impacts that might occur due to development at this site. *As to paleontological resources, a Phase I paleontological report also was prepared to determine the likelihood of encountering paleontological resources on the proposed Mission Village site. This report focused on a literature and records search, as well as an extensive field survey of the area proposed for development. Development of Mission Village would occur in geologic formations with high and moderate potential for the discovery of fossil remains and, therefore, grading activities associated with development of the proposed Mission Village project could result in significant impacts to the region's paleontological resources absent mitigation. Mitigation previously adopted by the County, in combination with additional proposed mitigation, would reduce any potentially significant impacts to paleontological resources to a level below significant.*	SP 4.3-4 (continued) a reassessment of the paleontological potential of each rock unit will be used to develop mitigation plans for subsequent subdivisions. The report shall include an itemized inventory of the fossils, pertinent geologic and stratigraphic data, field notes of the collectors and include recommendations for future monitoring efforts in those rock units. Prior to grading, an agreement shall be reached with a suitable public, non-profit scientific repository, such as the Los Angeles County Museum of Natural History or similar institution, regarding acceptance of fossil collections. MV 4.20-1 Although no other significant cultural resources were observed or recorded, all grading activities and surface modifications must be confined to only those areas of absolute necessity to reduce any form of impact on unrecorded (buried) cultural resources that may exist within the confines of the project area. In the event that previously undetected archaeological, paleontological, and/or historical resources are found during construction, activity in the immediate area of the find shall stop and a qualified archaeologist or paleontologist, as applicable, shall be contacted to evaluate the resource(s). If the find is determined to be a historical or unique archaeological resource, as defined by CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archaeological mitigation takes place, pursuant to *State CEQA Guidelines* Section 15064.5(f) and Public Resources Code Section 21083.2(i).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.20 CULTURAL/PALEONTOLOGICAL RESOURCES (CONTINUED)		
	MV 4.20-2 Following recordation of the applicable unit of the Mission Village tract map, the Asistencia de San Francisco (CA-LAN-962H) site shall be dedicated to The Archaeological Conservancy. MV 4.20-3 Scientific specimens are to become the property of a public, nonprofit educational institution, such as the Los Angeles County Museum of Natural History (or similar institution). Most institutions are now requiring, as conditions for accepting the materials, that significant fossils be prepared, identified to a reasonable level, and catalogued before donation. Therefore, to meet these requirements, prior to the start of Project-related grading, an agreement shall be reached with a suitable scientific repository regarding acceptance of the fossil collection. MV 4.20-4 A trained paleontologist acceptable to Los Angeles County shall be retained to monitor and salvage scientifically significant fossil remains. The duration of these inspections depends on the potential for the discovery of fossils, the rate of excavation, and the abundance of fossils. (a) The Saugus and Pico Formations have a high potential to yield paleontological resources and will require continuous monitoring during all grading activities. This may require use of multiple paleontologists working on the site at the same time if simultaneous ground disturbing activities are occurring over an extensive area to assure all areas of excavation are being fully monitored for the presence of paleontological resources. The number of required monitors shall be determined by Project's monitoring paleontologist. (b) The older dissected Pleistocene formations have a moderate potential to yield paleontological resources and will require half-time monitoring during all grading activities by a qualified paleontologist(s).	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.20 CULTURAL/PALEONTOLOGICAL RESOURCES (CONTINUED)		
	Periodic review of the paleontological potential assigned to each rock unit shall be conducted at the end of each phase of grading. This reassessment of potential will be used to develop mitigation plans for future phases of development. If fossil production is lower than expected, the duration of the monitoring efforts should be reduced to less than continuous monitoring during all grading activities. MV 4.20-5 The paleontologist, in consultation with the grading contractor, developer, and Los Angeles County inspector, shall have the power to divert temporarily or direct grading efforts in the area of an exposed fossil to allow evaluation and, if necessary, salvage of exposed fossils.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.21 FLOODPLAIN MODIFICATIONS		
Implementation of the Mission Village project, including the installation of proposed infrastructure, urban development and modifications to the Santa Clara River and on-site tributaries, would not result in significant impacts to existing hydrologic conditions. Project-related effects to the Santa Clara River regarding water flow, velocity, water surface elevation and scour would be minimal and localized. Erosion-related impacts to the River and on-site tributaries would have the potential to be significant but would be reduced to a less than significant level with the implementation of previously adopted and proposed mitigation measures. Impacts to riparian resources resulting from changes to existing hydrologic conditions would also be minimal and localized, and would not result in significant impacts. Implementation of the Mission Village project would not result in a substantial reduction in sediment supplies that are transported to the Santa Clara River and would not result in a significant impact to Ventura County beaches.	MV 4.21-1 Post-peak stormwater runoff discharges from storm drainage systems must be controlled to minimize localized erosion impacts to River geomorphology and riparian habitat. Discharge flows would be regulated using water control features that must capture the runoff from small, frequent flows (i.e., one- and two-year events). Water and hydromodification control features must be designed in accordance with DPW criteria. Where applicable, energy dissipation structures must be incorporated at drainage outlets to the Santa Clara River to minimize discharge velocities and potential localized erosion. MV 4.21-2 Where practical, the proposed Santa Clara River bridge crossing shall minimize the number and size of piers and/or columns to minimize localized impacts to River and/or tributary geomorphology and riparian resources. MV 4.21-3 Structural features such as outlets, bank stabilization, grade stabilization structures, bridge abutments, culverts, and other features that may be subjected to River or tributary flows will be constructed of erosion resistant materials such as concrete, soil cement, or secured riprap to ensure long-term stability and reduce the need for routine maintenance and/or rehabilitation/replacement activities and be subject to approval by DPW. MV 4.21-4 Prior to building permit, in-stream tributary channel design features for Lion Canyon drainage will be incorporated to control potential hydromodification impacts to geomorphology and riparian resources. The design will be based on erosion potential and other hydrologic modeling to determine appropriate equilibrium slope in the post-development condition as described in the Subregional Stormwater Mitigation Plan and be subject to approval by DPW.	With implementation of the identified mitigation measures, the proposed project's floodplain modification impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.21 FLOODPLAIN MODIFICATIONS (CONTINUED)		
	MV 4.21-5 Sediment/debris control structures must be constructed downstream of natural watersheds to protect developed area drainage systems from debris flows. The design capacity for sediment/debris control structures must take into account the classifications stated in the debris production maps provided in Appendix A of the DPW 1991 Hydrology Manual. Sediment/debris control structure capacity and transport rates must be based on the specification stated in the DPW Sedimentation Manual.	
	MV 4.21-6 A Geomorphology Monitoring and Management Plan (Plan) will be prepared to ensure that the modified/re-engineered Lion Canyon drainage comply with the mitigation objectives and design goals outlined in the Newhall Ranch Tributary Channel Design Guidelines (PWA 2008). Specifically, the Plan shall include the measures to be implemented to ensure the integrity of the structural elements and a state of "constrained dynamic equilibrium.[16]" The Plan shall specify the following: (1) a framework to collect baseline data to characterize conditions immediately after construction; (2) a post-development monitoring program; (3) a framework to develop erosion and sedimentation threshold parameters and performance standards that activate adaptive management measures across a series of potential future scenarios; and, (4) contingency plans and appropriate remedial measures in the event that management efforts are not successful. The Plan shall be subject to final approval by the U.S. Army Corps of Engineers, CDFG, and DPW.	

16 In this context, "constrained dynamic equilibrium" indicates that the channels will be designed to periodically change width, depth, and location on the floodplain in response to changing rainfall and vegetation dynamics, but stay within a predefined corridor and not encroach on infrastructure or fill slopes.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.22 WATER QUALITY		
The Mission Village tract map site presently consists of open space, agriculture, and oil and gas extraction wells with associated access roads, and runoff is conveyed via natural drainages and existing concrete channels to ultimately discharge to the Santa Clara River. Construction and operation of the Mission Village project would replace open space, agricultural land, and extraction well pad runoff with urban runoff. The following summarizes the impacts of the pollutants of concern under wet- and dry-weather conditions in the post-developed conditions: • ***Sediments:*** *Municipal Separate Storm Sewer System (MS4) Permit, Construction General Permit, Dewatering General Permit, ~~and~~ Standard Urban Stormwater Mitigation Plan (SUSMP) and Low Impact Development (LID)-compliant Best Management Practices (BMPs) would be incorporated into the project to address sediment in both the construction phase and post-development. Mean total suspended solids concentration and loads are predicted to be less in the post-development condition than in the existing conditions. Turbidity in stormwater runoff would be controlled through implementation of a Construction Stormwater Pollution Prevention Plan (SWPPP) and would be permanently reduced through the stabilization of erodible soils with development. On this basis, the impact of the project on sediments is considered less than significant.*	SP 4.2-1 All on- and off-site flood control improvements necessary to serve the NRSP are to be constructed to the satisfaction of the County of Los Angeles Department of Public Works Flood Control Division. SP 4.2-2 All necessary permits or letters of exemption from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the Regional Water Quality Control Board for Specific Plan-related development are to be obtained prior to construction of drainage improvements. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in [NRSP Program EIR] Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement). SP 4.2-3 All necessary streambed agreement(s) are to be obtained from the California Department of Fish and Game wherever grading activities alter the flow of streams under CDFG jurisdiction. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in [NRSP Program EIR] Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement). SP 4.2-4 Conditional Letters of Map Revision (CLOMR) relative to adjustments to the 100-year FIA flood plain are to be obtained by the applicant after the proposed drainage facilities are constructed. SP 4.2-5 Prior to the approval and recordation of each subdivision map, a Hydrology Plan, Drainage Plan, and Grading Plan (including an Erosion Control Plan if required) for each subdivision must be prepared by the applicant of the subdivision map to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after site development. These plans shall be prepared to the satisfaction of the County of Los Angeles Department of Public Works.	With implementation of the identified mitigation measures, the proposed project's water quality impacts would be mitigated to below a level of significance, and no unavoidable significant impacts would occur.

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.22 WATER QUALITY (CONTINUED)			
• ***Nutrients (Phosphorus and Nitrogen [Nitrate+Nitrite-N and Ammonia-N]):*** *MS4 Permit, Construction General Permit, Dewatering General Permit, ~~and~~ SUSMP, and LID-compliant BMPs would be incorporated into the project to address nutrients in both the construction phase and post-development. Average annual loads for ammonia ~~total phosphorus, nitrate plus nitrite, and ammonia~~ are predicted to increase from the project due to increased average annual runoff volume. Average annual loads of total phosphorus and nitrate- plus nitrite-N are predicted to decrease. Average concentrations are predicted to decrease for total phosphorus, nitrate-N plus nitrite-N, and ammonia. Average concentrations are predicted to be within the range of observed wet weather values for Santa Clara River Reach 5. Average nitrate-N plus nitrite-N and ammonia-N concentrations are predicted to be well below Los Angeles Regional Water Quality Control Board Basin Plan objectives and TMDL wasteload allocations. The predicted nutrient concentrations are not expected to cause increased algae growth. On this basis, the impact of the project on nutrients is considered less than significant.*	SP 4.2-6	Install permanent erosion control measures, such as desilting and debris basins, drainage swales, slope drains, storm drain inlet/outlet protection, and sediment traps in order to prevent sediment and debris from the upper reaches of the drainage areas which occur on the Newhall Ranch site from entering storm drainage improvements. These erosion control measures shall be installed to the satisfaction of the County of Los Angeles Department of Public Works.	
	SP 4.2-7	The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the County of Los Angeles Department of Public Works. These requirements currently include preparation of an Urban Storm Water Mitigation Plan (USWMP) containing design features and BMPs appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of an SWPPP containing design features and BMPs appropriate and applicable to the subdivision. The County of Los Angeles Department of Public Works shall monitor compliance with those NPDES requirements.	
	SP 4.2-8	The applicant for any subdivision map permitting construction shall comply with all appropriate requirements of the County of Los Angeles Standard Urban Stormwater Mitigation Plan (SUSMP) requirements, and comply with the State Water Resources Control Board (SWRCB) issued General Permit for Construction Activity Storm Water (SWRCB Order 99-08-DWQ), as it may be amended from time to time or replaced by other applicable stormwater permits.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.22 WATER QUALITY (CONTINUED)		
• ***Trace Metals:*** *MS4 Permit, Construction General Permit, General Dewatering Permit, ~~and~~ SUSMP and LID-compliant BMPs would be incorporated into the project to address trace metals in both the construction phase and post-development. The~~Aside from dissolved copper concentrations which are predicted to increase, the~~ average annual concentrations of all modeled trace metals ~~concentrations~~ are predicted to decrease with project development. Average annual trace metal loads are predicted to increase for dissolved copper and total aluminum due to the increase in average annual runoff volume, and are predicted to decrease for total lead and dissolved zinc. ~~(~~These differences in loads and volumes concerning trace metals are due to the change of land use (from agriculture, oil and gas extraction, and open space ~~native~~ to developed) conditions ~~and the application of LID BMPs)~~. Predicted average annual concentrations of dissolved copper, total lead, dissolved zinc, and total aluminum are below benchmark Basin Plan objectives, California Toxics Rule (CTR) criteria, and National Ambient Water Quality Criteria (NAWQC) criteria. Cadmium is not expected to be present at significant levels in runoff discharges from the project. On this basis, the impact of the project on trace metals is considered less than significant.*	MV 4.22-1 Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to LACDPW for review and approval of drainage plans showing the incorporation into the project of those water quality and hydrologic control project design features (i.e., the post-development water quality and hydrologic control BMPs)(the "PDFs"), identified in this **Section 4.22**, which PDFs shall be designed to meet the standards set forth in this **Section 4.22**, including the sizing, capacity, and volume reduction performance standards set forth herein, as summarized in Table 4.22-17. MV 4.22-2 Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to planning staff for review a Landscape and Integrated Pest Management Plan, identified in this **Section 4.22**, which shall be designed to meet the standards set forth as follows.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.22 WATER QUALITY (CONTINUED)		
• ***Chloride:*** *MS4 Permit, Construction General Permit, Dewatering General Permit, and SUSMP and LID-compliant BMPs would be incorporated into the project to address chloride in both the construction phase and post-development. The mean predicted concentration and load of chloride is predicted to increase with development, although the predicted concentration is well below the Basin Plan objective and is near the low end of the range of observed values in the Santa Clara River Reach 5. On this basis, the impact of the project on chloride is considered less than significant.*	MV 4.22-2 (continued) A Landscape and Integrated Pest Management Plan shall be developed and implemented for common area landscaping within the Mission Village project that addresses integrated pest management (IPM) and pesticide and fertilizer application guidelines. IPM is a strategy that focuses on long-term prevention or suppression of pest problems (i.e., insects, diseases and weeds) through a combination of techniques including: using pest-resistant plants; biological controls; cultural practices; habitat modification; and the judicious use of pesticides according to treatment thresholds, when monitoring indicates pesticides are needed because pest populations exceed established thresholds. The Landscape and Integrated Pest Management Plan will address the following components: 1. Pest identification. 2. Practices to prevent pest incidence and reduce pest buildup.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.22 WATER QUALITY (CONTINUED)		
• ***Pesticides:*** *Pesticides in runoff may or may not increase in the post-development phase as a result of landscape applications. Proposed pesticide management practices, including source control, removal with sediments in LID BMP~~treatment control PDF~~s, and advanced irrigation controls, would minimize the presence of pesticides in runoff. During the construction phase of the project, erosion and sediment control BMPs and source controls implemented per General Permit and General De-Watering Permit requirements would prevent pesticides associated with sediment from being discharged. Final site stabilization would limit mobility of legacy pesticides that may be present in pre-development conditions. On this basis, the impact of pesticides is considered less than significant.* • ***Pathogens:*** *Post-development pathogen sources include both natural and anthropogenic sources. The natural sources include bird and mammal excrement. Anthropogenic sources include leaking septic and sewer systems and pet wastes. Removal of agriculture and ranching operations and a reduction in open space within the project area would reduce the bacteria produced by livestock and wildlife. The project would not include septic systems and the sewer system would be designed to current standards minimizing the potential for leaks. Thus, pet wastes are the primary source of concern. Pathogens are not expected to occur at elevated levels during the construction phase of the project. The project design features (PDFs) would include source controls and LID BMPs~~treatment controls~~ which in combination should help to reduce pathogen indicator levels in post-development stormwater runoff. On this basis, the project's impact on pathogen and pathogen indicators is considered less than significant.*	MV 4.22-2 (continued) 3. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed. 4. Establishment of action thresholds that trigger control actions. 5. Pest control methods – cultural, mechanical, environmental, biological, and appropriate pesticides. 6. Pesticide management – safety (e.g., Material Safety Data Sheets, precautionary statements, protective equipment); regulatory requirements; spill mitigation; groundwater and surface water protection measures associated with pesticide use; and pesticide applicator certifications, licenses, and training (i.e., all pesticide applicators must be certified by the California Department of Pesticide Regulation). 7. Fertilizer management – soil assessment, fertilizer types, application methods, and storage and handling.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.22 WATER QUALITY (CONTINUED)		
• ***Hydrocarbons:*** *Hydrocarbon concentrations would likely increase post-development because of vehicular emissions and leaks. In stormwater runoff, hydrocarbons are often associated with soot particles that can combine with other solids in the runoff. Such materials are subject to treatment in the proposed LID BMPs ~~extended detention basins and bioretention areas~~. Source control BMPs incorporated in compliance with the MS4 Permit, the Construction General Permit, and the SUSMP would also minimize the presence of hydrocarbons in runoff. During the construction phase of the project, pursuant to the Construction General Permit, the Construction Stormwater Pollution Prevention Plan must include BMPs that address proper handling of petroleum products on the construction site, such as proper petroleum product storage and spill response practices, and those BMPs must effectively prevent the release of hydrocarbons to runoff per the Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology (BAT/BCT) standards. On this basis, the impact of the project on hydrocarbons is considered less than significant.*		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.22 WATER QUALITY (CONTINUED)		
• ***Trash and Debris:*** *Trash and debris in runoff are likely to increase with development. However, the project PDFs, including source control and LID~~treatment~~ BMPs incorporated in compliance with the MS4 Permit, ~~and the~~ SUSMP requirements, and the LID Performance Standard, would minimize the adverse impacts of trash and debris. Source controls such as street sweeping, public education, fines for littering, covered trash receptacles, and storm drain stenciling are effective in reducing the amount of trash and debris that is available for mobilization during wet weather. Trash and debris would be captured in catch basin inserts in the commercial area parking lots and in the LID BMP~~treatment control PDF~~s. During the construction phase of the project, PDFs implemented per Construction General Permit and Dewatering General Permit requirements would remove trash and debris through the use of BMPs such as catch basin inserts and by general good housekeeping practices. Trash and debris are not expected to significantly impact receiving waters due to the implementation of the project PDFs.*		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.22 WATER QUALITY (CONTINUED)		
• ***Methylene Blue Activated Substances*** *(MBAS): The presence of soap in runoff from the project would be controlled through the source control PDFs, including a public education program on residential and charity car washing and the provision of a centralized car wash area directed to the sanitary sewer in the multi-family residential areas. Project source control PDFs would reduce the impacts of soaps in post-construction runoff. Other sources of MBAS, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices. During the construction phase of the project, equipment and vehicle washing would not use soaps or any other MBAS sources. Therefore, MBAS are not expected to significantly impact the receiving waters of the proposed project.* • ***Cyanide****: In addition to the expected relatively low level of cyanide in untreated stormwater, cyanide in runoff from the project would be readily removed by biological uptake, degradation by microorganisms, and by volatilization in the LID BMPs~~treatment PDFs~~. Therefore cyanide is not expected to significantly impact the receiving waters of the proposed project.* • ***Bioaccumulation****: According to scientific literature, the primary pollutants that are of concern with regard to bioaccumulation are mercury and selenium. However, selenium and mercury are not of concern in this watershed, so bioaccumulation of selenium and mercury is also not expected to result either during the construction or post-development project phases. On this basis, the potential for bioaccumulation in the Santa Clara River and adverse effects on waterfowl and other species is considered less than significant.*		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.22 WATER QUALITY (CONTINUED)		
• ***Construction Impacts:*** *Construction impacts on water quality are generally caused by soil disturbance and subsequent suspended solids discharge, or by discharge of certain non-sediment-related pollutants, including construction materials (e.g., paint, stucco, etc); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants. These impacts would be minimized through implementation of construction BMPs that would meet or exceed measures required by the Construction General Permit, as well as BMPs that control the other potential construction-related pollutants (e.g., petroleum hydrocarbons and metals). A SWPPP specifying BMPs for the site that meet or exceed BAT/BCT standards would be developed as required by, and in compliance with, the Construction General Permit and Los Angeles County Standard Conditions. Erosion control BMPs, including but not limited to hydro-mulch, erosion control blankets, stockpile stabilization, and other physical soil stabilization techniques, also would be implemented to prevent erosion, whereas sediment controls, including but not limited to silt fencing, sedimentation ponds, and secondary containment on stockpiles, would be implemented to trap sediment and prevent discharge. Non-stormwater and construction waste and materials management BMPs (such as vehicle and equipment fueling and washing BMPs; nonvisible pollutant monitoring; and BMPs to manage materials, products, and solid, sanitary, concrete, hazardous, and hydrocarbon wastes) also would be deployed to protect construction site runoff quality. On this basis, the construction-related impact of the project on water quality is considered less than significant.*		

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.22 WATER QUALITY (CONTINUED)		
Construction Impacts (cont'd): • ***Regulatory Requirements:*** *The proposed project satisfies MS4 Permit requirements for new development, including SUSMP requirements, low impact development (LID) requirements, and satisfies construction-related requirements of the Construction General Permit and General Dewatering Permit. Therefore, the project would comply with water quality regulatory requirements applicable to stormwater runoff.* *Finally, the proposed Mission Village project, including proposed drainage and hydromodification controls, would not substantially alter the existing drainage pattern of the Santa Clara River in a manner that would cause substantial erosion, siltation, or channel instability; or substantially increase the rates, velocities, frequencies, duration, and/or seasonality of flows in a manner that causes channel instability or in a manner that harms sensitive habitats or species in the River. Therefore, the impact of the project on hydromodification is considered less than significant.*		

Environmental Impact	Mitigation Measures		Level of Significance After Mitigation
4.23 GLOBAL CLIMATE CHANGE			
The proposed Mission Village project would result in the emission of greenhouse gases (GHGs). ***Section 4.23*** *discusses the scientific and regulatory developments surrounding global climate change and provides a quantitative inventory for the emissions that would result from approving Mission Village. In the absence of regulatory criteria, a significance criterion also was developed to assess the impact of the project's GHG emissions. Both project and cumulative impacts were assessed against the identified significance criterion.* *This section also discusses the Intergovernmental Panel on Climate Change's (IPCC) conclusion that there is a scientific consensus that global climate change is occurring, and that the frequency of heat extremes, heat waves, and heavy precipitation events likely will increase. Currently accepted models predict that continued GHG emissions at or above current rates will produce more extreme global climate changes during the 21st century than were observed during the 20th century. Relatedly, the section also addresses the IPCC's conclusion that human activities have increased atmospheric concentrations of GHGs.* *Nonetheless, there are uncertainties. The uncertainties relate to predicting: the actual climate change experienced by various areas of the world; the rate at which air and water temperatures will rise; whether the consequences of global climate change will be sudden or gradual; whether the consequences will be catastrophic or manageable; and whether international, national, state, and local measures will effectively reduce GHG emissions.*	MV 4.23-1	All residential buildings on the project site that are enabled by approval of the proposed project shall be designed to provide improved insulation and ducting, low E glass, high efficiency air conditioning units, and radiant barriers in attic spaces, as needed, or equivalent to ensure that all residential buildings operate at levels 15 percent better than the standards required by the 2008 version of Title 24. Notwithstanding this measure, all residential buildings shall be designed to comply with the then-operative Title 24 standards applicable at the time building permit applications are filed. For example, if new standards are adopted that supersede the 2008 Title 24 standards, the residential buildings shall be designed to comply with those newer standards and, if necessary, exceed those standards by an increment that is equivalent to a 15 percent exceedance of the 2008 Title 24 standards.	With implementation of the identified mitigation measures, the proposed project's climate impacts would be mitigated to below a level of significance, and no significant unavoidable impacts would occur.
	MV 4.23-2	All commercial and public buildings on the project site that are enabled by approval of the proposed project shall be designed to provide improved insulation and ducting, low E glass, high efficiency HVAC equipment, and energy efficient lighting design with occupancy sensors as needed, or equivalent to ensure that all commercial and public buildings operate at levels 15 percent better than the standards required by the 2008 version of Title 24. Notwithstanding this measure, all nonresidential buildings shall be designed to comply with the then-operative Title 24 standards applicable at the time building permit applications are filed. For example, if new standards are adopted that supersede the 2008 Title 24 standards, the nonresidential buildings shall be designed to comply with those newer standards and, if necessary, exceed those standards by an increment that is equivalent to a 15 percent exceedance of the 2008 Title 24 standards.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.23 GLOBAL CLIMATE CHANGE (CONTINUED)		
The emissions inventory for the proposed Mission Village project considers eight categories of GHG emission sources that would result from approval of the Mission Village project: (1) emissions due to land use/vegetation changes; (2) emissions from construction activities; (3) emissions associated with residential building use; (4) emissions associated with nonresidential building use; (5) mobile source emissions; (6) municipal source emissions; (7) area emissions; and (8) emissions associated with recreational center use. The emissions from land use/vegetation changes and construction activities are one-time emissions event, whereas emissions from the other sources would occur annually, throughout the life of the project. The inventory identified approximately 109,331 metric tons (tonnes) of carbon dioxide equivalent (CO2e) one-time emissions, and 60,715 tonnes of CO2e annual emissions. If the one-time emissions are annualized, over 40-years, the annual emissions are 63,448 tonnes per year. *These emission levels were analyzed to determine whether approval of Mission Village would impede compliance with the GHG emissions reduction goals mandated by the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), which requires that California's GHG emissions be reduced to 1990 levels by 2020. The proposed project's CO2e emissions from all annual sources are 36.6 percent below the level that would be expected if the proposed project were constructed consistent with the assumptions in the California Air Resources Board's projections for 2020 if "no actions are taken" (CARB 2020 NAT scenario). (See Climate Change Proposed Scoping Plan: A Framework for Change [Scoping Plan], California Air Resources Board [adopted December 2008].) Moreover, when the one-time land use/vegetation change and construction emissions are included, the proposed project's emissions are still 35.6 percent below the CARB 2020 NAT scenario. As established by CARB's emission forecasts for 2020, a reduction of 29 percent below the CARB 2020 NAT scenario is required to meet the goals of AB 32.*	MV 4.23-3 The project applicant or designee shall produce or cause to be produced renewable electricity, or secure greenhouse gas offsets or credits from a public agency (e.g., CARB; SCAQMD) endorsed market, equivalent to the installation of one photovoltaic (i.e., solar) power system no smaller than 2.0 kilowatts, when undertaking the design and construction of each single-family detached residential unit on the project site. MV 4.23-4 The project applicant or designee shall produce or cause to be produced renewable electricity, or secure greenhouse gas offsets or credits from a public agency (e.g., CARB; SCAQMD) endorsed market, equivalent to the installation of one photovoltaic (i.e., solar) power system no smaller than 2.0 kilowatts, on each 1,600 square feet of nonresidential roof area provided on the project site.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
4.23 GLOBAL CLIMATE CHANGE (CONTINUED)		
Therefore, the proposed project would not impede implementation of AB 32 as its reduction below the CARB 2020 NAT scenario is greater than that required, and project impacts are less than significant. *This inventory was prepared assuming that all emissions from Mission Village would be "new," in the sense that absent development of Mission Village these emissions would not occur. Given the global nature of GHG emissions, questions arise over whether new global GHG emissions are caused by economic and population growth, and not the local development projects that simply accommodate such growth.* *In addition, the proposed Mission Village project's GHG emissions were assessed from a cumulative impact perspective. As discussed above, AB 32 requires approximately a 29 percent reduction of GHG emissions below the CARB 2020 NAT scenario. The project design features of Mission Village would reduce its contribution of GHG emissions; therefore, especially when compared to a project that does not adopt such reduction strategies and sustainable development principles, the proposed project would enable California to meet its goal of returning to 1990 GHG emissions levels by 2020. As a result, the Mission Village GHG emissions are not considered "cumulatively considerable" under CEQA.*	MV 4.23-5 Consistent with the Governor's Million Solar Roofs Plan, the project applicant or designee, acting as the seller of any single-family residence constructed as part of the development of at least 50 homes that are intended or offered for sale, shall offer a solar energy system option to all customers that enter negotiations to purchase a new production home constructed in Mission Village on land for which an application for a tentative subdivision map has been deemed complete. The seller shall disclose the total installed cost of the solar energy system option, and the estimated cost savings. MV 4.23-6 The project applicant shall use solar water heating for all pools located at the Mission Village recreation centers. MV 4.23-7 The project applicant, in accordance with Los Angeles County requirements, will design and construct the approximately 13,500 square feet fire station and 36,000 square feet public library so as to achieve LEED silver certification. In addition to the seven global climate change mitigation measures identified above, mitigation measures recommended in connection with other sections (i.e., air quality; biological resources; traffic) of the Mission Village Draft EIR would reduce the proposed project's GHG emissions and/or improve the project's capacity to respond to the uncertain effects of global climate change. As these measures are recommended for adoption and incorporation into a mitigation monitoring and reporting program, these measures can be relied upon in this analysis as feasible measures designed to reduce GHG emissions and the impact of global climate change on the project.	

3. RESPONSIBLE AGENCIES

Under CEQA, a public agency other than a lead agency that has discretionary approval power over aspect(s) of a project is considered a "responsible agency." (*State CEQA Guidelines* Section 15381.) No public agency, other than the County of Los Angeles, has discretionary approval power over the Mission Village project; however, if the County approves this project, subsequent implementation of various project components could require discretionary approval authority from responsible agencies that may, among others, include:

(a) California Regional Water Quality Control Board (RWQCB)

(b) California Department of Fish and Game (CDFG)

(c) California Public Utilities Commission (CPUC)

(d) South Coast Air Quality Management District (SCAQMD)

(e) U.S. Fish and Wildlife Service (USFWS)

(f) U.S. Army Corps of Engineers (USACE)

(g) City of Santa Clarita

(h) California Department of Transportation (Caltrans)

(i) County Sanitation Districts of Los Angeles County (CSDLAC)

4. PROJECT APPLICANT

The applicant of the proposed project is:

Newhall Land and Farming
25124 Springfield Court, Suite 300
Valencia, California 91355
Contact: Steve Zimmer, Executive Vice President
(661) 255-4000

5. PROJECT SUMMARY

a. Revised Project Summary

The Mission Village Draft EIR (October 2010) analyzed the potential environmental impacts associated with development of 4,412 dwelling units (382 single-family dwellings and 4,030 multi-family units) and

1.55 million square feet of mixed-use/commercial development on the proposed project site. Included within the proposed project as described was a 65.6-acre spineflower preserve.

Subsequent to circulation of the Draft EIR, the California Department of Fish and Game (CDFG) approved the Newhall Ranch Resource Management and Development Plan/Spineflower Conservation Plan (RMDP/SCP), which includes the Mission Village project area within its boundaries. As approved by CDFG, the RMDP/SCP designates 85.8 acres of spineflower preserve on the Mission Village site; this represents an increase of 20.2 acres over the amount designated in the Draft EIR.

As a result of the increased spineflower acreage, the development component of the proposed Mission Village project has been reduced in size, consistent with the approved RMDP/SCP. Specifically, as revised, the proposed project now includes a total of 4,055 dwelling units (351 single-family dwellings and 3,704 multi-family units); the 1.55 million square feet of mixed-use commercial development is unchanged.

With the exception of the water quality analysis, this section, nor any other section, has not been revised to reflect the revised project. Instead, the environmental effects of the proposed revised project are addressed in **Topical Response 4: Revised Project Design.**

b. Draft EIR Project Summary

The project applicant proposes to develop the Mission Village project, which would be constructed on 1,261.8 acres of property located primarily within the boundaries of the Newhall Ranch Specific Plan (of the 1,261.8 acre tract map, approximately 39.1 acres are located outside the Specific Plan boundaries). The project site is located within the northeastern corner of Newhall Ranch in western unincorporated Los Angeles County, south of the Santa Clara River and State Route 126 (SR-126), and west of Interstate 5 (I-5). The proposed project consists of the development of single-family and multi-family residences, mixed-use commercial development, mixed-use residential/commercial development, commercial uses, an elementary school, parks, library, fire station, bus transfer station, open space, and recreational centers. Other land uses within the project site include a spineflower preserve in the northeastern portion of the site.

The proposed project also includes facilities and infrastructure proposed to support the project, including roads (including the Commerce Center Drive Bridge), trails, drainage improvements, flood protection (including buried bank stabilization within and adjacent to the Santa Clara River), potable and recycled water systems (including water tanks), sanitary sewer system and dry utility systems. To facilitate development of the Mission Village tract map site (VTTM 61105), several off-site project-related improvements (i.e., improvements outside the tract boundary) would be developed on an additional 592.8 acres of land that, for the most part, is located within the approved Specific Plan boundary. These project-related components include the following: utility corridor, Magic Mountain Parkway roadway extension and related improvements, a water quality basin, three water tanks (portions of 2 would be located on site), a Southern California Edison (SCE) electrical substation, and two debris basins. Additional proposed off-site activities include work associated with the Lion Canyon drainage, grading associated with construction of the northerly extension of Westridge Parkway and southerly extension of Commerce Center Drive, and miscellaneous grading to tie proposed grades into natural grades. For purposes of this EIR, the "tract map site" refers to the proposed location of the Mission Village development site itself, and the "project site" refers to the tract map site and off-site improvements.

The project applicant is requesting approval of the following discretionary entitlements (Project Approvals) to allow implementation of the Mission Village project (County Project No. 04-181):

(a) Vesting Tentative Tract Map No. 061105

(b) Significant Ecological Area (SEA) Conditional Use Permit No. RCUP200500080 for project-level development, including utilities within the Specific Plan's River Corridor Special Management Area (SMA)/SEA 23 boundaries

(c) Conditional Use Permit RCUP200500081 to authorize

  (i) development of 73 second dwelling units;

  (ii) care facilities associated with the proposed continued care retirement community;

  (iii) grading associated with the extension of Westridge Parkway and Commerce Center Drive and the construction of off-site improvements, including the extension of Magic Mountain Parkway, a utility corridor, a water quality basin, an electrical substation, and water tanks; and

  (iv) on-site grading and development of project related infrastructure (including water tanks and utilities.

(d) Oak Tree Permit No. ROAK200500032 (project site)

(e) Oak Tree Permit No. T200500043 (off-site extension of Magic Mountain Parkway)

(f) Parking Permit RPKT200500011 to authorize off-site and reciprocal parking across lot lines

In addition, Section 5.2 of the Newhall Ranch Specific Plan contains provisions regarding implementation. Section 5.2 describes substantial conformance as an administrative procedure by which the Planning Director determines whether proposed development or uses substantially comply with the standards, regulations, and guidelines of the Specific Plan. Substantial Conformance 201000001 requests substantial conformance determination for the following: (a) Grading and Hillside Management Guidelines; (b) modification to setback standards; and (c) modification to proposed trails sections. These Project Approvals are described further below.

If the County grants the requested Project Approvals, 4,412 residences (382 single-family homes, and 4,030 multi-family units, including attached and detached condominiums, age qualified and apartment units),[1] 1,555,100 square feet of commercial/mixed-uses, an 9.5-acre elementary school, fire station, public library, bus transfer station, parks, ~~public and~~ private recreational facilities, trails, and road improvements would be permitted (See **Table 1.0-3, Mission Village Statistical Summary**, later in this section). Additional ministerial actions, such as building plan review grading, and building permits, would be required by the County prior to actual grading and construction of these improvements.

Project buildout currently is estimated to occur over several years, with full buildout not expected until 2021. Since market conditions and consumer needs historically change over time, a certain amount of flexibility is necessary in the specific type of residential units that ultimately would be built in order to assure the best mix of residential housing to meet changing market demands. Similarly, as to commercial uses, it is difficult to forecast with a high degree of certainty over the extended duration of project buildout the specific type of office uses and tenant space requirements that will be in demand at buildout.

For these reasons, it is necessary to maintain a certain degree of planning flexibility within the multi-family and commercial planning areas of the proposed project. This flexibility includes, for instance, the ability to: build condominiums rather than apartments, and vice versa; build detached housing units rather than attached units; alter dwelling unit type and location within a designated planning area; change the location of driveways, driveway entries and drive alignments; change lot configurations; and, change commercial building type and location within a planning area. Importantly, however, the total dwelling unit count and commercial square footage shown on Vesting Tentative Tract Map (VTTM) 061105 and the accompanying site plan exhibit maps would not be exceeded; that is, project buildout would not exceed 4,412 dwelling units and 1,555,100 total commercial square feet.

For example, the Village Center planning area is proposed as a mixed use center, comprised of residential, retail, and office uses, combined both horizontally and vertically. In light of potential changes

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1 The 4,412 total residential dwelling units does not include the 73 second units that would be developed on the single family lots and authorized by the conditional use permit.

9. OTHER PERMITS AND APPROVALS

Table 1.0-2, **Future Agency Actions**, identifies other permits and approvals, which are known to be needed, or may be needed, in order to implement various project components in the future.

Table 1.0-2
Future Agency Actions[1]

Agency	Action Required
• Regional Water Quality Control Board	Section 401 certification of USACE Section 404 permit or, alternatively, waste discharge requirements (WDRs); construction de-watering permits; Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan[2]
• California Department of Fish and Game (CDFG)	Streambed Alteration Agreement per Fish & Game Code Sections 1601, et seq. Section 2081 Incidental Take Permits authorizing impacts to listed plant and animal species[3]
• United States Department of the Army, Corps of Engineers (USACE)	Section 404 permit under the federal Clean Water Act[4]
• United States Department of the Interior, Fish and Wildlife Service (FWS)	Candidate Conservation Agreement to be made part of the Spineflower Conservation Plan[5]
• South Coast Air Quality Management District	Various permits for air emissions required under the Air Quality Management Plan
• California Public Utilities Commission	Approval of an Advise Letter to allow Valencia Water Company to provide water to the project site; Approval of a new Southern California Edison Company substation, if necessary
• California Department of Transportation	Execution of the Traffic Mitigation Agreement with the project applicant
• County Sanitation Districts of Los Angeles County	Implementation of the Interconnection Agreement if Mission Village wastewater is temporarily treated at the Valencia Water Reclamation Plant
• City of Santa Clarita	Issuance of encroachment permits to construct roadway improvements, if necessary

[1] *This table is not intended to provide the complete and final listing of all future actions required to implement the project but, rather, identifies those actions that are known at this time to be required in the future.*
[2] *Approval of the RMDP/SCP EIS/EIR would eliminate the need to obtain approvals from RWQCB.*
[3] *Approval of the RMDP/SCP EIS/EIR would eliminate the need to obtain approvals from CDFG.*
[4] *Approval of the RMDP/SCP EIS/EIR would eliminate the need to obtain approvals from USACE.*
[5] *Approval of the RMDP/SCP EIS/EIR would eliminate the need to obtain approvals from FWS.*

10. PROJECT OBJECTIVES

CEQA requires that an EIR include a statement of the objectives sought by a project applicant. (*State CEQA Guidelines* Section 15124(b).) The overall objective of the proposed project is to implement a portion of the Newhall Ranch Specific Plan, including, as it relates to Mission Village, the Specific Plan's Master Circulation Plan; Master Trails Plan; Conceptual Backbone Drainage, Water and Sewer Plans; Public Facilities/Services Plan (e.g., fire, police/sheriff, schools, libraries); Resource Management Plan; Hillside

(2) Multi-Family Residential Component

The multi-family attached units provide for densities ranging from 4.7 to 55 dwelling units per acre. These units are typically characterized as detached condominium, townhomes, live/work units, duplex, or condominium/apartment-style buildings. Parking may be at-grade, subterranean or structured. A total of 4,030 multi-family units are proposed. Included in this total are 393 Active Adult residences in Area C. (See **Figure 1.0-8, Neighborhood C Site Plan**.) These residences will be limited to residents 55 or older. Also included in this total are 351 units of continuing care retirement community residences offering independent and assisted living for seniors. A typical building elevation for attached multi-family housing is depicted in **Figure 1.0-13, Typical Elevation – Multi-Family Units**.

(b) Mixed-Use/Commercial Component

Mixed-use areas include retail/commercial and office uses, as well as civic, public, and recreational uses, connected by a vehicular, transit, and pedestrian network of streets, courtyards, and paseos. Residential uses are located in the areas surrounding the mixed-use and commercial sectors.

A total of 1,555,100 square feet of mixed-use/commercial uses are planned on approximately 57.4 acres of land in two general locations on the project site. The mixed-use/commercial areas are planned in the eastern portions of the site along Commerce Center Drive, i.e., the Village Center, Neighborhood E and Neighborhood C. Supporting commercial uses likely to be found in the mixed-use areas include food service, grocery, banking, dry cleaners, merchandise sales, food sales, and various professional offices, as well as live/work units. 704,100 square feet of the mixed use/commercial uses planned for Mission Village would be located in the Village Center in a "main street" setting with reciprocal and shared parking. The 704,100 square feet includes 66,400 square feet of commercial uses that ~~would~~ may be integrated vertically~~horizontally~~ with residential uses located in the Village Center. All mixed-use/commercial areas would be accessible by a vehicular, transit, and pedestrian street network, trails, paseos, and sidewalk areas. Conceptual illustrations of the Village Center are depicted in **Figures 1.0-14a,** and **1.0-14b**, **Conceptual Design Elements for the Village Center**.

(c) Elementary School

Mission Village is located within the boundaries of 2 school districts: Newhall School District (NSD) and Saugus Union School Districts (SUSD). The project applicant has entered into a School Facilities Funding Agreement (Agreement) with both Districts. The Agreements generally require that the applicant set aside land and provide funds for development of the required elementary schools as mitigation for buildout of all uses within Newhall Ranch. Both Agreements provide full mitigation for elementary school impacts.

Consistent with the Agreements, the proposed project includes a 9.5-acre site located in Area A for development of an elementary school. The school is planned to consist of a main school building with modular classrooms and adjacent playing field. **Figure 4.13-3, Conceptual Site Plan – Newhall School District Elementary School,** depicts the conceptual plan for the school. Children of elementary school age will attend schools within the school district in which they reside. Initially, children will attend existing schools within their respective Districts. Children within NSD initially will attend the Oak Hills School in Westridge located to the south of the project. In accordance with the Agreements, certain student generation numbers would trigger the requirement that the project applicant provide ready-to-build school sites.

The SUSD will determine which of the existing schools within its district the children from Mission Village will attend. A SUSD school is proposed on a planned 7.0-acre site in the adjacent Entrada Community (VTTM 53295). (See **Figure 4.13-4, Conceptual Site Plan – Saugus Union School District Elementary School.)**

(d) Recreation Areas

The proposed project includes a 20-acre Community Park along the eastern side of the proposed Commerce Center Drive near the eastern site boundary. The location of the Community Park within VTTM 61105 and additional details regarding the park are shown on **Figure 1.0-16, Community Park**. The Community Park would include improvements such as those identified in Specific Plan Section 2.8 (4) (b). These include tot lots, ball fields, tennis or basketball courts, turf areas, vehicular parking, and restrooms facilities.

One of the Specific Plan Neighborhood Parks also would be developed on the project site. The location of the Neighborhood Park within VTTM 61105 and additional details regarding the park are shown on **Figure 1.0-17, Neighborhood Park.** The park would contain approximately 5 acres of usab**l**e parkland. Amenities provided at the parks would include those identified in the Specific Plan Section 2.8 (4) (b).

An 6.9-acre private Community Recreation Center would be provided as a Newhall Ranch wide amenity, and may contain such amenities as a 25,000-square-foot recreational building, pool, spa, wading pool, shade overhead structure, play courts, and/or restroom building. The location of the Community Recreation Center within VTTM 61105 and additional details regarding the center are shown on **Figure 1.0-15**. ~~The recreation areas would be fenced and maintained by a homeowners association, and p~~Parking would be provided both off street and on street. Located next to the Community Recreation Center is a private park that will function as a village green in the Village Center to provide opportunities for both passive and active recreation as well as allocation for community functions, such a farmers market.

In Neighborhood C, the age-qualified~~active adult~~ area, a private neighborhood recreation area would be developed on a total of 4.6 acres. This facility would provide recreational activities for those residents living in Neighborhood C. The amenities may include a 25,000-square-foot recreational building, pool, spa, wading pool, shade overhead structure, and/or play courts.

In addition to the small recreation lot in area A7, separate smaller satellite neighborhood recreation centers would be situated throughout various neighborhoods in Mission Village. These may contain facilities for passive uses or active uses such as tot lots, play courts, and/or pools.

(e) Fire Station

The proposed project includes a 1.5-acre fire station site located south of Magic Mountain Parkway on the easterly side of Westridge Parkway. This site will accommodate up to a 13,500-square-foot fire station plus ancillary buildings.

Consistent with Mitigation Measure 4.18-4 of the Newhall Ranch Specific Plan Program EIR, the applicant is negotiating an MOU with the County Fire Department that would provide for the development of up to three fire stations within the Specific Plan site. Specific to Mission Village, discussions between The Newhall Land and Farming Company (Newhall Land) and the Fire Department revolve around the construction or funding by Newhall Land of an approximately 13,500-square-foot station within Mission Village on the 1.50-acre net building pad site.

It should be noted that both the station and building pad sizes exceed the requirements of the approved Newhall Ranch Specific Plan. Additionally, the approved Specific Plan required Newhall Land to provide funding for the construction of the station, rather than constructing the station, and provide funding for its pro-rata share of equipment for the station.

As required by the Specific Plan, Newhall Land and the Fire Department will enter into a MOU to finalize the Newhall Ranch requirements associated with the Fire Department.

(f) Library

Consistent with mitigation adopted as part of the Newhall Ranch Specific Plan, the proposed project includes a 3.3-acre library site in the Village Center area of the project. Specific Plan mitigation requires that the developer provide funding for the library, including the site, construction, furniture, fixtures, equipment and materials, and that the total library building square footage not exceed 0.35 net square foot per person. The library construction requirements, including size, funding, and time of construction, are to be mutually agreed upon by the County Librarian and the developer, and incorporated into a memorandum of understanding entered into prior to the County's issuance of the first residential

Figure 1.0-20, **Mission Village Trails Plan**, depicts the trails and paseos that fulfill the intent of the Specific Plan's Master Trails Plan and implements the Specific Plan's objective of providing a hierarchy of trails with varying sizes and functionality. The Plan includes approximately 18,900 linear feet of community trails, 12,900 linear feet of local trails, and 9,200 linear feet of pathways. As shown on **Figure 1.0-20**, the Mission Village project would provide an extensive community trail system throughout the project site, which would be linked to the Santa Clara Regional River Trail (off site to the north~~west~~) via the extension of other local trails, and paseos.

Community trails are unified pedestrian and bicycle routes in landscaped parkways, and are located along major roads in order to connect the Villages of the Specific Plan. The Mission Village community trails are proposed along Magic Mountain Parkway, Commerce Center Drive, and Westridge Parkway.

A local trail is a joint pedestrian/bicycle route that may or may not follow a roadway. Local trails provide access to amenities, the community trail network, or serve to link Villages of the Specific Plan. The Mission Village project includes local trails through open space areas.

Pathways, which consist of multi-purpose bicycle and pedestrian trails, are located adjacent to local collector roadways. The pathways are proposed to provide a means of pedestrian access from residential neighborhoods to and from the Community Park, recreation centers, elementary school, and mixed-use/commercial areas. The pathways would adjoin major roadways and certain residential collector streets, and be separated from vehicular traffic by a landscaped parkway (**Figure 1.0-20**). The Mission Village project includes pathways along residential collector streets off of Magic Mountain Parkway and Commerce Center Drive. The Mission Village Trails Plan will ensure that each residential neighborhood and community service area is linked to one or more pedestrian and bicycle trails or paseos~~, with locations for river trail access points and observation/interpretive points~~. In addition, on-street bike lanes will be provided along Magic Mountain Parkway and Commerce Center Drive.

(k) Site Access and Circulation

The Mission Village project-level circulation system is consistent with and implements the mobility objectives of the Specific Plan's approved Master Circulation Plan (Exhibit 2.4-2 of the Specific Plan). The Specific Plan's Master Circulation Plan was designed as a flexible mechanism by which necessary circulation modes of travel within the Specific Plan area could be integrated with existing regional road networks. The Specific Plan's mobility objectives were found by the County to be consistent with the transportation goals and objectives of the County of Los Angeles General Plan and Santa Clarita Valley Areawide Plan. **Figure 1.0-21, Newhall Ranch Specific Plan Master Circulation Plan – Mission Village**, depicts the Specific Plan's Master Circulation Plan as it relates to Mission Village.

Figure 1.0-25, Mission Village Drainage and Water Quality Plan, illustrates the project's proposed drainage and water quality plan and related improvements. The plan incorporates methodologies~~ to meet or~~that exceed the ongoing NPDES permit requirements and conforms to the drainage and water quality requirements of the Specific Plan. The plan includes a comprehensive series of drainage, flood control, and water quality improvements designed to allow for a system to both protect development and preserve the Santa Clara River.

The proposed Mission Village drainage system would be designed to provide drainage and flood protection., ~~and to maintain storm water flows from the project during and after buildout at a level approximately equal to or less than pre-development conditions.~~ Project Design Features (PDFs) incorporated into the project to address water quality and hydrologic impacts include site design, low impact development (LID), source control, treatment control, and hydromodification control Best Management Practices (BMPs). As part of the proposed project, LID BMPs will be implemented that retain runoff from the 0.75-inch water quality design storm. This LID BMP Implementation Plan will be conceptually similar to LID requirements in the recently adopted Ventura County MS4 Permit. As shown on **Figure 1.0-25**, on-site surface run-off would be intercepted in retention and/or biofiltration BMPs to the extent feasible~~by curb, debris and/or desilting basins~~. Excess runoff would ~~and~~be conveyed to a network of storm drains that lead to a series of ~~treatment~~ regional infiltration/biofiltration facilities~~,including water quality basins,~~ prior to discharge into the Santa Clara River. ~~As part of the proposed project, a~~An off-site ~~water quality basin~~regional biofiltration facility covering approximately 9 acres in size, would be constructed in the northeast portion of the project site, within the boundaries of Entrada; two debris basins would be constructed along the southerly tract boundary within VTTM 61996 (Legacy Village), which would be removed with construction of Legacy Village; and four debris basins would be constructed within the eastern portion of the Utility Corridor. (See **Figure 1.0-25, Mission Village Drainage and Water Quality Plan**, and **Figure1.0-25a, Off-Site Improvements**.)~~ In commercial areas, parking lot and roof run-off would be directed through landscaped parkways and grassy swales or through sections of porous pavement to provide infiltration and initial treatment prior to discharge into the drainage system.~~

Additional drainage-related improvements that would be implemented as part of the project include conveying water through underground pipes and installing energy dissipaters. In addition, the tributaries located on the Mission Village site would be modified:

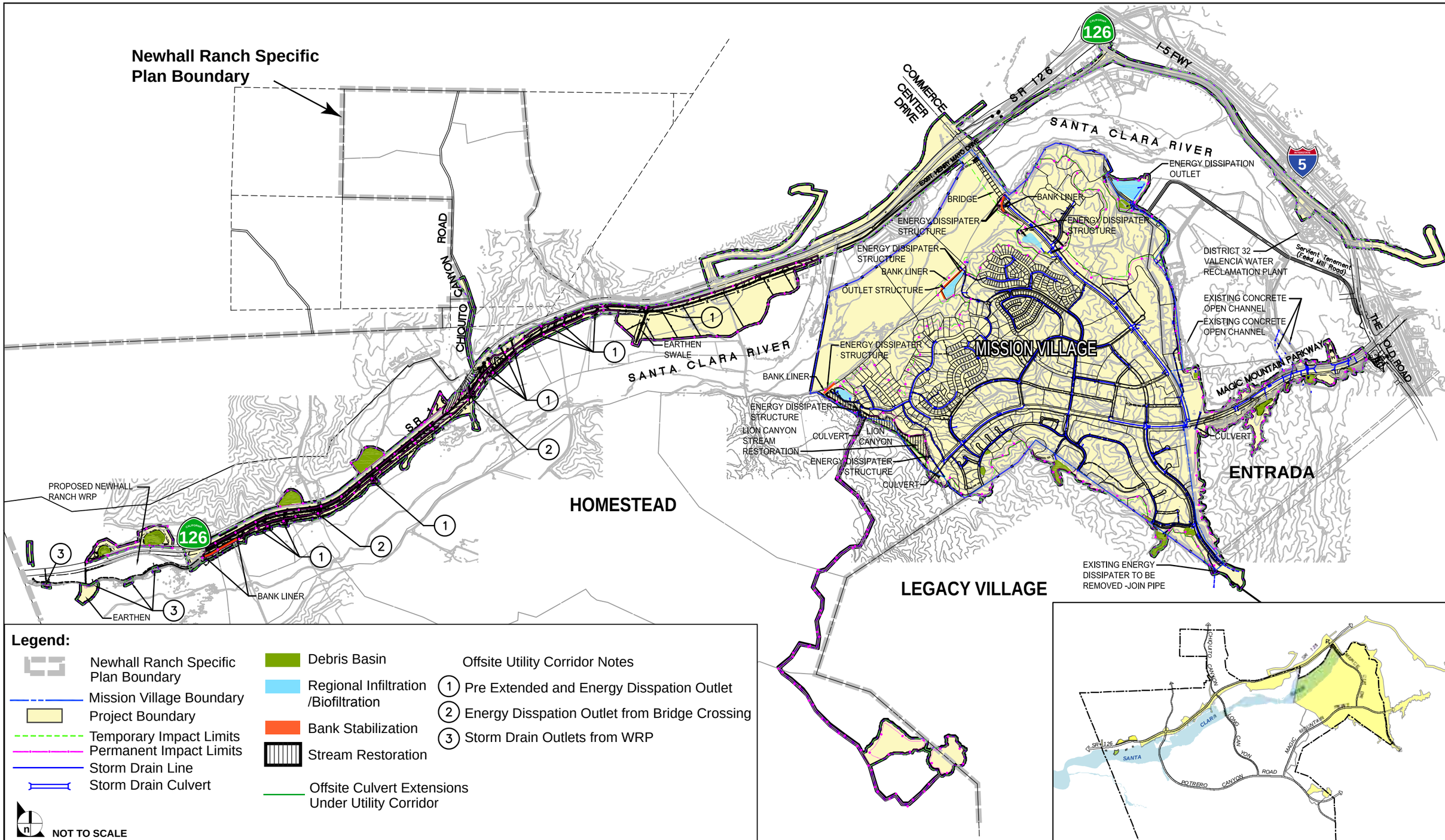
- Lion Canyon: The Lion Canyon drainage would be stabilized with drainage treatments, including grade stabilizing measures to maintain sediment equilibrium (i.e., drop structures/grade stabilizers) to protect the channel and banks from hydromodification impacts. **Figure 1.0-35, Lion Canyon Drainage Treatments** (found at the end of this project description section), depicts the approximate location of the drainage treatments that would occur within Lion Canyon, including one road crossing culvert, slope/bank protection, buried bank protection, and drop structures/grade stabilizers~~and protect the channel bed and banks from hydromodification impacts~~.

- Exxon Canyon: The southern portion of Exxon Canyon would be graded to accommodate development on the Mission Village project site, and the seasonal flows through the drainage would be conveyed by buried storm drain.

- Middle Canyon, Magic Mountain Canyon, Dead End Canyon: These tributaries would be graded to accommodate Mission Village development and the seasonal flows through the drainages would be conveyed by buried storm drain.

Additional information for Lion Canyon is provided below to provide detail regarding the restoration and enhancement design within the drainage. Lion Canyon, it is a 0.84-square-mile (539 acres) watershed area, which is a tributary to the southern district of the Santa Clara River. The total length of the mainstem channel is approximately 4,761 feet, with an average overall slope of 4.6 percent. Approximately 280 acres of the watershed (52 percent) is located within the Newhall Ranch Specific Plan. Approximately 90 percent or more of the watershed consists of rugged foothill topography with the remainder is the narrow valley floor. Generally, the soils in the watershed are characterized hydrologic soil group "B/C" (moderate runoff potential). The associated vegetative cover within the watershed varies, but includes California sagebrush scrub and chaparral.

As part of the Mission Village project, the Lion Canyon drainage would be stabilized with drainage treatments, including grade stabilizing measures (i.e., drop structures/grade stabilizers) to protect the channel and surrounding development from excessive vertical scour and lateral channel migration. **Figure 1.0-35, Lion Canyon Drainage Treatments**, (found at the end of this project description section) depicts the approximate location of the drainage treatments that would occur within Lion Canyon, including one road crossing culvert, slope/bank protection, buried bank protection, and drop structures/grade stabilizers. Reconstruction of the drainage channel would result in 3 acres of modified channel. The reconstructed channel also would result in 3.7 acres of newly created jurisdictional and upland buffer areas.



SOURCE: PSOMAS - February 2010

(Revised) FIGURE **1.0-25**

Mission Village Drainage and Water Quality Plan

32-99•04/11

(~~p~~q) Potable Water

The Mission Village project-level potable and recycled water plan is consistent with and implements the Specific Plan's approved Conceptual Backbone Water Plan. (Specific Plan Exhibit 2.5-2). This plan sets forth program-level on-site storage and water distribution systems to provide adequate water service to Newhall Ranch. The Specific Plan also committed to the provision of recycled water, to the extent available, for irrigation use. **Figure 1.0-28, Newhall Ranch Specific Plan Conceptual Backbone Water Plan – Mission Village**, depicts the Specific Plan's Conceptual Backbone Water Plan as it relates to Mission Village.

The Valencia Water Company (VWC) would provide potable water to the Mission Village project. Potable water demands will be met by using groundwater produced from the Alluvial aquifer from newly constructed replacement wells located within the Valencia Commerce Center that have been approved and permitted by the California Department of Health Services (DHS). These wells replaced older wells used for irrigation that are no longer active and have been permanently closed as directed by DHS. In August 2004, VWC received an amended water supply permit from DHS for approval and construction of four domestic water supply wells. The wells will operate by delivering water to VWC's existing Zone I system and then would be pumped into Zones II and III to meet the demands of the Mission Village project. The project would be located primarily within VWC's Zone II and Zone III water pressure zones. See, **Figure 1.0-29, Mission Village Potable Water System.**

The portion of Mission Village lying within VWC Zone II would be served by a proposed 4.0-million-gallon reservoir tank, which would be located partially on site and partially off site just south of the project boundary within VTTM 61996 (Legacy Village), and a second proposed 4.0-million-gallon reservoir tank located off-site at the existing Westridge Tank site adjacent to Westridge Parkway. (See **Figure 1.0-25a, Off-Site Improvements**.) Both reservoir tanks would be constructed as part of the proposed project. The two new reservoirs would receive water via a new ~~3,500 gallon per minute (gpm)~~ pump station and 18-inch pipeline constructed along the extension of Commerce Center Drive. Connections are also planned with the existing Zone II water system along Magic Mountain Parkway and Westridge Parkway.

The proposed project Zone III service areas would be served by an existing 3.3-million-gallon reservoir located within the Westridge Community, southeast of the Mission Village project site. Connection to the project site would be provided by an existing Zone III line located in Westridge Parkway.

(r~~q~~) Recycled Water

The project also proposes to use recycled water for landscape irrigation purposes when available. Use of recycled water would entail construction of a separate recycled water storage and distribution system from the potable system described above. **Figure 1.0-30, Mission Village Reclaimed Water System,** depicts the proposed Mission Village recycled water system.

Currently, recycled water is only available from the Valencia WRP located along The Old Road east of the project site. The long-range plan is for the future Newhall Ranch WRP and the Valencia WRP to serve the sewage and recycled water needs within Newhall Ranch. (The environmental effects of constructing and operating the Newhall Ranch WRP were evaluated at the project-level in the certified Newhall Ranch Specific Plan EIR.) The WRP's capacity would be 6.8 mgd, with a maximum flow of 13.8 mgd. The WRP would be designed to meet the standards and requirements of the Los Angeles County Department of Public Works, County Sanitation Districts of Los Angeles County (CSDLAC), and State of California relative to recycled water. A new County sanitation district has been formed, the Newhall Ranch County Sanitation District, which would include the proposed project area.

Both the Valencia and Newhall Ranch WRPs would supply recycled water to the Valencia Water Company (VWC) Zone 1 pressure zone. Zone I would have sufficient delivery capacity through a backbone pipeline to meet the recycled water needs of the entire Newhall Ranch Specific Plan. The backbone pipeline would be constructed starting at the Newhall Ranch WRP and continuing easterly along the utility corridor south of the SR-126 right of way to Castaic Creek where it would extend north under SR-126, then east crossing under Castaic Creek. The pipeline would continue easterly through Hancock Parkway then southerly on Commerce Center Drive to Henry Mayo Drive, where it would continue easterly on Henry Mayo Drive to The Old Road. At the point where Henry Mayo Drive merges with The Old Road, the pipeline would turn southerly along the right of way along The Old Road, where it would connect to the existing Valencia WRP.

The Mission Village site would be located within VWC's Zone I, Zone II and Zone III recycled water pressure zones. Water storage facilities for Zone I would be provided by 500,000 gallons of storage to be located at the Newhall Ranch WRP pump station. In addition, the existing 3.3-million-gallon Round Mountain reservoir tank, currently being used for potable water and which is located in the proposed Utility Corridor, would be converted to a non-potable recycled water tank. (See **Figure 1.0-25a, Off-Site Improvements**.) Recycled water would be supplied to this tank by installing a pipeline from the proposed project's backbone pipeline system along The Old Road and then along the Santa Clarita trails system eastward to the tank.

A 2.5 million gallon storage tank would be constructed along the southerly tract map boundary, partially on site and partially within VTTM 61996 (Legacy Village), to meet the storage requirements for Zone II. (See **Figure 1.0-25a, Off-Site Improvements**.) Zone II would require a pump station located at Commerce Center Drive and SR-126 to pump recycled water from Zone I to Zone II; Zone III would require a pump station to pump water from Zone II to Zone III.

To augment recycled water supplies within Zone II, two connections are planned to the Castaic Lake Water Agency (CLWA) existing Zone II recycled water system located in Magic Mountain Parkway and Westridge Parkway, with reducing stations within the project to serve lower zones.

Project improvements also would include the abandonment and relocation of one or two existing agricultural wells presently used to irrigate cultivated fields on the Mission Village project site and on other portions of Newhall Ranch. These existing wells and associated piping would be relocated/abandoned, as necessary, to continue to meet ongoing agricultural needs elsewhere on Newhall Ranch.

(s~~r~~) Wastewater

The Mission Village project-level wastewater/sewer plan is consistent with and implements the Specific Plan's approved Conceptual Backbone Sewer Plan (Exhibit 2.5-3 of the Specific Plan), which sets forth a program-level system for wastewater/sewage collection for Newhall Ranch. The Specific Plan also committed that all sewer system facilities would be designed and constructed for maintenance by the County, the CSDLAC, or the approved ~~new~~ Newhall Ranch County Sanitation District, in accordance with all applicable requirements. **Figure 1.0-31, Newhall Ranch Specific Plan Conceptual Backbone Sewer Plan – Mission Village**, depicts the Specific Plan's Conceptual Backbone Sewer Plan as it relates to Mission Village.

As noted above, the long-range plan is for the Newhall Ranch WRP to be constructed to serve the sewage and recycled water needs within Newhall Ranch, including nearly all of Mission Village.[6] In the interim, several options are available to treat wastewater generated by the proposed project.

One option, as shown in **Figure 1.0-32, Mission Village Wastewater System – Scenario 1**, is to construct an initial phase of the Newhall Ranch WRP to serve the Mission Village project, with buildout of the WRP occurring over time as demand for treatment increases. Under this scenario, a network of sewer collectors, sewers pumps, and force mains would collect and convey effluent to an interceptor sewer

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6 Upon construction of the Newhall Ranch WRP, due to gravitational limitations, a small amount of wastewater generated by the Mission Village project (approximately 0.2 million gallons per day) would need to be treated permanently at the existing Valencia WRP, which is located approximately 0.5 mile east of the Mission Village site along The Old Road. This treatment would be subject to conditions specified in a Joint Sewerage Services Agreement to be executed between NRCSD and the Santa Clarita Valley Sanitation District (SCVSD).

pipeline in the utility corridor. The interceptor sewer will convey effluent to the west in the proposed utility corridor (parallel to the SR-126 right-of-way), where it would connect to the Newhall Ranch WRP.

The second option, as shown in **Figure 1.0-33, Mission Village Wastewater System – Scenario 2**, is to construct a lift or pump station within the utility corridor in one of three potential locations, either near the northerly abutment of the proposed Commerce Center Drive bridge, or within the Landmark Village site near Long Canyon Road, or near the Newhall Ranch WRP. In either scenario, the wastewater would be pumped to the existing Valencia WRP (District No. 32), which is located approximately 0.5 mile east of the project site along The Old Road. Wastewater from the Mission Village project would ~~continue to~~ be pumped temporarily to the Valencia WRP until such time as the first phase of the Newhall Ranch WRP is constructed. Under an Interconnection Agreement with the SCVSD, the Valencia WRP can temporarily treat wastewater for up to 6,000 Newhall Ranch dwelling units until such time as the Newhall Ranch WRP is constructed and operational. The Interconnection Agreement was developed to establish a logical plan for the development and administration of the new NRCSD and its infrastructure, and it sets conditions under which the first 6,000 homes in Newhall Ranch may temporarily discharge wastewater to the existing Valencia WRP. The conditions include payment of the standard connection fee (fair share of the cost of the existing infrastructure) and transfer of title of the 22-acre Newhall Ranch WRP site to the NRCSD. Newhall Ranch residents also would pay the Sanitation Districts an annual service charge to recover the full cost of treating their wastewater at the Valencia WRP.

Temporary treatment of wastewater at the Valencia WRP would not eliminate the need for the developer to construct the Newhall Ranch WRP; instead, the temporary treatment of wastewater at the existing Valencia WRP is a practical engineering decision based on the need to build up an adequate, steady flow of wastewater before starting up the Newhall Ranch WRP. Such an approach would match the slower pace of the development, but would not eliminate the Specific Plan requirement for construction of the Newhall Ranch WRP. (A copy of the Interconnection Agreement is found in **Appendix F4.9** of the Mission Village Final EIR.)

Under this scenario, a sanitary sewer force main would be constructed in the proposed utility corridor located south of SR-126 right-of-way, and extend along Henry Mayo Drive and would connect to an existing CSDLAC pump station near the intersection of The Old Road and Henry Mayo Drive. The existing CSDLAC pump station may require upsizing.

In the event the Commerce Center Drive Bridge is not completed at the time it becomes necessary to treat wastewater flows and, therefore, the bridge cannot support pipelines to convey effluent flows, an interim pump station would be constructed near the intersection of "GG" Street and Commerce Center Drive on the westerly side of Commerce Center Drive that would pump effluent to the existing Valencia WRP (District No. 32). **Figure 1.0-34, Mission Village Wastewater System – Scenario 3**, illustrates this option. Under this scenario, a pipeline from the interim pump station on the project site to the Valencia WRP would be constructed along Commerce Center Drive and the Magic Mountain Parkway Extension. The pipeline would connect with an existing line at the intersection of The Old Road and Magic Mountain Parkway. The existing pipeline would convey effluent to the Valencia WRP. As with Scenario 2 described above, wastewater from the Mission Village project would be pumped temporarily to the Valencia WRP until such time as the first phase of the Newhall Ranch WRP is constructed and operational.

(t~~s~~) Magic Mountain Parkway Extension

As part of the proposed project, Magic Mountain Parkway will be extended from its existing terminus just east of the project boundary to provide a westward thoroughfare through the project site. (See **Figure 1.0-25a, Off-Site Improvements**.) Improvements also will be made to the existing portion of the roadway lying within VTTM 53295 (Entrada), from The Old Road to the existing terminus. As part of the Magic Mountain Parkway improvements, Media Center Drive also will be realigned.

(u~~t~~) Grading

Project site grading would require the removal and recompaction of approximately a maximum of 29.9 million cubic yards of existing material in a balanced cut and fill operation. Included in this 29.9 million cubic yards is grading for the off-site Magic Mountain Parkway extension (approximately 900,000 cubic yards of cut and 500,000 cubic yards of fill, the excess to be used as fill in Mission Village), the utility corridor (approximately 618,000 cubic yards cut/fill), and Alternate 2 of the SCE Substation. Project grading would be consistent with, and would implement, the Specific Plan's approved Conceptual Grading Plan (Specific Plan Exhibit 2.7-1), and the applicable Specific Plan Design Guidelines (Specific Plan Chapter 4, Section 4.8) for grading and hillside management.

Grading specific to the Mission Village project includes mass grading for the development areas, along with fine grading for development pads. Mass grading would consist of rough grading operations that would provide for major roads and infrastructure, including off-site improvements, establish drainage patterns, and create building pads for the various land uses within the project site. Remedial grading and custom grading may also be required depending upon future site specific soils and geotechnical investigations. Graded slopes would be landscaped and irrigated pursuant to County grading and erosion control requirements. Vesting Tentative Tract Map 61105 depicts the project's ultimate grading contours as shown on the project grading plan.

Off-site grading is required at several locations to construct the off-site project components. Specifically, the proposed project would require off-site grading of the utility corridor, roadway extensions (Magic Mountain Parkway and Westridge Parkway/Commerce Center Drive; grading to occur within VTTM 53295 [Entrada]), portions of a water quality basin, and portions of a water tank site. (See **Figure 1.0-25a, Off-Site Improvements**.) A limited amount of off-site grading also will be conducted along the southerly boundary of the tract map site with VTTM 61996 (Legacy Village) in order to tie the proposed grades into natural grades. (See **Figure 1.0-25a, Off-Site Improvements**.) Additionally, it is anticipated that limited portions of the re-grading and stabilization work associated with the Lion Canyon drainage would take place outside of the Mission Village tract map site, within the future Homestead portion of Lion Canyon. (See **Figure 1.0-25a, Off-Site Improvements**.)

As described earlier, depending on the timing of other development projects, Southern California Edison may require construction of a 16 kV Substation to serve the Mission Village project. There are two alternative locations for the proposed substation, both outside the boundaries of Mission Village. Additional grading to construct either one of these sites would need to occur. Alternative one would require approximately 158,000 cubic yards of cut and 45,000 cubic yards of fill. The excess dirt from this site would be placed in the existing agricultural fields in Potrero Valley, adjacent to the construction site.

The second alternative would require 372,000 cubic yards of cut and 107,000 cubic yards of fill. The excess dirt from this site also would be placed in the existing agricultural fields in Potrero Valley.

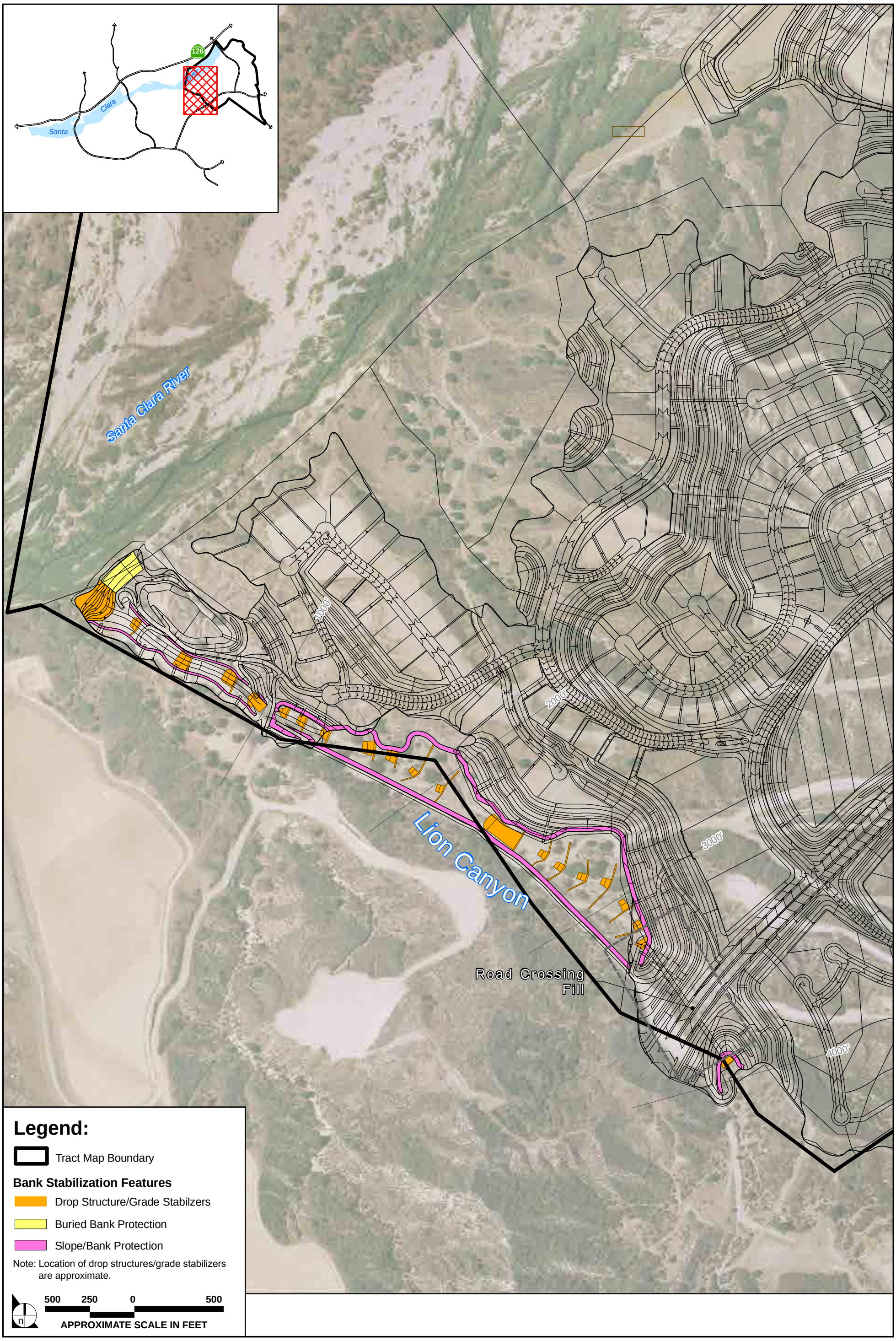
The project-related grading also may occur in several phases, including partial grading within the tract map site. The limit of the grading phase would be established to achieve a balanced earthwork for that grading phase and may extend beyond the limits of a particular final unit map boundary to achieve a phased grading balance. ~~An interim hydrology report would be prepared for each phased grading area and the phased grading would be protected from flooding erosion in accordance with current County standards.~~

b. Implementation of Smart Growth Principles

There are many different components that make a community sustainable or qualify a project as a "smart growth" project. These include a proper mix of land use, provision of jobs, design for future transit uses, provision of open space and recreation, connectivity (trails), preservation of natural areas, the reduction of impermeable surfaces, water conservation and re-use, energy conservation including the use of alternative energies (solar, wind, cogeneration, etc.), and the incorporation of green building techniques. Researchers sometimes refer to those factors that characterize urban development patterns as "D" variables, which include density of development, diversity of land uses, design (pedestrian v. vehicle-oriented), destination accessibility, and distance to transit. The D variables have a significant effect on the overall vehicle miles traveled (VMT) and vehicle trips (VT) of individuals and households, mostly through their effect on the distance people travel and the modes of travel they choose. As is evidenced below, Mission Village, as with Newhall Ranch, utilizes the D variables in a manner that incorporates the components of a sustainable or smart growth community.

1. **Mix of Land Uses.** Mission Village, along with the other villages in Newhall Ranch, will include a broad range of housing types, including affordable housing, along with commercial, office, and public facilities. Mission Village will provide a diverse range of 4,412 homes (382 single-family and 4,030 multi-family units) with densities ranging between 1 and 55 du/ac. In addition, age qualified homes will be provided for active adults age 55 plus, and a continuing care retirement community offering independent and assisted living also is included. To minimize and shorten vehicle trips, most homes will be located within walking distances to the Mission Village community's commercial and mixed-use areas, elementary school site, community park, and trail system. Additionally, to further minimize and shorten vehicle trips, Mission Village would be located adjacent to the Valencia Commerce Center, one of the largest employment centers in the County. Bike and pedestrian trails within Newhall Ranch and Mission Village will connect to trails within the Valencia Commerce Center, thereby reducing the need for vehicle trips.

2. **Provision of Jobs.** A portion of Newhall Ranch's approximate 20,000 new jobs would be provided through Mission Village's mixed-use and commercial areas. Newhall Ranch is adjacent to the existing Valencia Gateway (which includes the Valencia Commerce Center), which presently provides



SOURCE: PSOMAS – April 2011

FIGURE **1.0-35**

Lion Canyon Drainage Treatments

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modification of traffic patterns, any safety issues posed by dirt movers in proximity to the SR-126, and include requisite traffic control assistance for the CHP. The traffic management plan would then be reviewed and approved by the Los Angeles County Department of Public Works and/or Caltrans prior to issuance of construction permits.

With implementation of private security services, CHP traffic control services, and the County/Caltrans traffic management plan, potentially significant construction-related impacts to police protection services that may occur as a result of the Mission Village project would be reduced to a less than significant level.

(2) Operational Impacts

(a) Los Angeles County Sheriff's Department

The County of Los Angeles Sheriff's Department would have the responsibility to provide general law enforcement services to the project site. It is anticipated that demand for these services in the project area would increase above current levels upon buildout of the project, and that the number of service calls and the types of incidents at the project site would be similar in frequency and character to those experienced in other areas of the Santa Clarita Valley.

The Sheriff's Department anticipates that the non-emergent response time to a request for service to the proposed Project would be approximately 20 to 35 minutes. The priority response time would be approximately 8 to 12 minutes and the response time under emergent circumstances would be approximately 5 to 7 minutes. All response times are approximations and would be dependent on both the deployment of area radio cars and traffic conditions. As noted above, the project proposes a total residential population of 10,802. Based upon the ideal ratio of one deputy per 1,000 residents, the project would require 11 additional deputies. The Sheriff now estimates that the proposed project would have approximately 13,778 residents resulting in the need for an additional 13 officers. Additionally, according to the Sheriff's Department, the increase in required deputies would necessitate an increase in support resources, such as detectives, front desk personnel, secretaries, administration, vehicles, and portable radios.[28] Without additional Sherriff's Department staffing and facilities, the predicted population increase associated with the Mission Village project would decrease the existing level of service of the Sheriff's Department and would result in a significant impact.

Capital facilities and equipment would be funded by the law enforcement facilities fee, discussed above. The law enforcement facilities fee would provide sufficient revenues to pay for land acquisitions,

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28 Written correspondence from Captain Patti A. Minutello, Los Angeles County Sheriff's Department, Santa Clarita Valley Station, August 4, 2004..

engineering, construction, installation, purchasing, and other costs for the provision of capital law enforcement facilities and equipment needed to serve new development in the unincorporated Santa Clarita Valley. Additional operational funding for the Sheriff's Department in the Santa Clarita Valley area and the rest of Los Angeles County would be derived from various types of tax revenues (e.g., property taxes, sales taxes, user taxes, vehicle license fees, deed transfer fees), which are deposited in the County's General Fund. The County Board of Supervisors then allocates the revenue for various public

MV 4.11-4 Prior to the issuance of building permits or certificates of occupancy as applicable, the project applicant, or its designee, shall pay to the County the applicable law enforcement facilities fee required by Los Angeles County Code section 22.74.010, et seq., or, in the alternative, shall enter into an agreement with the County for the in lieu payment of such fees.

MV 4.11-5 Prior to the issuance of building permits or certificates of occupancy as applicable, the project applicant, or its designee, shall incorporate the following crime prevention measures into the proposed Project:

- Provide lighting in open areas and parking lots;
- Ensure the visibility of doors and windows from the street;
- Ensure that the required building address numbers are lighted and readily apparent from the street for emergency response agencies;
- Provide knox box entry key system for law enforcement if a gated community, gated apartments or gated town homes are planned in the project boundary.

8. CUMULATIVE IMPACTS

In order to analyze the cumulative impacts to law enforcement services of this project in combination with other expected future growth, the amount and location of growth expected to occur with buildout of the Santa Clarita Valley, in addition to that of the Mission Village project, was forecast. The Santa Clarita Valley Cumulative Buildout Scenario entails buildout of all lands under the current land use designations indicated in the Santa Clarita Valley Area Plan and County General Plan, the proposed project, and all known pending General Plan Amendment requests for additional urban development in the unincorporated area of the Santa Clarita Valley and the City of Santa Clarita. A list of the future development activity (with and without the project) expected in the valley under the Santa Clarita Valley Cumulative Buildout Scenario is presented below in **Table 4.11-1, Cumulative Development Activity – Santa Clarita Valley Cumulative Buildout Scenario**.

Excluding the proposed project, the total residential population within the valley under this buildout scenario would be 416,395 persons. With the Mission Village project, this total resident population would be 427,197 persons.[41]

[41] Household estimates are based upon estimates provided by the County of Los Angeles of 3.17 persons per single-family dwelling and 2.38 persons per multi-family dwelling, per apartment, and per mobile home.

a. Los Angeles County Sheriff's Department

Using the desired officer-to-population ratio of one officer per 1,000 population, Santa Clarita Valley buildout (exclusive of the project) would require a total of 416 sworn officers, or 255 more sworn officers than currently work in the valley. The proposed project would increase this total by an additional 11 sworn patrol officers. Meanwhile, for purposes of this analysis, it is assumed that the deputy-to-resident ratio would be at the desired ratio of one officer per 1,000 population, and that each development project would be responsible to ensure that adequate law enforcement services are available. Therefore, if no officers are hired to accommodate the needs of the region as it builds out, a significant cumulative impact would occur.

4.12 FIRE PROTECTION SERVICES

1. SUMMARY

Fire protection and emergency medical response services for the Mission Village project and surrounding area are provided by the County's Fire Department. ~~Fourteen~~ Thirteen fire stations and ~~three~~ four fire camps currently provide fire protection services for the project area. The closest station to the project site that would provide fire protection services is Fire Station 76, located at 27223 Henry Mayo Drive in Valencia. Should a significant incident occur, the resources of the entire Fire Department, not just the station closest to the site, would be available to serve the project. The County's Fire Department and a franchise private ambulance company also provide paramedic services to the area.

The Mission Village project site is located in an area that has been designated as a Very High Fire Hazard Severity Zone (formerly called Fire Zone 4) by the County Fire Department, which denotes the County Forester's highest fire hazard potential.

Pursuant to mitigation adopted by the County as part of its approval of the Newhall Ranch Specific Plan, and project specific mitigation proposed by this EIR, the applicant is currently in discussions with the County's Fire Department with respect to a memorandum of understanding (MOU) for Newhall Ranch, Entrada, and Legacy Village, which collectively, comprise "the Project Area" for the MOU, which would result in the construction of additional fire stations on the Newhall Ranch site, generally, and specifically a new fire station on the Mission Village site. ~~It is expected that~~A ~~the additional~~ fire station is to be constructed on the Mission Village site (Fire Station 177) that would ultimately provide fire protection services for the Mission Village site. ~~The project applicant intends to complete construction of Fire Station 177 such that the station is operational upon issuance of the 5,000th certificate of occupancy for the Project Area as defined in the MOU.~~ Until such time as that station is completed, existing Fire Stations 76 and 124 would be available to serve the project site.

Additionally, the proposed project would be required to meet all County codes and requirements relative to providing adequate fire protection services to the site during both the construction and operational stages of the project. As a result, the project would not diminish the staffing or response times of existing fire stations in the Santa Clarita Valley, nor would it create a special fire protection requirement on the site that would result in a decline in existing service levels. Therefore, with implementation of the adopted Specific Plan mitigation measures, in combination with the recommended project-specific mitigation, the proposed project would not have a significant project-specific or cumulative impact on fire protection services or fire hazards in Santa Clarita Valley.

In response to the identified significant impacts, the Final Newhall Ranch Specific Plan Program EIR identified four feasible mitigation measures.[1] The Board of Supervisors found that adoption of the recommended mitigation measures would reduce the identified potentially significant effects to less than significant levels. The Specific Plan's mitigation program for fire protection services and fire hazards includes the following requirements: (1) approval of a Wildfire Fuel Modification Plan for each Newhall Ranch final subdivision map that permits construction in development areas adjacent to Open Area and the High Country Special Management Area (SMA); (2) provisions in each tentative subdivision map and site plan for sufficient fire flow capacity for all proposed residential and non-residential uses; (3) subdivision map and site plan compliance with all applicable building and fire codes and hazard reduction programs for Moderate Fire Hazard Zones or Very High Fire Hazard Severity Zones; (4) provisions for funding the three fire stations in lieu of developer fees, the dedication of two fire station sites, and providing for various equipment needs; and (5) provisions for a MOU with the Fire Department to address first-phase fire protection requirements and the criteria for timing the development for each of the three fire stations.[2] The MOU requirement specified that delivery of fire service for Newhall Ranch would be from either existing fire stations, or one of the three fire stations to be provided pursuant to the Specific Plan's mitigation program. Prior to commencement of the operation of any of the three fire stations, the MOU requirement contemplated that fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the developer at mutually agreed-upon locations. Planned permanent stations located within Newhall Ranch would replace the temporary fire stations.

4. EXISTING CONDITIONS

a. Fire Protection Services

The County's Fire Department provides fire protection service to the project area. ~~Fourteen~~ Thirteen fire stations and ~~three~~ four fire camps support the project area. The location of these stations, the fire suppression camps, temporary fire stations, and fire stations with paramedic units, are illustrated on **Figure 4.12-1, Existing Fire Station Locations**.

Also shown on **Figure 4.12-1** is the location of the existing ~~fire station at the~~ Del Valle Training Facility, which is located west of the project site. The closest fire station to the project site is Fire Station 76, located at 27223 Henry Mayo Drive in Valencia, approximately 0.27 mile from the northern boundary of the

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1 Mitigation Measures 4.18-1 through 4.18-4 in both the certified Final Program EIR (March 9, 1999) and adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

2 See Mitigation Measure 4.18-4 in both the certified Newhall Ranch Program EIR (March 9, 1999) and adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

Mission Village project site. The second closest fire station to the project site is Fire Station 124, located at 25870 Hemingway Avenue in Stevenson Ranch, approximately 1.3 miles from the southeastern boundary of the project site. These distances translate into response times ranging from approximately 5 to 8 minutes for Mission Village as a whole. The closest available district response units would provide fire protection services. Should a significant incident occur, the resources of the entire Fire Department, not just the stations closest to the site, would serve the project site.

Fire suppression camps supply crews on a daily basis to assist in the suppression of wildland fires. They also perform storm-related functions, such as the filling of sandbags, and provide additional manpower at search and rescue incidents. Of the four camps located in the Santa Clarita Valley area, two are staffed with paid fire suppression aids, and the other two are staffed by a workforce comprised of adult male prisoners provided by the California Department of Corrections (CDC). This partnership with the CDC provides the Fire Department with a large labor pool. The closest fire suppression camp to the project site is located at 29300 The Old Road in Saugus.[3]

A description of the operational characteristics of the four fire stations closest to the site and, therefore, most likely to respond to fire and medical emergencies, is provided below. A three-person fire company consists of a captain, a fire fighter specialist, and a fire fighter.[4] A four-person fire company has one additional fire fighter. If the station houses a paramedic squad, a paramedic fills one fire fighter position on the engine. There are no plans for upgrades to ~~seven~~ 10 of the ~~11~~13 fire stations located in the vicinity of the project site; however, Station 156 has commenced (as of April 2010) construction for the development of a permanent station and is expected to be operational the second quarter of 2011.[5]

(1) Los Angeles County Fire Station 76

Los Angeles County Fire Station 76 is located at 27223 Henry Mayo Drive in Valencia. The station maintains ~~one fire engine and is supported by four firefighters.[6] A five person hazardous materials unit is located at this station.[7] A~~a nine person Hazardous Materials Task Force comprised of a four person engine company and a five person hazardous materials squad that provides full fire protection services, hazardous materials-related and otherwise.

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3 Electronic communication, Lorraine Buck, Planning Division, County of Los Angeles Fire Department, March 27, 2009.

4 Written correspondence between Loretta Bagwell, Planning Analyst, Planning Division, Los Angeles County Fire Department, and Impact Sciences, April 7, 2010. If the fire station has a paramedic squad, the 3-person engine company would consist of a captain, a fire fighter specialist, and a fire fighter/paramedic. The same would hold true for a 4-person engine company; one fire fighter would be replaced with a fire fighter/paramedic.

5 Written correspondence between Loretta Bagwell and Impact Sciences, April 7, 2010.

~~Telephone communication, Lorraine Buck, Planning Division, County of Los Angeles Fire Department, February 3, 2009.~~

~~7 Telephone communication, Lorraine Buck, February 3, 2009.~~

e. Current Site Conditions

The Mission Village project site is currently vacant with some irrigated agricultural uses and abandoned oil and gas operations. Previous uses of the site include cattle grazing operations.

The topography of the Mission Village project site varies considerably, with mesa areas located sporadically along the Santa Clara River, and moderately to steeply sloping terrain in the central and southern portions of the site. Access roads through the project area consist primarily of dirt roadways with some paved roads that are generally in good to poor condition. Vegetation communities located in the project area include disked farm fields; habitat communities include, among others, non-native grassland, upland scrub habitat and sensitive riparian habitat. Please refer to **Section 4.3, Biota**, of this EIR for additional information on the existing biological resources on the Mission Village site, and **Section 2.0, Environmental and Regulatory Setting**, for additional discussion of the current conditions on the Mission Village project site.

There was one call for service during the year 2009, for a wildland fire that occurred approximately 4 miles north of the Mission Village project site.[26]

5. PROPOSED PROJECT IMPROVEMENTS

The project proposes to develop a total of 4,412 residential dwelling units consisting of 382 single-family homes, 4,030 multi-family units, including attached and detached condominiums, age qualified, and apartment units, with a total residential population of 10,802.[27] To facilitate development of the Mission Village tract map site (VTTM 61105), several off-site, project-related improvements (i.e., improvements outside the tract boundary) would be developed on an additional 592.3 acres of land. These project-related components include the following: utility corridor, Magic Mountain Parkway roadway extension, a water quality basin, three water tanks (portions of two water tanks would be located on site), a Southern California Edison electrical substation, conversion of an existing water tank to recycled water tank, and grading associated with construction of the southerly extension of Westridge Parkway. The project would also include 1.555 million square feet of commercial/mixed uses, a 9.5-acre elementary school, fire station, public library, bus transfer station, parks, public and private recreational facilities, trails, and road improvements. The proposed Mission Village fire station would be located south of Magic Mountain Parkway near the intersection of Magic Mountain Parkway and ~~Westside~~ Westridge Parkway. **Figure 4.12-2, Proposed Fire Station Locations**, illustrates the approximate locations of the fire stations to

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26 Telephone communication, Loretta Bagwell, Planning Division, Los Angeles County Fire Department, February 18, 2010.

27 Based upon County of Los Angeles estimates of 3.17 persons per single-family household and 2.38 persons per multi-family households.

be constructed pursuant to the MOU presently being negotiated between Newhall Land and the Fire Department. ~~in connection with the Newhall Ranch Specific Plan, including the Mission Village fire station.~~

6. PROJECT IMPACTS

The analysis of potential impacts to fire protection services associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

According to Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*, a project would have a significant impact on fire protection services if the project would result in

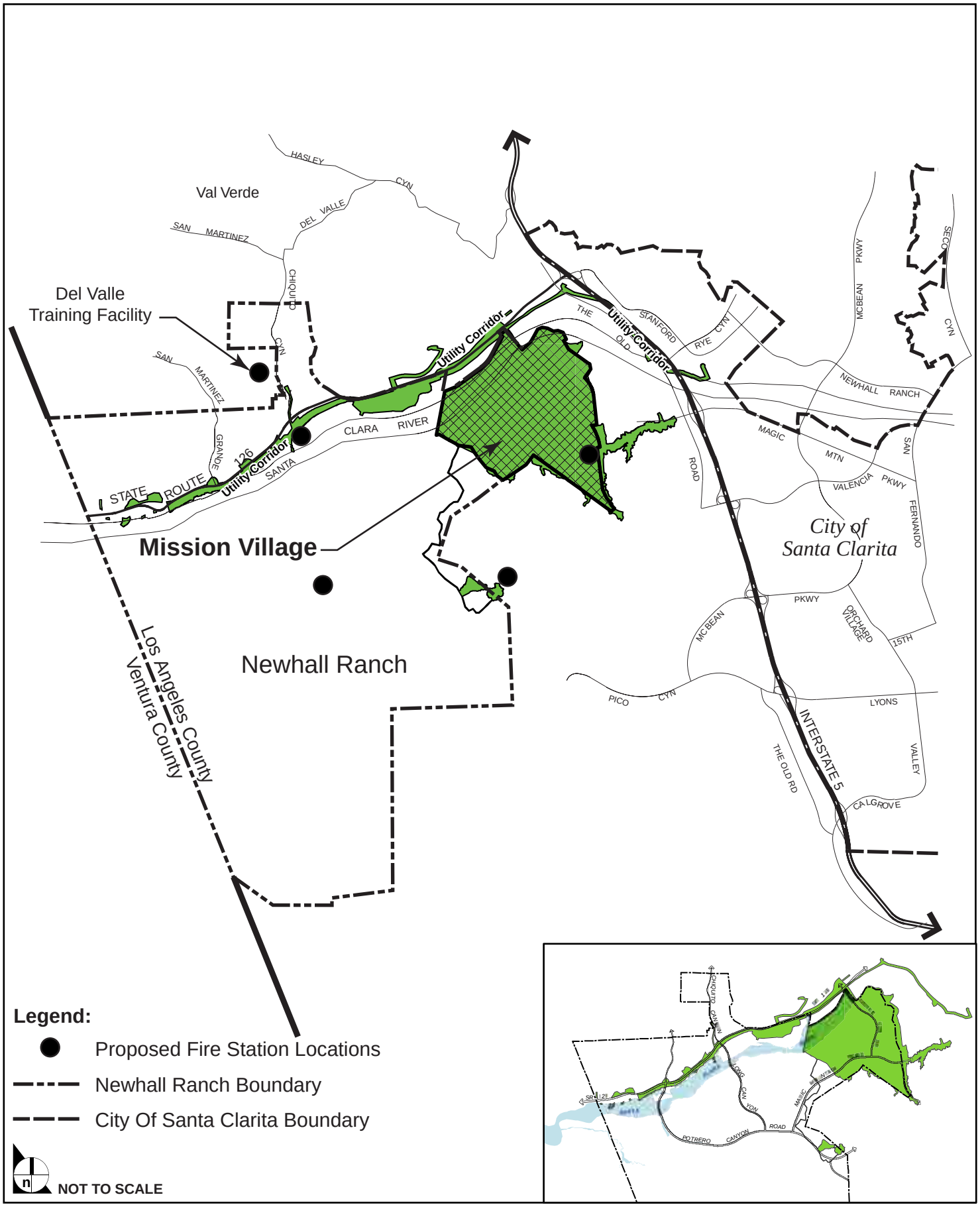
- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities;
- The need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services; or
- Expose people or structures to a significant risk of loss, injury, or death involving wildfires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

These are the significance criteria to be applied in assessing the potential impacts of the proposed project.

b. Impact Analysis

(1) Construction-Related Impacts

Construction projects result in a variety of operations that have the potential to increase the risk of fire, such as the use of mechanical equipment in vegetated areas, cutting and grinding metal, welding, and the storage of flammable materials such as fuel, wood and other building materials. A large amount of wood framing would occur on the project site during buildout. In association with the wood framing operations, the project's electrical, plumbing, communications, and ventilation systems would be installed in each structure. Although rare, fires do occur at construction sites, and it is expected that the electrical, plumbing, and mechanical systems for the development would be properly installed during framing operations. Installation would be subject to County codes and inspection by County personnel prior to drywalling. In addition, construction sites would also be subject to County requirements relative to water availability and accessibility to fire-fighting equipment. Compliance with County Code requirements would assist in mitigating potential fire-related impacts to a level below significant.



SOURCE: Impact Sciences, Inc. – May 2011

FIGURE **4.12-2**

Revised Proposed Fire Station Locations

32-99•05/11

The project could increase the existing rate of calls for service because portions of the development would be located adjacent to natural areas, particularly along the southern, western, and northern edges of the tract map site that have wildfire potential. The applicant, however, must prepare a Fuel Modification Plan pursuant to Section 1117.2.1 of the Fire Code that would retard the spread of wildfire into development areas until the Fire Department's arrival at the site. Moreover, the site is located within an existing service area and the Fire Department indicates that response times within the project region are within the Department's adopted service standards of 5 minutes for basic life support and 8 minutes for advanced life support. Because the project includes the provision of a fire station north of Magic Mountain Parkway at the intersection of Magic Mountain Parkway and Westridge Parkway, it is expected that the response times at project buildout will continue to meet the Department's adopted service standards. Until such time as the Mission Village station is completed, Fire Station 76 and Fire Station 124~~156~~ would serve the project site.[28] Response times would meet the adopted service standards.

The provision of a fire station as part of the Mission Village project is consistent with the adopted mitigation measures for the Specific Plan, which require that the project applicant, in lieu of the payment of developer fees, provide funding to the County Fire District for the construction of three fire stations, two of which would be located on the Specific Plan site and the third at the Del Valle Training Facility, just outside the Specific Plan boundary. The adopted mitigation also provides that Newhall and the Department enter into a MOU that will set forth the first-phase fire protection requirements (fire protection plan) and the criteria for timing the development of each of the three fire stations. The fire protection plan component of the MOU also will undergo annual review and modification, if necessary. Based in part on the mitigation, the Specific Plan EIR determined that potential impacts to fire protection services would be reduced to levels below significant. The applicant is currently working with the Fire Department to develop the specific items to be covered under the MOU, which would be completed prior to the issuance of any certificate of occupancy. In consideration of the applicant's planned development of the Specific Plan Entrada, and Legacy Village, the applicant and the Fire Department presently are considering the development of four fire stations to serve the area, rather than three. The following are the main points of the draft MOU presently being considered:

- The applicant would construct, improve, and equip four fire stations, each no smaller than 9,600 gross square feet (gsf) in size, and would convey the four fire stations, including the underlying land, to the Fire Department upon completion (the Mission Village station would be 13,500 gsf with a 3,600 gsf apparatus storage building).

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28 Written correspondence between John R. Todd, Chief, Forestry Division, Prevention Bureau, Los Angeles County Fire Department and Daniel Fierros, Planning Assistant, Department of Regional Planning, Impact Analysis Section, January 3, 2008.

(c) Fire Codes and Guidelines

As indicated above under the "Existing Conditions," all projects must adhere to applicable state and County Fire codes, standards, and guidelines. Mitigation is proposed further requiring compliance with applicable County requirements. As the project builds out, the fire codes, standards, and guidelines would be continually updated by the state and County agencies as knowledge gained from past fires increases.

(d) Conclusion

The proposed project would ultimately be served by ~~three~~ four Newhall Ranch area fire stations, including three on Newhall Ranch with one within Mission Village, and a fourth station in the immediate vicinity (i.e., within Legacy Village), to be funded and constructed by the project applicant in lieu of developer fees pursuant to the MOU presently being negotiated between Newhall Land and the Fire Department~~ and which is required by mitigation proposed by this EIR~~. ~~As required by the mitigation,~~ Under the MOU, the project applicant also would dedicate land for the ~~three~~ four fire station sites~~ in Newhall Ranch~~, and provide payment for the cost of designated equipment needs.

Mitigation adopted as part of the Specific Plan requires that the project applicant provide funding for three fire stations, and mitigation recommended by this EIR requires that the applicant construct and equip a fire station on the Mission Village site. As noted above, with construction of the Mission Village fire station, in combination with the other proposed mitigation measures summarized below, the impact of the Mission Village site on fire protection in the project vicinity would be reduced to a level below significant. (~~s~~See **Figure 4.12-2**, ~~and~~ Specific Plan EIR **Mitigation Measure 4.18-4**, and Mission Village **Mitigation Measure MV 4.12-2**). Additionally, mitigation is proposed requiring the project to implement a Wildfire Fuel Modification Plan, and meet County codes and requirements relative to providing adequate fire protection services to the site during both the construction and operation phases. The required MOU will also address the first-phase fire protection requirements (fire protection plan) and the criteria for developing each of the three fire stations for the Newhall Ranch Specific Plan. As a result, the project would neither diminish the staffing or the response times of existing fire stations in the Santa Clarita Valley, nor would it create a special fire protection requirement on the site that would result in a decline in existing services levels in the valley. Additionally, mitigation is proposed requiring that the project meet minimum water flow requirements and applicable Fire Department access requirements. Therefore, with implementation of the proposed mitigation measures, potential impacts to fire protection services and fire-related hazard impacts associated with both the operation and construction of the proposed project would be reduced to below a level of significance.

7. PROJECT MITIGATION MEASURES

Although the proposed Mission Village project may result in potentially significant impacts related to fire protection services absent mitigation, the County previously adopted mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan that would reduce these impacts to below significant at the program level of review. These mitigation measures, as they relate to fire protection services, are found in the previously certified Newhall Ranch Program EIR and adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation

MV 4.12-5 This property is located within the area described by the Forester and Fire Warden as a Fire Zone 4, Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met.

MV 4.12-6 Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.

MV 4.12-7 Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width and indicated on the Tentative or Exhibit "A" maps. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.

MV 4.12-8 Access roads shall be maintained with a minimum of 10 feet of brush clearance on each side. Fire access roads shall have an unobstructed vertical clearance clear-to-sky with the exception of protected tree species. Protected tree species overhanging fire access roads shall be maintained to provide a vertical clearance of 13 feet, 6 inches. Applicant to obtain all necessary permits prior to the commencement of trimming of any protected tree species.

MV 4.12-9 The maximum allowable grade shall not exceed 15 percent except where topography makes it impractical to keep within such grade; in such cases, an absolute maximum of 20 percent will be allowed for up to 150 feet in distance. The average maximum allowed grade, including topographical difficulties, shall be no more than 17 percent. Grade breaks shall not exceed 10 percent in 10 feet.

MV 4.12-10 Requirements for access, fire flows and hydrants are to be addressed at the Los Angeles County Subdivision Committee meeting during the subdivision tentative map stage.

MV 4.12-11 Fire sprinkler systems shall be installed ~~are required~~ in ~~some~~ residential and ~~most~~commercial occupancies consistent with applicable code and ordinance requirements. For those occupancies not requiring fire sprinkler systems, it is encouraged that fire sprinkler systems be installed. This will reduce potential fire and life losses.

MV 4.12-12 Prior to construction, the following items shall be addressed:

a. Installation and inspection of the required all weather access to be provided as determined by either the tentative map review process or building permit issuance.

b. Fire hydrants shall be installed and tested prior to the clearance for the commencement of construction.

4.13 EDUCATION

1. SUMMARY

The Newhall School District (Newhall District), Saugus Union Elementary School District (Saugus District), and the William S. Hart Union High School District (Hart District) currently provide public elementary, junior high and senior high school education in the Mission Village project area. The Newhall and Saugus Districts provide elementary school service (kindergarten and grades 1–6) to the project site. The Hart District provides junior high school service (grades 7–8) and senior high school (grades 9–12) service to the project site. The Mission Village project would generate an estimated 969 elementary students, ~~187~~ 267 middle school students, and ~~321~~ 378 senior high school students for the three districts at buildout.

*The "School Facilities Funding Agreement entered into between the Newhall District and Newhall Land and Farming Company" (Newhall School Funding Agreement), effective ~~January 22, 2010~~December 1, 2009, and included in this EIR (**Appendix 4.13**), would mitigate the proposed Mission Village project's direct and cumulative impacts on education facilities in the Newhall District to a level below significant. Under the Newhall School Funding Agreement, Newhall guarantees to the Newhall District that there will be adequate school facilities available to accommodate every student within the Specific Plan area.*

*The "School Facilities Funding Agreement Between the Saugus Union School District and Newhall Land and Farming Company" (Saugus School Funding Agreement), effective February 18, 1997, and included in this EIR (**Appendix 4.13**), would mitigate the proposed Mission Village project's impacts on the Saugus District. Under the Saugus School Funding Agreement, the applicant and the Saugus District have agreed to a financing schedule and a financing plan, in combination with certain mitigation payments, which will provide permanent facilities, including land, buildings, furnishings and equipment, to house grades K–6 students who will reside in the Newhall Ranch Specific Plan area. Once implemented, the Saugus School Funding Agreement would fully mitigate Mission Village's direct and cumulative impacts on the Saugus School District's educational facilities.*

*Project impacts on the Hart District would be mitigated through the "School Facilities Funding Agreement Between the William S. Hart Union High School District and The Newhall Land and Farming Company" (Hart School Funding Agreement), effective October 1998, and included in this EIR (**Appendix 4.13**). The Hart School Funding Agreement conditionally obligates The Newhall Land and Farming Company to provide up to three additional junior high schools and two additional senior high schools to the Hart District. Once implemented, the Hart School Funding Agreement would fully mitigate Mission Village's direct and cumulative impacts on the Hart District's educational facilities.*

Cumulative student generation under the Development Monitoring System (DMS) Build-Out Scenario and the Santa Clarita Valley Build-Out Scenario cannot be accommodated by existing or presently planned facilities that serve the valley; therefore, the impacts of cumulative development on the school districts would be potentially significant if no additional facilities were constructed. However, compliance, as appropriate, with existing School

Facilities Funding Agreements and other mechanisms (e.g., Senate Bill [SB 50], the Valley-Wide Joint Fee Resolution, and/or new school facilities funding agreements), which require that future development pay its fair-share towards the construction of new school facilities to accommodate the increased population, would reduce potential cumulative development impacts on the school districts to below a level of significance. Moreover, because the direct impacts of the proposed project would be fully mitigated, the project's contribution to any cumulative impacts would not be cumulatively considerable.

No significant unavoidable impacts would result from implementation of the proposed Mission Village project.

2. BACKGROUND

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

Section 4.16 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with public education for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan EIR mitigation program was adopted by the County in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts on educational services, but that the identified mitigation measures would reduce the impacts to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, the County of Los Angeles General Plan, and the Santa Clarita Valley Area Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. This section discusses, at a project-specific level, the Mission Village project's existing conditions relative to education, the project's impacts on educational services, the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any mitigation measures recommended by this EIR for the Mission Village project.

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

The Newhall Ranch Specific Plan Program EIR identified certain potentially significant impacts related to educational services resulting from implementation of the Specific Plan. Specifically, the Newhall Ranch Specific Plan Program EIR, and related findings, determined that implementation of the adopted Specific Plan would significantly increase the demand for educational services on the Specific Plan site and the local vicinity.

Buildout of uses within the Specific Plan would generate approximately 5,016 elementary students, 1,392 junior high students, and 2,372 senior high students. Under the adopted mitigation program, provisions were made to reserve land for five elementary school sites, one junior high school site, and one

high school site within the Specific Plan boundaries with sufficient acreage to construct schools to accommodate the estimated number of students generated at buildout of the Specific Plan. In addition, three school facilities/funding agreements were entered into with the Newhall School District, William S. Hart Union High School District, and Castaic Union School District. These agreements outlined a program for school mitigation fees pursuant to the Valley-Wide Joint Fee Resolution (which constitutes more than the applicant's fair share of school funding per state legislation). The County and the City of Santa Clarita are signatories to the Valley-Wide Joint Fee Resolution. Based on the Newhall Ranch Specific Plan Program EIR and record, the County's Board of Supervisors found that the significant impacts on educational services identified in that EIR were mitigated to below a level of significance by adoption of the specified mitigation measures.[1]

4. EXISTING CONDITIONS

The Newhall School District, Saugus Union School District, and the William S. Hart Union High School District currently provide public elementary, junior high/middle school, and senior high school education for the Mission Village project area. The Newhall and Saugus Districts provide elementary service (grades K–6) as shown in **Figure 4.13-1, School District Boundaries**; while the Hart District provides junior high (grades 7–8) and high school (grades 9–12) service. Current enrollment and design capacities for each of the three districts is addressed below.

a. Newhall School District (Newhall District)

Comprised of ~~nine~~ ten elementary schools, the Newhall District serves grades K–6 children who reside in the Newhall, Valencia, Westridge and Stevenson Ranch areas of the Santa Clarita Valley. The current enrollment and design capacities for the Newhall District are listed in **Table 4.13-1**, **Existing Design Capacities and Enrollments for the Newhall District**.

As indicated on **Table 4.13-1**, there are 10 elementary schools within the Newhall District. Meadows Elementary, Pico Canyon Elementary, and Stevenson Ranch Elementary are operating above their design capacities. Total student capacity within the District is 7,848; this capacity is provided via permanent and temporary (relocatable) classrooms. Total student enrollment in the Newhall District for the 2009–2010 school year is ~~6,574~~7,074,[2] which is ~~84~~ 90 percent of capacity for the District.

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1 See Mitigation Measures 4.16-1 through 4.16-5 in both the certified Newhall Ranch Specific Plan Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

2 Enrollment data provided by Mike Clear, Newhall School District Asst. Superintendent to Business Services as of January 2010 for the 2009–2010 school year on February 22, 2010.

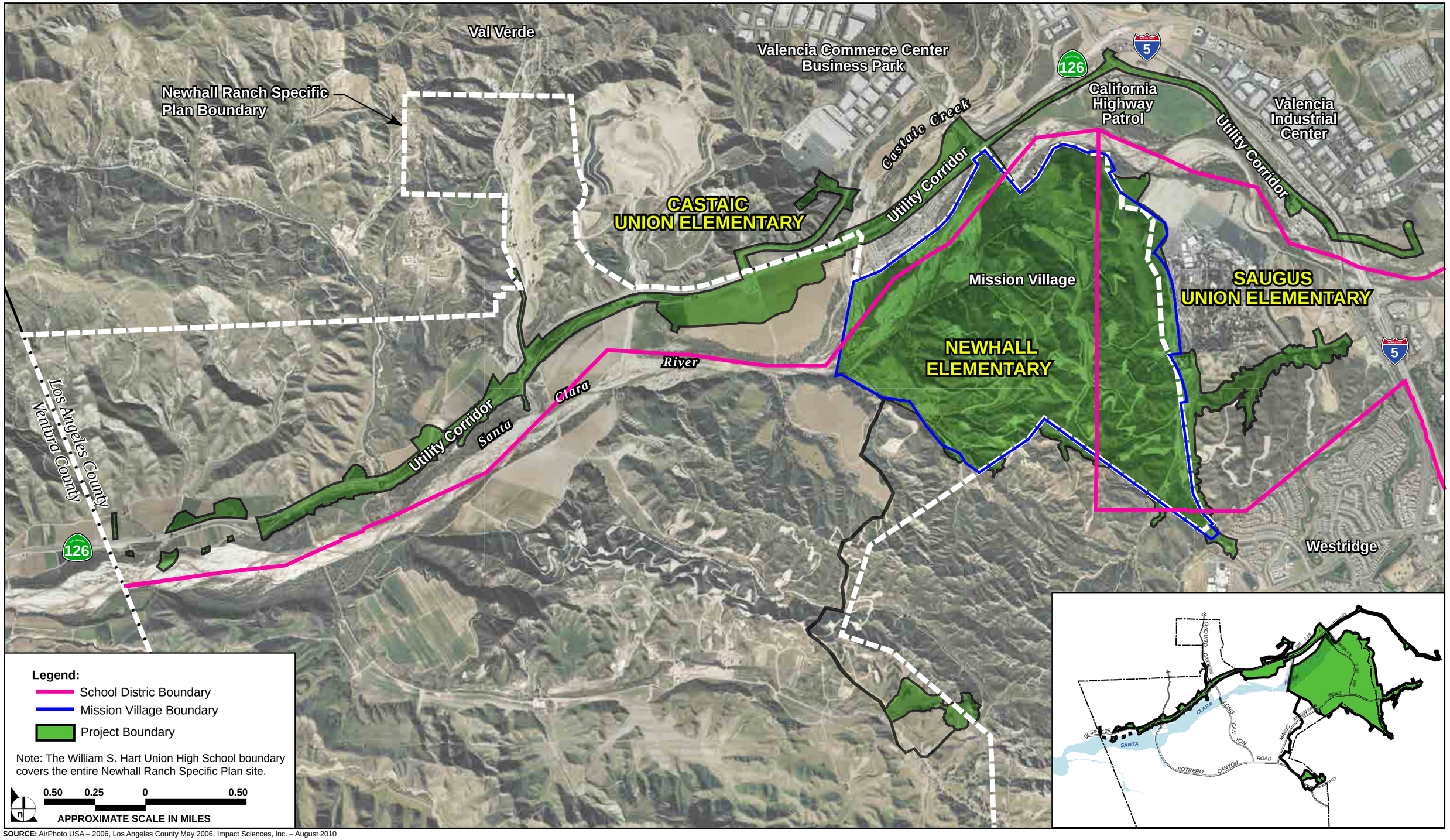
Table 4.13-1
Existing Design Capacities and Enrollments for the Newhall District

School	Grade Levels	Current Enrollment	Design Capacity
McGrath Elementary	K–6	677	720
Meadows Elementary	K–6	625	624
Newhall Elementary	K–6	682	792
Old Orchard Elementary	K–6	550	576
Peachland Elementary	K–6	535	672
Pico Canyon Elementary	K–6	1,001	912
Oak Hills Elementary	K–6	566	984
Stevenson Ranch Elementary	K–6	1,003	960
Valencia Valley Elementary	K–6	660	744
Wiley Canyon Elementary	K–6	775	864
		~~6,574~~7,074	7,848

Source: Enrollment data as of January 2010 and design capacity provided by Mike Clear, Asst. Superintendent to Business Services, 02/22/2010.

b. Saugus Union Elementary School District

Like other school districts, the Saugus Union Elementary School District has been divided into specific attendance areas. These areas define the geographic attendance limits of each individual school and are adjusted every few years in response to changes in student generation, ethnic balance and other factors. Given the current attendance areas, the project site is located within the service areas of the following Saugus School District public schools as described in **Table 4.13-2, Existing Design Capacity and Enrollments for the Saugus Union Elementary School District.**



SOURCE: AirPhoto USA – 2006, Los Angeles County May 2006, Impact Sciences, Inc. – August 2010

FIGURE **4.13-1**

School District Boundaries

32-99•08/10

Table 4.13-2
Existing Design Capacity and Enrollments for the Saugus Union Elementary School District

School	Grade Level	Current Enrollment	Design Capacity
Bridgeport Elementary	K–6	953	950
Cedarcreek Elementary	K–6	600	800
Charles Helmers Elementary	K–6	912	1,035
Highlands Elementary	K–6	638	800
James Foster Elementary	K–6	585	725
Mountainview Elementary	K–6	1,002	1,025
North Park Elementary	K–6	924	930
Plum Canyon Elementary	K–6	711	825
Rio Vista Elementary	K–6	942	1,100
Rosedell Elementary	K–6	678	850
Santa Clarita Elementary	K–6	547	835
Skyblue Mesa Elementary	K–6	480	875
Tesoro Del Valle Elementary	K–6	582	675
West Creek Elementary*	K–6	N/A	775
Total		**9,554**	**12,200**
Schools Closed for the 2010-2011 School Year			
Bouquet Canyon Elementary	K–6	556	625
Emblem Elementary**	K–6	300	950
		856	**1,575**

N/A = not available
* *West Creek Elementary is a new school expected to be opened in fall 2010.*
** *Emblem Elementary School is closed temporarily (school year 2010-2011). This is due to addition of a new classroom building.*
Upon closure of Bouquet Canyon Elementary, students living in the Bouquet Canyon Elementary School neighborhood are assigned to Rosedell Elementary. Students in the Haskell Canyon area are assigned to Foster Elementary. Bouquet students assigned to Foster may transfer to Rosedell to complete their elementary careers. Bouquet students have priority at West Creek during the Open Enrollment period.
Source: Design capacity and 2008-2009 student enrollment information was obtained via electronic communication between Harold Pierre, Director of Facilities Services, and Chris Hampson, Staff Planner Impact Sciences, Inc. on 02/24/10.

As indicated on **Table 4.13-2**, there are 16 elementary schools within the Saugus District. Bridgeport Elementary is the only school operating above its design capacity. Total student capacity within the District is 13,000; this capacity is provided via permanent and temporary (relocatable) classrooms. Total student enrollment in the Saugus District for the 2008–2009 school year was 10,410,[3] which is 80 percent of capacity for the District. The Bouquet Canyon Elementary and Emblem Elementary will be closed at the end of the 2009–2010 school year. West Creek Elementary is scheduled to open in the fall of 2010.

3 Electronic Communication between Harold Pierre, Director of Facilities Services, Saugus Union Elementary School District, and Impact Sciences, Inc., on February 24, 2010.

c. William S. Hart Union High School District (Hart District)

The current enrollment and design capacities for the Hart District high schools are listed in **Table 4.13-3, Existing Design Capacity and Enrollments for the Hart District High Schools**.

Table 4.13-3
Existing Design Capacity and Enrollments for the Hart District High Schools

School	Grade Level	Current Enrollment	Design Capacity
Canyon High	9–12	2,614	2,600
William S. Hart High	9–12	2,222	2,600
Saugus High	9–12	2,560	2,750
Valencia High	9–12	3,462	2,949
Golden Valley High	9–12	2,549	2,385
West Ranch High	9–12	2,724	2,385
	High School Total	16,131	15,669
Arroyo Seco Junior High	7–8	1,300	1,240
La Mesa Junior High	7–8	1,300	1,220
Placerita Junior High	7–8	1,116	1,210
Rio Norte Junior High	7–8	1,192	1,300
Sierra Vista Junior High	7–8	1,248	1,280
Rancho Pico Junior High	7–8	982	1,125
	Junior High Total	7,138	7,375
	District Total	**23,269**	**23,044**

Source: Enrollment and design capacity data provided by Lorna Baril, Senior Administrative Assistant, William S. Hart Union High School District, correspondence to Impact Sciences, Inc., May 7, 2010. Enrollment numbers are current as of March 2010.

As indicated above, there are a total of 11 high schools and six junior high schools within the Hart District. Overall, total student capacity within the Hart District inclusive of junior high and high schools is 23,044. Current total enrollment in the Hart District schools is 23,269 students. The District is operating at a capacity of 101 percent. Specific to the high schools, total high school capacity within the Hart District schools is 15,669.[4] Total student enrollment in the Hart District high schools in March 2010 was 16,131. Overall enrollment in District high schools is greater than total design capacity; however, William S. Hart High and Saugus High are currently operating below individual design capacity, as is Rancho Pico Jr. High. In order to accommodate existing and future students, the Hart District plans to open Castaic High School in fall 2013 or 2014. The design capacity of Castaic High School will be similar to other District high schools.[5]

4 Lorna Baril, William S. Hart Union High School District, electronic correspondence to Impact Sciences, Inc., May 7, 2010.

5 Ibid.

d. School Funding

(1) School Facilities Agreement Between the Newhall School District and Newhall

On December 1, 2009, the Newhall School District entered into a school facilities mitigation and funding agreement with Newhall Land and Farming (Newhall Land) to ensure that development within Newhall Land properties, including Mission Village, either individually or cumulatively with other projects within the District's boundaries, would have no adverse impacts on the District's ability to provide adequate educational opportunities to every student in the District. The agreement establishes the mechanism by which Newhall Land will mitigate the impacts arising from its development projects in order to ensure that school facilities are available for project students. Under the agreement, in lieu of the payment of statutory school fees, Newhall's mitigation obligations will be fully satisfied by providing elementary school sites and necessary funding, and, if agreed by the parties, constructing and equipping one or more of the required elementary schools. The agreement between the District and Newhall Land is referred to as the "Newhall School Facilities Funding Agreement," and is provided in this EIR (**Appendix 4.13**).

(2) School Facilities Agreement Between the Saugus Union School District and Newhall

On February 18, 1997, the Saugus District entered into a school facilities/funding agreement with Newhall Land to ensure that development within the Newhall Ranch Specific Plan, either individually or cumulatively with other projects within District's boundaries, would have no adverse impacts on the District's ability to provide adequate educational opportunities to every student in the District. Under the agreement, Newhall Land will provide the District with school sites and funding towards the design and construction of new elementary schools. In particular, the Financing Schedule and Financing Plan contained in the agreement guarantees to the Saugus District that there will be adequate school facilities available to accommodate every student within the Specific Plan area. The agreement states that the funds and land to be provided to the Saugus District by Newhall constitute the entire extent of Newhall's obligation to provide school facilities for the Specific Plan, inclusive of Mission Village. This agreement is referred to as the "Saugus Union School Facilities Funding Agreement," and is provided in this EIR (**Appendix 4.13**).

(3) School Facilities Funding Agreement Between the William S. Hart Union High School District and Newhall

On October 15, 1998, the Hart District entered into a school facilities funding agreement with Newhall Land, which sets forth Newhall's obligations to mitigate the impacts of the development of Newhall lands, including Mission Village, as to Hart, and the respective obligations of Hart relating to the

provision of school facilities for Newhall students. Under the agreement, Newhall will pay fair-share school impact mitigation payments to the Hart District, and Hart will build as many additional junior and senior high schools as are necessary to house Newhall students. This agreement is referred to as the "Hart School Facilities Funding Agreement," and is provided in this EIR (**Appendix 4.13**).

Compliance with the Hart School Facilities Funding Agreement constitutes the entire extent of the project applicant's obligation to provide the means necessary for the Hart District to provide the school facilities needed to house junior and senior high school students generated by Newhall's projects, inclusive of the proposed Mission Village project. As a result, compliance with the agreement would satisfy all of the proposed project's obligations as to the Hart District with respect to its junior and senior high school impacts, and ensure that the proposed project would have no direct or cumulative impacts on the Hart District. The Hart School Facilities Funding Agreement is grandfathered for purposes of satisfying the provisions of SB 50, and the provisions of the agreement take precedence over any fee limitations imposed by SB 50.

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop a total of 4,412 residential dwelling units with a projected total residential population of 10,802; this total includes residents of age-restricted units and a continued-care community.[6] The proposed project also includes approximately 1,555,100 square feet of commercial/mixed use space, an approximate 9.5-acre elementary school, a 20-acre Community Park, a 5-acre Neighborhood Park, one private recreation area, open space, community and local trails, a library site, and roads supporting roadway and infrastructure improvements. Consistent with Section 2.5 (Public Services and Facilities) of the Specific Plan, the Mission Village project includes one of the elementary school sites required by the Newhall Ranch Specific Plan Program EIR and related mitigation program.

The proposed Mission Village Elementary School would be designed for a capacity of 900 students, based on a traditional, single track, nine-month schedule school program. The elementary school would be constructed in accordance with the requirements and specifications contained in the Education Code and the Applicant Handbook for State School Building Lease-Purchase Program published by the Office of Public School Construction, as those requirements and specifications exist at the time of construction. The school would be located on an approximate 9.5-acre site in the central portion of the Mission Village project site with access taken from "EE" Private Drive. This school site is adjacent to an 8.5-acre community recreation center that would be improved and available for joint use with the new elementary school at the time that it opens for operation.

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6 Based upon county of Los Angeles provided estimates of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

6. PROJECT IMPACTS

The analysis of potential impacts to education facilities associated with construction and operation of the proposed Mission Village project, including the significance criteria applicable to assessing such impacts, follows.

a. Significance Threshold Criteria

According to Appendix G of the *State CEQA Guidelines*, a project would have a significant impact on schools if the project would result in:

- substantial adverse physical impacts associated with the provision of new or physically altered school facilities; or
- the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for school facilities.

b. Impact Analysis

The number of additional students that may be generated by any given development project is determined by the number and type of residential units to be developed. The proposed Mission Village project includes 382 single-family and 4,030 multi-family residential units. As determined in the Newhall School Facilities Funding Agreement and the Saugus Union School Facilities Funding Agreement, age restricted dwelling units (which would be age 55 and over) and continued care retirement community units have been excluded from the analysis as specified in the funding agreements.

The number of students that would be generated by each new housing unit is referred to as the "student generation rate." Student generation rates are largely calculated by categorizing the existing number of students within the particular school district by the type of home in which they live (single family, multi-family, and apartment), and then dividing the total number of students in each category by the total number of homes of each type. Student generation rates per housing type for the Newhall District, Saugus District, and Hart District are provided in **Table 4.13-4, Student Generation Rates**.

Based on the number and type of housing units to be developed by the Mission Village project and the student generation rate for each type of housing unit, the Mission Village project would generate a total of 969 elementary students, ~~187~~ 267 junior high school students, and ~~321~~ 378 senior high school students (minus age restricted units) (see **Appendix 4.13** for calculations). Impacts on the Newhall District, Saugus District, and Hart District as a result of the Mission Village project are discussed below.

Table 4.13-4
Student Generation Rates

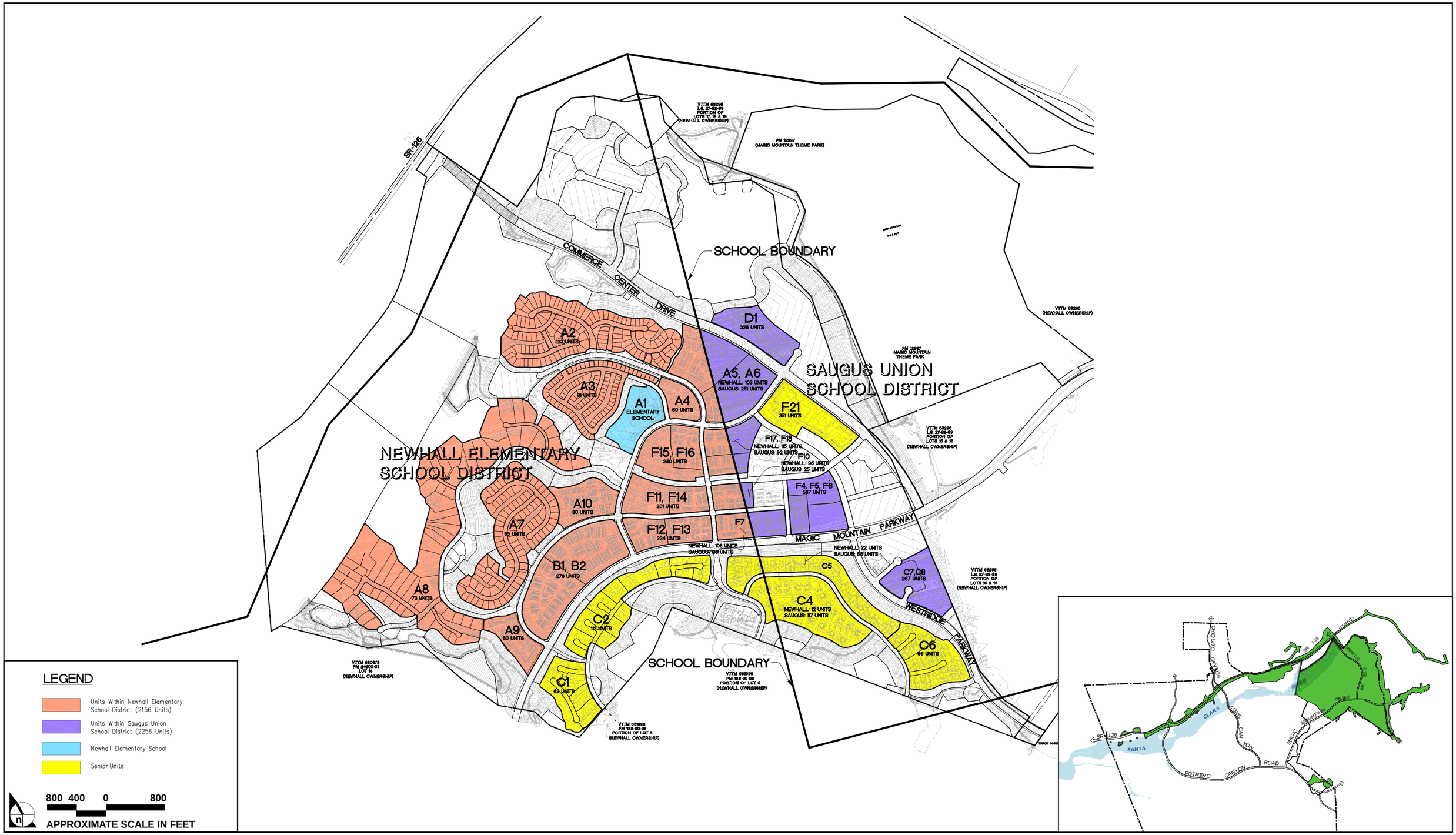
School District	Student Generation Rate		
	Single-Family	Multi-Family	Apartment
Newhall Elementary[1]	0.502	0.285	0.169
Saugus Elementary[2]	0.450	0.200	0.197
Hart Jr. High[3]	0.~~1270~~1116	0.~~0429~~0697	--
Hart Senior High[4]	0.~~2386~~2194	0.~~0714~~0915[3]	--

[1] *Mike Clear, Newhall School District, Asst. Superintendent to Business Services, telephone communication with Impact Sciences, Inc., February 22, 2010.*
[2] *Harold Pierre, Saugus Union School District, Director of Facilities, telephone communication with Impact Sciences, Inc., February 22, 2010. Multi-family rate includes multi-family attached.*
[3] *Lorna Baril, William S. Hart Union High School District, telephone correspondence to Impact Sciences, Inc., November 16, 2009.*
[4] *For a conservative analysis, student generation for Hart Senior High has been calculated on the following basis: 382 single-family units at 0.~~2386~~2194 single family detached generation rate, and ~~4,030~~3,220 multi-family and apartment units at the 0.~~0875~~0915 single-family attached generation rate.*

(1) Project Impacts to Newhall and Saugus School Districts

In accordance with the provisions of the Newhall School Facilities Funding Agreement and the Saugus School Facilities Funding Agreement, the approximately 969 elementary students (638 students for Newhall District and 331 students for Saugus District) generated by the Mission Village project would likely attend Oak Hills Elementary School, Bridgeport Elementary, and West Creek Elementary (according to paragraph 1 of the Saugus Newhall Agreement) until the number of elementary students generated within the Mission Village Planning Area reaches 300 students. Under the agreements, at the time 300 students are generated, the proposed Mission Village Elementary School would open and accommodate K–6 students. The Mission Village project site currently is bisected by Newhall District and Saugus District boundaries, shown in **Figure 4.13-2, Planning Area School Boundary**.

Children of elementary school age will attend schools within the school district in which they reside. Initially, children will attend existing schools within their respective Districts. Children within Newhall District initially will attend the Oak Hills School in Westridge located to the south of the project. In accordance with the Agreements, certain student generation numbers would trigger the requirement that the project applicant provide ready-to-build school sites. In the case of Newhall District, as noted above, the proposed project includes a 9.5-acre site for a school on the Mission Village site in Planning Area A. **Figure 4.13-3, Conceptual Site Plan – Newhall School District Elementary School,** depicts the conceptual plan for the school.

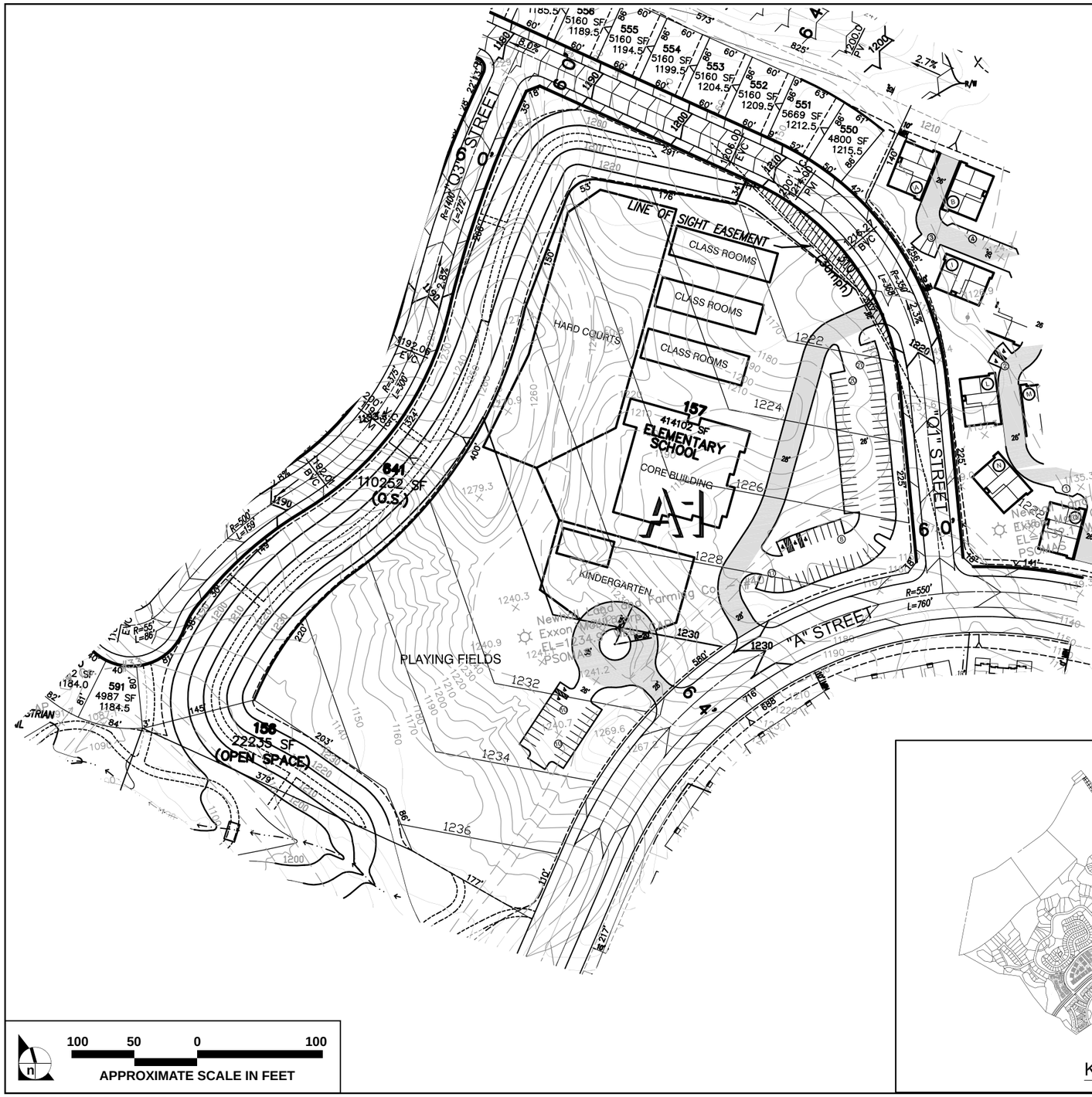


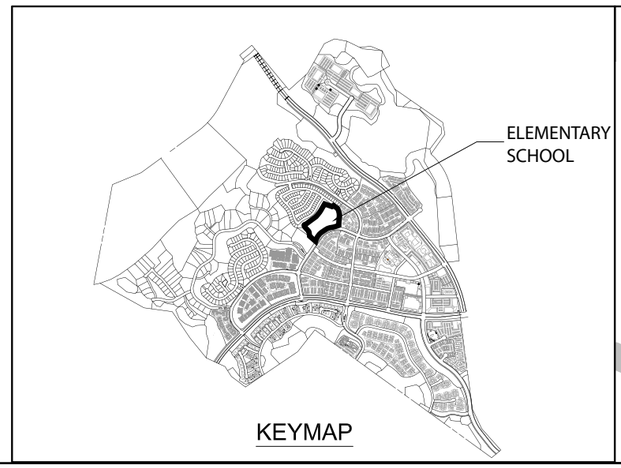
SOURCE: PSOMAS - February 2010

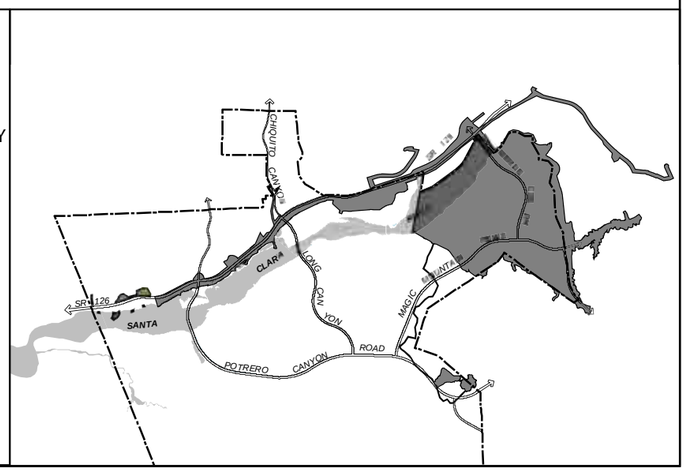
FIGURE **4.13-2**

Planning Area School Boundary

32-99•04/10







SOURCE: PSOMAS – February 2010

FIGURE **4.13-3**

Conceptual Site Plan - Newhall School District Elementary School

32-99•05/10

The Saugus District will determine which of the existing schools within its district the children from Mission Village will attend. A Saugus District school is proposed on a planned 7.0 acre site in the adjacent Entrada Community (VTTM 53295). (See **Figure 4.13-4, Conceptual Site Plan – Saugus Union School District Elementary School**.)

Oak Hills Elementary School is located at 26730 Old Rock Road in Valencia, approximately 2.1 miles south-southeast of the project site. Because this school is located over 2 miles from the Mission Village project site, students would require busing. Oak Hills Elementary School has a permanent capacity of 984 students. Student enrollment for calendar year 2009–2010 is 566; therefore, this school is currently operating within design capacity.

Bridgeport Elementary School is located at 23670 Newhall Ranch Road, Santa Clarita, approximately 2.8 miles east of the eastern project boundary. Because this school is located over 2 miles from the Mission Village project site, students would require busing. Bridgeport Elementary School has a permanent capacity of 950 students. Student enrollment for calendar year 2008-2009 was 953; therefore, this school is currently operating over capacity by three students. West Creek Elementary is located at 28767 West Hills Drive, Valencia, approximately 3.0 miles north-northeast of the eastern project boundary. Because this school is located over 2 miles from the Mission Village project site, students would require busing. West Creek Elementary School will open fall 2010 with a permanent capacity of 775 students. Due to budget cuts for the Newhall District, classroom sizes would increase to a 30:1 (student:teacher) ratio.[7]Given the distance of Oak Hills Elementary School, Bridgeport Elementary School, and West Creek Elementary School from the Mission Village site, and the facilities' agreement requirement that Mission Village Elementary School open when a total of 300 Mission Village elementary school students are generated, impacts to the Newhall District's and Saugus District's elementary schools would be less than significant.

(2) Project Impacts to the William S. Hart Union School District

The proposed Mission Village project would generate approximately ~~187~~ 267 students in grades 7–8. The Hart District would serve these students. Depending upon the year in which the junior high/middle school students are generated from the Mission Village project, the junior high/middle school students would attend Rancho Pico Junior High School. Rancho Pico Junior High School is located at 26250 Valencia Boulevard in Stevenson Ranch, approximately 5.5 miles southeast of the project site. Because this school is located over 2 miles from the Mission Village site, students would require busing. Rancho Pico Junior High has a permanent capacity of 1,125 students. Student enrollment for calendar year 2009-2010 is 982; therefore, this school is currently operating within capacity. Rio Norte Junior High has a

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7 Newhall School District, "Further Budget Reduction Considerations After Initial Recommended Cuts and Shifts on February 16, 2010," http://www.newhallschooldistrict.net/index.php?option=com_content&task=view&id=113&Itemid=1. Accessed on March 12, 2010.

permanent capacity of 1,300 students. Student enrollment for calendar year 2009–2010 is 1,192; therefore, this school is currently operating within capacity. Placerita Junior High has a permanent capacity of 1,210 students. Student enrollment for calendar year 2009-2010 is 1,116~~1,192~~; therefore, this school is currently operating within capacity.

The enrollment of an additional ~~187~~ 267 junior high students generated by the proposed project would result in an exceedance of the design capacity of Rancho Pico Junior High School. In order to accommodate existing and future students, the remaining junior high students not attending Rancho Pico Junior High would initially attend Rio Norte Junior High and Placerita Junior High, each of which has additional capacity. Therefore, impacts on the Hart District junior high schools would be less than significant.

The proposed Mission Village project would generate approximately ~~321~~ 378 senior high school students. The Hart District would serve these students. Depending upon the year in which high school students are generated from the Mission Village project, the high school students would initially attend West Ranch High School (on the Rancho Pico Junior High School campus, which is currently operating within capacity).

Currently, grades 9–12 in the Mission Village project area are served by West Ranch High School (which is eight students in excess of capacity). West Ranch High School is located at 26255 W. Valencia Boulevard in Stevenson Ranch, approximately 5.5 miles south of the project site. Because this school is located more than 2 miles from the project site, busing may be necessary for these students. West Ranch High School has a permanent design capacity of 2,600 students. The Hart District is in the process of locating a site for a high school in the Castaic area, and the proposed Mission Village project would eventually (after 2012) be served by that high school. In order to accommodate existing and future students, the Hart District plans to open Castaic High School, which is scheduled to open in fall 2013 to start accepting ninth grade students.[8] The design capacity of Castaic High School will be similar to other District high schools. General redrawing of school district boundaries would occur once Castaic High School is open for enrollment.[9]

Under the Hart School Facilities Funding Agreement, Newhall would provide up to three additional junior high schools and two high schools to the Hart District that would ensure adequate school capacity to serve the Mission Village project and other Newhall projects. As a result, no significant project impacts on the Hart District's school facilities would occur.

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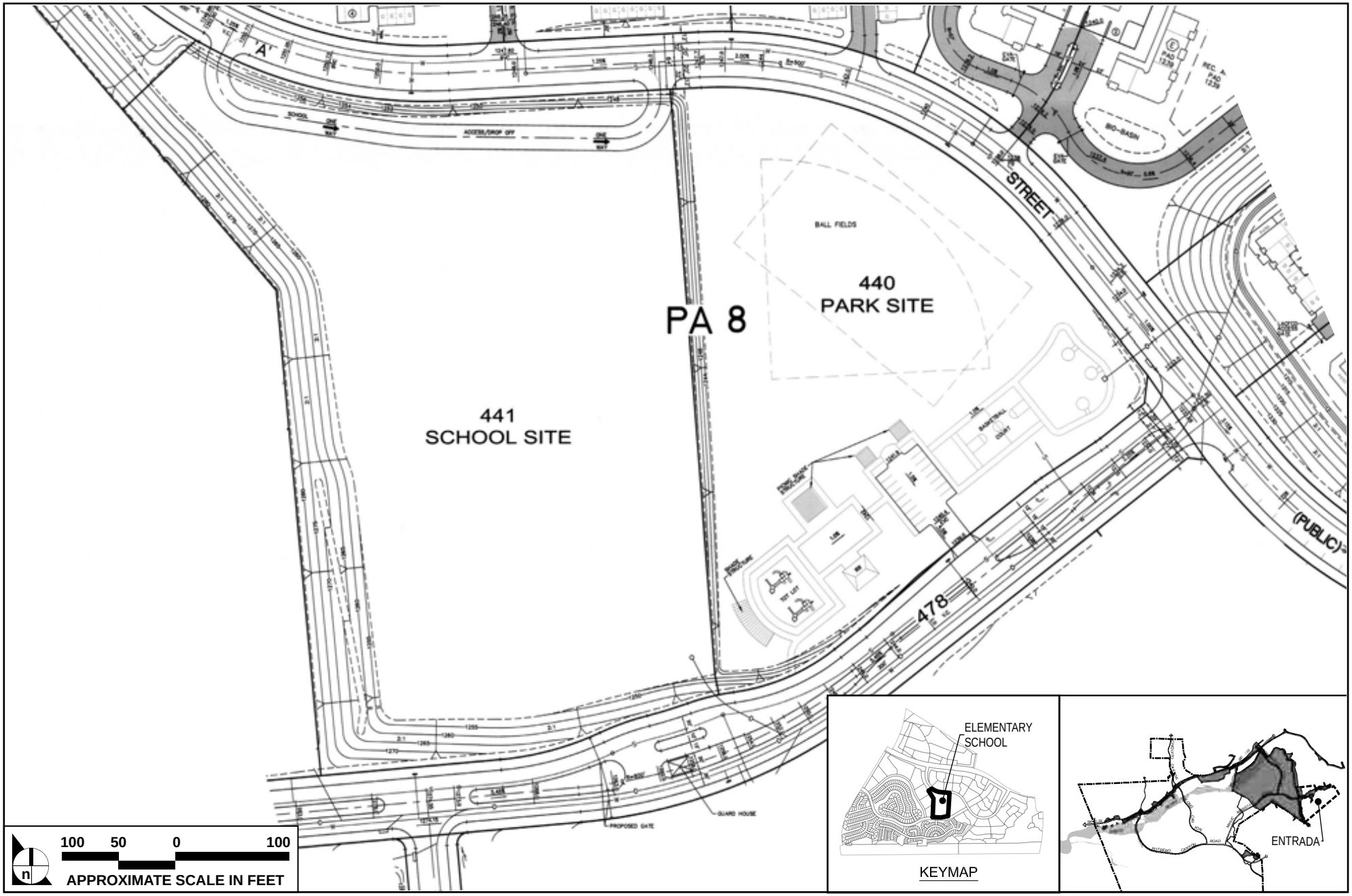
8 Pat Willet, William S. Hart Union High School District, Community Liaison Officer, telephone communication with Impact Sciences, Inc., February 22, 2010.

9 Ibid.



SOURCE: Alliance Engineering – February 2010

FIGURE **4.13-4**

Conceptual Site Plan - Saugus Union School District Elementary School

32-99A•03/10

(3) Construction-Related Impacts

Any potential adverse physical effects on the environment associated with construction of the Mission Village Elementary School are analyzed in **Section 4.0, Environmental Impact Analysis**, of this EIR.

7. MITIGATION MEASURES

Although the proposed Mission Village project may result in potential impacts relative to education absent mitigation, the County previously adopted mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to education, are found in the certified Newhall Ranch Specific Plan Program EIR (March 8, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan to ensure development of the project site would not result in significant impacts relative to education.

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

The following mitigation measures (Mitigation Measure Nos. 4.16-1 through 4.16-5) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented to mitigate the potentially significant impacts to education facilities associated with the proposed Mission Village project. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.16-1 The Specific Plan developer shall reserve five elementary schools sites, one junior high school site and one high school site, of 7 to 10, 20 to 25, and 40 to 45 acres in size, respectively, depending upon adjacency to local public parks and joint use agreements. *(The Mission Village project includes the reservation of a 9.5-acre elementary school site.)*

SP 4.16-2 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Newhall School District. *(This measure is applicable to the Mission Village project.)*

SP 4.16-3 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the William S. Hart Union High School District. *(This measure is applicable to the Mission Village project.)*

SP 4.16-4 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land & Farming Company and the Castaic Union School District (*Only the Newhall,*

Saugus and Hart School Districts are impacted by the Mission Village project. Therefore this mitigation measure is not applicable to the Mission Village project.)

SP 4.16-5 In the event that school district boundaries on the Specific Plan site remain unchanged, prior to recordation of all subdivision maps which allow construction, the developer of future subdivisions which allow construction is to pay to the Castaic Union School District the statutory school fee for commercial/industrial square footage pursuant to Government Code Sections 65995 and 65996, unless a separate agreement to the contrary is reached with the district (*Only the Newhall, Saugus and Hart School Districts are impacted by the Mission Village project. Therefore this mitigation measure is not applicable to the Mission Village project*).

b. Additional Mitigation Measures Proposed by this EIR

Implementation of the above Specific Plan mitigation measures as part of the proposed Mission Village project, in combination with the following additional mitigation measure, would mitigate all impacts to school facilities to below a level of significance. The measure is preceded by "MV," which stands for Mission Village.

MV 4.13-1 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Saugus Union School District.

8. CUMULATIVE IMPACTS

As required by CEQA, the cumulative impact on schools caused by the project and other related future residential development is assessed in this section. In order to improve the accuracy of estimates of future residential development, the amount of future residential development within the Districts was analyzed under two different scenarios: (a) DMS Build-Out Scenario which includes only pending, recorded and approved residential projects involving land divisions located in the affected school districts; and (b) Santa Clarita Valley Cumulative Build-Out Scenario, a more extensive scenario that anticipates full buildout of both the project and all lands under the current land use designations indicated in the Santa Clarita Valley Area Plan and the Los Angeles County General Plan, plus all known active pending General Plan Amendment requests for additional urban development in the unincorporated area of Santa Clarita Valley and the City of Santa Clarita. Each scenario is discussed below.

a. DMS Build-Out Scenario

The DMS Build-Out Scenario assumes complete buildout of the Mission Village project and those subdivision projects listed in the County's DMS for the Newhall District, Saugus District, and the Hart District. The County's DMS data used for this analysis includes all pending, recorded and approved residential projects involving land divisions located in these three school districts. Copies of the County DMS Inventory Information reports for the three school districts are included in this EIR (**Appendix 3.0**).

A summary of projected future development within each school district under the DMS Build-Out Scenario is presented in **Table 4.13-5, Summary of Cumulative Projects by School District – DMS Build-Out Scenario (Pending, Approved, and Recorded Projects)**. As shown, the elementary schools in the Newhall and Saugus Districts serve a smaller number of cumulative residential units than the junior and senior high schools in the Hart District. This variation exists because four school districts in the Santa Clarita Valley serve grades K–6 students (Castaic, Newhall, Saugus, and Sulphur Springs), while only two districts serve grades 7–8 students (Castaic, and Hart District), and only one district serves high school students (Hart District).

Table 4.13-5
Summary of Cumulative Projects by School District – DMS Build-Out Scenario (Pending, Approved, and Recorded Projects)

School District	Residential Units		
	Single-Family	Multi-Family[1]	Total Units
Newhall Elementary			
Cumulative Projects	4,692	3,406	8,098
Proposed Project	382	1,564	1,946
Total	5,074	4,970	10,044
Number of Students Generated[3]	*2,547*	*1,416*	*3,964*
Saugus Elementary			
Cumulative Projects	10,750	5,193	15,943
Proposed Project	0	1,656	1,656
Total	10,750	6,849	17,599
Number of Students Generated[3]	*4,838*	*1,370*	*6,207*
William S. Hart Jr. High			
Cumulative Projects	18,876	10,801[2]	29,677
Proposed Project	382	3,220	3,602
Total	19,258	14,021	33,279
Number of Students Generated[3]	*~~2,446~~2,149*	*~~602~~977*	*~~3,047~~3,126*
William S. Hart Sr. High			
Cumulative Projects	23,726	13,557[2]	37,283
Proposed Project	382	3,220	3,602
Total	24,108	16,777	40,885
Number of Students Generated[3]	*~~5,752~~5,289*	*~~1,198~~1,535*	*~~6,950~~6,824*

Source: Los Angeles County Department of Regional Planning, Service Provider Report (April 23, 2003).
Note: Proposed numbers do not add up to the total number of dwelling units on the project site (4,412) because age-restricted units were not included in the school generation impacts
[1] *Includes apartments.*
[2] *Includes 273 mobile home units.*
[3] *Student Generation Rates are included in* ***Appendix 4.13****.*

Under the DMS Build-Out Scenario (including the proposed project), there would be an additional 10,171 elementary school students, ~~3,047~~3,126 junior high school students and ~~6,950~~6,824 senior high school students that would need to be served by the Newhall District, Saugus District, and Hart District (student generation calculations are provided in **Appendix 4.13**). Based on an elementary school classroom size of 20 and a junior and senior high school classroom size of 32, these students would require a total of 509 additional elementary school classrooms, ~~95~~ 98 additional junior high school classrooms, and ~~217~~ 213 additional senior high school classrooms.

Although the Newhall School District total current enrollment is below design capacity, given that some of the existing schools in the district are already operating above design capacity, and the new elementary school would not have enough capacity to serve an additional 10,171 elementary students, the impacts of cumulative development to the Newhall and Saugus Districts under this scenario would be significant if no additional school facilities were built to accommodate the future development.

The Hart District will construct two new high schools with a combined capacity of 5,200 students. These schools are being funded primarily through SB 50 and Hardship funds under SB 50. Although the District total current enrollment is above design capacity, given that existing schools in the district are already operating above design capacity, and that the new Castaic High school would not have enough capacity to serve the projected additional junior and high school students, the impacts of cumulative development to the Hart District under this scenario would be significant if no additional school facilities were built to accommodate the future development.

b. Santa Clarita Valley Cumulative Build-Out Scenario

The Santa Clarita Valley Cumulative Build-Out Scenario entails full buildout of both the project and all lands under the current land use designations indicated in the Santa Clarita Valley Area Plan and the Los Angeles County General Plan, plus all known active pending General Plan Amendment requests for additional urban development in the unincorporated area of Santa Clarita Valley and the City of Santa Clarita. A list of the future development activity (with and without the project) expected in the region under the Santa Clarita Valley Cumulative Build-Out Scenario is presented below in **Table 4.13-6**, **Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario.**

Table 4.13-6
Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario

Land Use Types	Cumulative Buildout w/o Project[1]	Project	Cumulative Buildout w/ Mission Village[1]
Single-Family	93,412 du	382 du	93,794 du
Multi-Family	47,621 du	4,030 du	51,651 du
Mobile Home	2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	1,555,100 sq. ft.	20,421,130 sq. ft.
Hotel	2,071 room		2,071 room
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	1,~~156~~ 236students	279,~~746~~ 826 students
High School	12,843 students	~~321~~ 378 students	13,~~164~~ 221 students
College	29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.		171,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.
Manufacture/Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.		6,380,520 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.
Golf Course	1,209.0 ac		1,209.0 ac
Developed Parkland	477.3 ac	25 ac	502.3 ac
Undeveloped Parkland	1,000.0 ac		1,000.0 ac
Special Generator[2]	413.0 sg		413.0 sg

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

[1] *Santa Clarita Valley Consolidated Traffic Model, (November 2002). Includes existing development, buildout under the existing City of Santa Clarita General Plan, Santa Clarita Valley Area Plan, and active pending General Plan Amendment requests.*

[2] *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, California Highway Patrol (CHP) Office, and Aqua Dulce Airport.*

The focus of this cumulative impact analysis is on determining whether the cumulative increase in the residential population from Valley buildout, in combination with the project, would adversely impact the affected school districts that serve the residents of the Santa Clarita Valley (i.e., Castaic, Newhall, Saugus, Sulphur Springs, and Hart District). Therefore, the number of students generated by the Santa Clarita Valley Cumulative Buildout Scenario are analyzed below, in **Table 4.13-7**, **Student Generation as a Result of Cumulative Projects.**

Table 4.13-7
Student Generation as a Result of Cumulative Projects

School Districts	Single-Family			Multi-Family			Mobile Homes			Total Students	Number of Classrooms
	Units	Per Unit Rate	Students Generated	Units	Per Unit Rate	Students Generated	Units	Per Unit Rate	Students Generated		
ELEMENTARY											
Newhall (K–6)	13,771	0.502	**6,913**	10,163	0.285[1]	**2,896**	1,497	0.227[1]	**340**	10,149	507
Saugus (K–6)	23,241	0.450	**10,458**	6,963	0.200	**1,393**	50	0.198[2]	**10**	11,861	593
Castaic (K–5)	31,744	0.357	**11,333**	22,349	0.205	**4,582**	25	0.188[3]	**5**	15,919	796
Sulphur Springs (K–6)	21,666	0.336	**7,280**	9,283	0.336	**3,119**	1,219	0.336	**410**	10,808	540
Elementary Totals	90~~.~~,422		**35,984**	48,758		**11,990**	2,791		**765**	**48,738**	**2,437**
JR. HIGH SCHOOL											
Hart Jr. (7–8)	54,065	0.~~1270~~1116	**6,~~866~~034**	23,697	0.04~~29~~697	**1,~~017~~652**	2,123	0.08~~50~~907[4]	**18~~0~~93**	~~8,063~~7,878	25~~2~~46
Castaic (6–8)	22,381	0.164	**3,670**	16,001	0.0740	**1,184**	25	0.0825[5]	**2**	4,857	152
Jr. High Totals	76,466		**~~10,537~~9,704**	39,698		**~~2,201~~836**	2,148		**~~182~~95**	**~~12,920~~735**	**~~404~~398**
SR. HIGH SCHOOL											
Hart Sr. (9–12)	83,212	0.~~2386~~2194	**~~19,854~~18,257**	45,163	0.0714915	**~~3,225~~4,132**	2,123	0.~~0796~~1555[6]	**~~169~~330**	~~23,248~~22,719	~~726~~710
Sr. High Totals	83,212		**~~19,854~~18,257**	45,163		**~~3,225~~4,132**	2,123		**~~169~~330**	**~~23,248~~22,719**	**~~726~~710**
Total[7]			**~~66,375~~63,945**			**~~17,415~~18,958**			**1,~~115~~289**	**84,~~905~~191**	**3,56~~7~~45**

[1] *Mobile home student generation rate is the midpoint between the multi-family rate of 0.285 and the apartment rate of 0.169 for Newhall Elementary Schools.*
[2] *Mobile home student generation rate is the midpoint between the multi-family rate of 0.200 and the apartment rate of 0.197 for Saugus Elementary Schools.*
[3] *Mobile home student generation rate is the midpoint between the multi-family rate of 0.205 and the apartment rate of 0.170 for Castaic Union Elementary Schools.*
[4] *Mobile home student generation rate is the midpoint between the single-family rate of 0.~~1270~~116 and the multi-family rate of 0.0~~429~~697 for Hart Junior High School.*
[5] *Mobile home student generation rate is the midpoint between the multi-family rate of 0.0740 and the apartment rate of 0.0910 for Castaic Union Middle Schools.*
[6] *Mobile home student generation rate is the midpoint between the single-family attached rate of 0.~~0875~~2194 and the multi-family rate of 0.0~~714~~915 for Hart Senior High School.*

School Districts	Single-Family			Multi-Family			Mobile Homes			Total Students	Number of Classrooms
	Units	Per Unit Rate	Students Generated	Units	Per Unit Rate	Students Generated	Units	Per Unit Rate	Students Generated		

[7] *Assumes 20 students per classroom for the Newhall, Saugus Union, Castaic Union and Sulphur Springs Union School Districts (all elementary schools as well as Castaic Jr. High (6-8)) and 32 students per classroom for the William S. Hart Union High School District (Hart Jr. and Sr. High).*

[8] *Due to overlap of district boundaries, residential unit categories cannot be totaled.*

As shown in **Table 4.13-7**, cumulative development under the Santa Clarita Valley Cumulative Build-Out Scenario would generate 48,738 elementary school students, ~~12,920~~12,735 junior high school students, and ~~23,248~~22,719 senior high school students that would need to be accommodated by all of the school districts in the Santa Clarita Valley. Capacity for these students has yet to be planned in the school districts that serve the Santa Clarita Valley and, unless they can be accommodated, this scenario would result in a significant impact.

Thus, there would be a cumulative impact under both the DMS Build-Out Scenario and the Santa Clarita Valley Cumulative Build-Out Scenario if the projects projected for future development do not contribute their fair share to mitigate school facility impacts. However, due to the Specific Plan mitigation measures discussed above, which include school facilities/funding agreements in place with the respective school districts, the Mission Village project would not contribute to the identified cumulative impacts on school facilities in the Santa Clarita Valley; and therefore, would not result in a cumulatively considerable impact. Additionally, because such funding mechanisms will be implemented for each new residential development in the Santa Clarita Valley impacts on schools caused by other future residential development also would be mitigated to less than significant levels.

9. CUMULATIVE MITIGATION MEASURES

Because the proposed project would not result in significant cumulative impacts, no further mitigation is required.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Specific Impacts

By complying with the provisions of the School Facilities Funding Agreements between Newhall and the Newhall, Saugus, and Hart Districts, and the above mitigation measures, project impacts on school facilities would be reduced to below a level of significance. Therefore, no significant unavoidable project impacts would occur.

b. Cumulative Impacts

By complying with existing school facilities/funding agreements and/or other mechanisms (e.g., SB 50, the Valley-Wide Joint Fee Resolution, or new school facilities/funding agreements), cumulative development within the Santa Clarita Valley would reduce identified cumulative impacts on school facilities to below a level of significance. In addition, the Mission Village project impacts on school facilities in the valley, have been fully mitigated. Therefore, there are no significant unavoidable cumulative impacts on school facilities resulting from implementation of the proposed project.

4.14 PARKS AND RECREATION

1. SUMMARY

The proposed Mission Village project includes a 20-net acre public Community Park, which is consistent with the Specific Plan's Land Use Overlay Community Park designation for the area and would be located along the eastern side of the proposed Commerce Center Drive near the eastern site boundary. It should be noted that the park locations in the Newhall Ranch Specific Plan are overlay designations. The overlay designation allows park location flexibility to situate parks in the best locations to serve future residents as the property develops over time. The proposed project also includes a 5-acre public neighborhood park, 6.9-acre private Community Recreation Center, 4.6 acres of private recreation area, and 2.9-acre private park. The proposed project further provides a hierarchy of community, local and pathway trails, as identified in the Specific Plan, connecting to the Specific Plan's Regional River Trail, which traverses the Santa Clara River. These trails include 18,980 linear feet of community trails, 12,900 linear feet of local trails, and 9,200 linear feet of pathways (7.5 miles of trails). In addition, the project includes 217 acres of River Corridor dedication. The Specific Plan allows a 10 percent (21.7 acres) park land credit for River Corridor dedication. In sum, the proposed project includes a total of 70~~.4~~ acres of park and recreational space.

Implementation of these project components would result in a parkland provision equivalent to approximately10.2 ~~9.4~~ acres per 1,000 persons, which is greater than the Los Angeles County (County) and Quimby Act requirements of 3.0 acres per 1,000 persons. The basic Quimby Act park land obligation for the proposed project is 29.7 net acres of park land; pursuant to the Newhall Ranch Specific Plan, ~~the 71.86 acres~~ any acreage by which the proposed project exceeds its Quimby obligation will be credited against other subdivisions within the Specific Plan area. Measured against the identified significance thresholds, the proposed Mission Village project meets County parkland requirements, exceeds Quimby Act parkland standards, and would not result in significant impacts to local parks and recreation facilities by causing substantial physical deterioration to existing recreational facilities. Additionally, the proposed project does not include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

Implementation of cumulative projects would incrementally increase demand for local park facilities. However, the proposed project would meet County parkland requirements and exceed the Quimby Act parkland standards. Further, future development projects would be subject to the Quimby Act and County requirements, which would mitigate the demand associated with each future project. As a result, no significant cumulative impacts on County parks and recreation facilities would occur with implementation of the proposed project.

This state park includes the 168-acre Ed Davis/Towsley Canyon Park at 24255 The Old Road in Newhall, the 3-mile Pico Canyon Trail, the 2.4-mile Rice Canyon Trail, and the 3.8-mile East Canyon Trail. The facilities at Towsley Canyon Park include trails for hiking, mountain biking, and equestrian uses; picnic areas; the Sonia Thompson Nature Center; the Towsley Canyon Lodge available for daily or overnight use; and restroom facilities.

(4) Placerita Canyon ~~Park~~Natural Area

Placerita Canyon ~~Park~~ Natural Area is located east of the Antelope Valley Freeway and is accessible from Placerita Canyon Road. It is a state park managed and operated by the Los Angeles County Department of Parks and Recreation, and it contains a nature center, picnic areas, overnight and day camping facilities, a children's play area, hiking trails, and an equestrian campground.

d. Federal Parks in the Project Area

Federal parks in the vicinity of the project site are described below. Please see **Figure 1.0-2**, **Project Vicinity Map,** for the location of those federal parks in closest proximity to the proposed Mission Village project.

(1) Santa Monica Mountains National Recreation Area

The Santa Monica Mountains National Recreation Area (SMMNRA) is located approximately 12 miles southwest of the project site, encompassing approximately 344 square miles, and is approximately 46 miles in an east-west length and 8 to 10 miles in north-south length. The SMMNRA is under the jurisdiction of the National Park Service (NPS), U.S. Department of the Interior. Within the SMMNRA, the NPS owns a total of 8,400 acres in fee and an additional 17 acres in easements.

(2) Angeles National Forest

The Angeles National Forest covers 693,000 acres of land area in the San Gabriel Mountains, which constitutes approximately one-quarter of the land located within Los Angeles County. The U.S. Forest Service administers the National Forest, which is an agency of the U.S. Department of Agriculture. The Angeles National Forest is supervised in districts. The project site is located near two districts: the Saugus District located approximately 8 miles to the north and the Tujunga District located 10 miles to the east.

The Angeles National Forest offers a wide range of camping (with fees) and picnicking facilities. In addition, there are hundreds of miles of trails in the forest, some of which are located near the project site area (see discussion on trails below). There are four reservoirs in the Angeles National Forest, including Castaic and Pyramid Lakes (5 miles northeast and 18 miles north of the site, respectively), which provide

(7) Trails and Paseos

The approved Specific Plan's Master Trails Plan (Specific Plan, Exhibit 2.4-5) provided broad, general trail alignments and classifications to ensure that Mission Village would be linked to the greater Newhall Ranch via the Regional River Trail and the Community Trail network. See, **Figure 1.0-19, Mission Village Portion of the Newhall Ranch Specific Plan Master Trails Plan**, in **Section 1.0, Project Description**.

Figure 1.0-20, **Mission Village Trails Plan**, in **Section 1.0, Project Description**, depicts the trails that fulfill the intent of the Specific Plan's Master Trails Plan. It provides a tract map level of detail necessary to ensure that each residential neighborhood and community service area is linked to one or more pedestrian, bicycle or paseos, with locations for river trail access points and observation/interpretive points. The Mission Village Trails Plan implements the Specific Plan's objective of providing a hierarchy of trails with varying sizes and functionality. These trails are described below.

(a) Community Trails

As shown on **Figure 1.0-20**, the Mission Village project site would provide an extensive community trail system comprised of 18,980 linear feet throughout the residential portions of the project, and would be linked to the Santa Clara Regional River Trail (off site to the northwest), local trails, and paseos. As depicted in **Figure 4.14-5**, community trails are unified pedestrian and bicycle routes in landscaped parkways. They are located along major roads in order to connect the Villages of the Specific Plan and will have recognizable landscape features to identify these routes for inter-Village walking. The Mission Village community trails are proposed along Magic Mountain Parkway, Commerce Center Drive, and Westridge Parkway and will be located in open space lots (LDZ lots) 24 feet in width. LDZ (Landscape Development Zone) lots are those which accommodate trails and paseos. The total area for these lots is 9.3 acres. The Mission Village site plan proposes a 5-_to-8-foot-wide local trail as opposed to the 12-foot-wide trails outlined in the Specific Plan. Section 5.2.2(9) allows for adjustments to trail sections under the substantial conformance determination. An on-street bike lane will be provided, as well.

(b) Local Trails

A local trail is a joint pedestrian/bicycle route which may or may not follow a roadway. As depicted in **Figure 4.14-5**, local trails provide access to amenities, the community trail network, or serve to link Villages of the Specific Plan. Trees and other landscaping materials may line local trails to make them an identifiable route in the Village, but often they follow natural drainages within Open Areas and require little or no landscaping. The Mission Village project includes local trails comprised of 12,900 linear feet, through an open space area west of "Q2" Street and east of "C" Street with connection through the Neighborhood Park to an existing dirt road adjacent to the Santa Clara River (which will not be

The County Ordinance identifies several types of park and recreation facilities that may satisfy projected needs and that are eligible for Quimby credit. These facilities include, but are not limited to, publicly or privately owned playgrounds, riding and hiking trails, tennis, basketball or other similar game court areas, swimming pools, putting greens, athletic fields, picnic areas, and other types of natural or scenic areas as recommended by the director of parks and recreation for passive or active recreation.[19]

Credits toward meeting County Ordinance park requirements are determined by the County's Department of Parks and Recreation, and are based upon the ordinance and several criteria (e.g., access, improvements, topography, etc.). In this case, the project will provide a 20-acre Community Park, 5-acre neighborhood park, 14.4 net acres of private recreational and private park areas, and 9.3 acres of community trails.

Based on these facilities, the proposed project's expected parkland provision credit is 69.9 ~~70.55~~ acres, as shown in **Table 4.14-6, Estimated Quimby Credits**. As shown in **Table 4.14-5**, above, the basic Quimby park land obligation for the Mission Village subdivision is 29.70 net acres of creditable parkland or its equivalent. Therefore, the park requirement for the proposed project would be fulfilled through the dedication of, and in some cases, improvements to, public community parks, open space, and trails.

As described in Section 1.0, project buildout currently is estimated to occur over several years, with full buildout not expected until 2021. Since market conditions and consumer needs historically change over time, a certain amount of flexibility is necessary in the specific type of residential units that ultimately would be built in order to assure the best mix of residential housing to meet changing market demands.

Even in the unlikely scenario that the Mission Village buildout includes all single-family detached residential, the project's parkland provision would exceed the basic Quimby park land obligation (per Table 4.14-5; 4412 × 3.23 × 0.003= 42.7 acres of parkland obligation).

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19 Los Angeles County Ordinance 21.24.340, et seq.

Table 4.14-6
Estimated Quimby Credits

Land				Improvements			
Description/Category	**Acres**	**Credit %**	**Quimby Acres**		**Improv. Costs**	**Acre Equiv.[1]**	**Total Acreage**
Parks:							
Community Park	20	100%	20		$6,650,160	22.79	~~43.30~~42.8
Neighborhood Park	5.0	100%	5.0		$2,240,700	7.68	~~12.85~~12.7
Private Recreational Area	14.40	100%	14.40				14.40
Subtotal Parks	39.4		39.4				~~70.55~~69.9
Trails:							
Community Trails (LDZ Lots)	9.3	100%	9.3				9.3
River Corridor	217	10%	21.7				21.7
Total Credit Provided							**~~101.56~~100.9**
Quimby Act Requirements							**29.70**
Excess							**71.2~~86~~**

Source: Impact Sciences, Inc., May 2010.

[1] *The acreage equivalent column is calculated by dividing the improvement cost by the improvement fee (County in-lieu fee) of $291,767 per acre of parkland.*

2 *The project provides parkland at a rate of 10.2 acres/1,000 people (based on a project population of 9,900 people and 100.9 acres of parkland credit).*

As estimated in **Table 4.14-6**, a total of 100.9~~101.56~~ acres of park credit would be generated, resulting in 71.2~~86~~ acres over identified requirements. This parkland dedication is equivalent to approximately 10.2 acres per 1,000 persons, which is over 3.1 times greater than the Quimby requirements. Pursuant to the Newhall Ranch Specific Plan, ~~the 71.86 acres~~ any acreage by which the subdivision exceeds its Quimby obligation, as shown in **Table 4.14-6**, above, will be credited against other subdivisions within the Newhall Ranch Specific Plan area.

As demonstrated above, local park requirements are exceeded by the project based on the County Ordinance and Quimby Act standards. Since local park needs are exceeded by the proposed project, it is not expected that project residents would, in any appreciable manner, need to use local parks that are located off site, including those located in neighboring unincorporated Los Angeles County communities, in Ventura County, and in the City of Santa Clarita. This is not to say project residents would not use off-site facilities, but that significant park facilities are being provided to fully serve project needs. In fact, because the project exceeds local parkland requirements, it would actually help alleviate the negative condition being created by the existing Countywide shortage of parkland. Consequently, impacts to local parks would be considered beneficial.

b. Additional Mitigation Measures Proposed by this EIR

No feasible mitigation exists to fully reduce the impacts resulting from the conversion of 160.7 acres of Prime Farmland, 30.1 acres of Unique Farmland, and 0.6 acre of Farmland of Statewide Importance on the Mission Village project site to a less-than-significant level; therefore, this impact is considered a significant unavoidable impact. However, the following mitigation measure is recommended to minimize impacts to the extent feasible:

MV 4.16-1 In order to minimize the premature conversion of agricultural lands and to track that conversion, prior to issuance of the first grading permit in areas of Mission Village where agricultural soils designated as prime farmland, unique farmland, and/or farmland of statewide importance exist (Pub. Resources Code section 21060.1), Newhall Land shall prepare and submit to the County a phasing map to document the phased discontinuation of existing agricultural activities located within the Mission Village project area over the course of its development.

With respect to forest land resources, the development of Mission Village would not conflict with existing zoning for forestland and timberland, nor would it result in the loss or conversion of forest land due to mitigation measures identified in **Section 4.3**, **Biota**, of this EIR. Impacts would be less than significant and no additional mitigation measures would be required by this EIR.

8. CUMULATIVE IMPACTS

Conversion of agricultural land to urban uses has a history in Los Angeles County. According to the Los Angeles County 1984 to 2008 Land Use Summary Report[13] prepared by the California Department of Conservation, Division of Land Resource Protection, for the 24 years between 1984 and 2008, approximately 18,870 acres of Important Farmland have been developed into non-agricultural uses. This amount is based on a net decrease of 7,651 acres of Prime Farmland and 12,182 acres of Farmland of Local Importance, and a net increase of 211 acres of Farmland of Statewide Importance and 752 acres of Unique Farmland. During the same time period, approximately 288 acres of Grazing Land was converted to urbanized land uses.

Buildout of the Newhall Ranch Specific Plan and other reasonably foreseeable future related cumulative development in the region will result in the conversion of Important Farmland soils to non-agricultural uses, continuing an ongoing trend in Los Angeles County. Given that implementation of the Mission Village project would eliminate 160.7 acres of Prime Farmland, 30.1 acres of Unique Farmland, and 0.6 acre of Farmland of Statewide Importance, the Mission Village project's contribution to the conversion of Important Farmland in the region to non-agricultural uses is considered cumulatively significant.

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13 California Department of Conservation, Los Angeles County Important Farmland Data Availability, http://redirect.conservation.ca.gov/DLRP/fmmp/county_info_results.asp. Accessed February 2, 2010.

4.19 ENVIRONMENTAL SAFETY

1. SUMMARY

The potential environmental safety impacts relative to development of the Mission Village project site include soil contamination attributable to past and present agricultural activities and on-site petroleum (i.e., oil) drilling and pipeline activities, and the disposal of on-site hazardous materials debris. Hazardous materials generally include petroleum products (including oil and gasoline), automotive fluids (antifreeze, hydraulic fluid), paint, cleaners (dry cleaning solvents, cleaning fluids), and pesticides from agricultural uses (at higher concentrations). Byproducts generated as a result of activ~~e~~ities using hazardous materials (such as dry cleaning solvents, oil, and gasoline) are considered hazardous waste. Contamination usually takes the form of a hazardous materials or waste spill in soil. Such contamination can penetrate soils into the groundwater table, resulting in the pollution of a local water supply. Commercial uses, particularly those using underground storage tanks (UST), are most common in causing such contamination. Potential environmental safety impacts associated with the project site include observed stained soil (including possible petroleum hydrocarbon contamination) near abandoned oil wells and pipelines, aboveground storage tanks (AST), and equipment storage areas. Unless mitigated, these potentially contaminated soils could result in significant impacts, especially if construction utilizing these soils, or contamination within these soils, was permitted without proper monitoring and testing. When remediated to local, state and federal standards, including re-abandonment procedures for previously abandoned wells and pipelines, any potentially significant impacts relative to these conditions would be reduced to below a level of significance and, therefore, would not result in environmental safety hazards to Mission Village residents, employees and/or visitors.

Related to potential soil contamination, soils contaminated with petroleum hydrocarbons in oil fields and near abandoned wells are capable of generating gasses, containing methane, total petroleum hydrocarbons (TPHs), and volatile organic compounds (VOCs) through anaerobic biodegradation. Soils contaminated with petroleum hydrocarbons in oil fields and near abandoned wells are capable of being emitted into the air via the process of anaerobic biodegradation. Unremediated, contaminated soil could pose a potentially significant impact to public health and safety, due to the potential for methane, TPH or VOC gasses to accumulate under structures, otherwise known as vapor intrusion. However, mitigation would reduce potential impacts due to vapor migration to less than significant.

Potential environmental safety impacts associated with the project site also include miscellaneous debris present on the project site that could contain previously unidentified hazardous materials. Mitigation is recommended requiring that unidentified structures or materials encountered during project construction be assessed and the appropriate action taken in accordance with applicable regulatory requirements. With mitigation, potential impacts relative to on-site debris would be reduced to a less than significant level.

Electrical transmission line poles and transformers on the project site may contain polychlorinated biphenyls (PCBs), which could constitute a potentially significant impact. With mitigation, impacts relative to PCBs would be reduced to a less than significant level.

The presence of pesticides in the soils from historic agricultural operations, and the continuing use of pesticides in connection with ongoing agricultural activities, constitutes a potential impact, although the impact does not rise to a significant level. Soil sampling has been conducted to determine on-site concentrations of pesticides. The results conclude no concentration of hazardous pesticides exceeding the residential or industrial use Preliminary

b. References for this EIR Section

This section is based on information contained in the following documents, which are included in its entirety as **Appendix 4.19** of this Draft EIR.

1. *Phase I Environmental Site Assessment of Proposed The Mesas East, Valencia, California* (ESA), prepared for the Mission Village project by BA Environmental, dated February 2005.
2. *Phase I Environmental Site Assessment of River Village Tentative Tract Map No. 53108, Highway 126, Newhall Ranch, California*, BA Environmental, September 27, 2004.
3. *Phase I Environmental Site Assessment Addendum Letter of Proposed Water Tank Locations and Utility Corridor Easements Associated with the proposed River Village Development, Tentative Tract Map No. 53108, Highway 126, Newhall Ranch, California*, BA Environmental, September 28, 2004.
4. *Phase I Environmental Site Assessment of Parcel Map No. 060678*, prepared by BA Environmental, September 2005.
5. *Phase II ESA for the Water Quality Basin on the Entrada property*, prepared by BA Environmental, September 2006.
6. *Phase I Environmental Site Assessment of Legacy Village Development*, prepared by BA Environmental, March 30, 2007.
7. *Phase I Environmental Site Assessment of the Entrada Development*, prepared by BA Environmental, March 2007.
8. *Phase I Environmental Site Assessment of Proposed SCE Substation Site and Soil Disposal Site,* prepared by BA Environmental, May 2010.
9. *Limited Soil Vapor Survey,* prepared by BA Environmental, April 2011.

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

The Newhall Ranch Specific Plan Final Program EIR identified certain potentially significant hazardous materials impacts that would result with implementation of the Specific Plan. Specifically, the Final Program EIR determined that potentially significant on-site impacts would occur with respect to past and present oil and natural gas production operations, existing Southern California Edison (SCE) electrical transmission lines, existing high-pressure natural gas lines, the future transport of hazardous waste along SR-126, and the project's proximity to the Chiquita Canyon Landfill.

In response to the identified potentially significant impacts, the Newhall Ranch Specific Plan Program EIR identified nine feasible mitigation measures.[1] The Board of Supervisors found that adoption of the

[1] See Mitigation Measures 4.19-1 through 4.19-9 in both the certified Final Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

In this case, the proposed project entails the construction of a residential development with supporting school, park and commercial uses. The proposed project does not include the routine transport, use or disposal of hazardous materials. Based on the proposed use, the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Therefore, *State CEQA Guidelines* Criterion (a) and (c) are not applicable to the project and will not be analyzed further.

The proposed project is not located within 2 miles of a public airport or public use airport, nor is it located within the vicinity of a private airstrip. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area due to proximity to aviation uses. Therefore, Criterion (e) and (f) are not applicable to the project and will not be analyzed further.

As to whether the proposed project would impair implementation of or physically interfere with an adopted emergency response plan, Criterion (g), please see **Section 4.11, Sheriff Services.** As to whether the proposed project would expose people or structures to a significant risk involving wildland fires Criterion (h), please see **Section 4.12, Fire Protection Services.**

Based on the *State CEQA Guidelines*, the only significant impact criteria potentially applicable to the proposed project are Criterion (b), significant hazard through reasonably foreseeable accident conditions, (d), location on a site included on a list of hazardous materials, and/or (i), exposure of people to existing sources of potential health hazards.

Accordingly, the following analysis of project impacts addresses those potential impacts relative to Criteria (b), (d), and (i).

b. Site-Specific Project Impacts

An analysis of each of the sources of potential health hazards presently existing on the Mission Village project site is presented below.

(1) Oil Wells, Oil Sumps and Associated Structures

As discussed above, approximately 55 on-site oil wells and eight off-site oil wells and associated buildings, tanks and sumps were formerly located on the project site. Eight abandoned oil wells were located on or near the locations of the project's off-site improvements on the adjacent Legacy Village, SCE Substation Site and ~~nad~~ Soil Disposal Site, Potrero Valley and Landmark of the Newhall Ranch Specific Plan and Entrada properties. All on-site wells, wells located on or near off-site improvement areas, and oil wells drilled at various locations within 500 feet of the project site, have been plugged and abandoned. The decommissioning, which addressed the related buildings, tanks and sumps, as well as the actual well

Therefore, any potentially significant impacts relative to health hazards would be reduced to a less than significant impact.

(20) Magic Mountain Parkway Extension and Commerce Center Grading

As part of the project, Magic Mountain Parkway would be extended to provide regional access to and from the project site to SR-126 and I-5, respectively. The Magic Mountain Parkway extension would require the construction of off-site roadway improvements, and would proceed westerly from its existing terminus at The Old Road for a distance of approximately 5,000 feet before intersecting with the project site. Commerce Center grading consists of additional grading land along the eastern boundary north of the Magic Mountain Parkway extension to the southern boundary of the Magic Mountain Parkway, within the southern parcel of the Entrada development. The Magic Mountain Parkway would be a paved roadway which would not expose people to existing sources of potential health hazards or result in a significant hazard through reasonably foreseeable accidents. With implementation of mitigation below, the grading related to the Commerce Center would not expose people to existing sources of potential health hazards or result in a significant hazard through reasonably foreseeable accidents. Therefore, potential impacts would be reduced to a less than significant level.

(21) Grading for Westridge Parkway Expansion

The grading associated with the southerly expansion of Westridge Parkway will affect the southeastern boundary of the project site, and will also proceed west into the southern portion of VTTM 53295 (Entrada project site) and south into the northern portion of VTTM 61996 (the Legacy Village project site). With implementation of mitigation below, the grading related to the Westridge Parkway Expansion would not expose people to existing sources of potential health hazards or result in a significant hazard through reasonably foreseeable accidents. Therefore, potential impacts would be reduced to a less than significant level.

(22) Vapor Intrusion

As summarized in **Subsection 4.19.2(b)**, several Phase I investigations have been conducted on the Mission Village project area and surrounding sites. According to these reports, there is the potential for soil contamination by residual petroleum hydrocarbons and petrochemical contaminants within these areas, due to the former oil production facilities on-site. Soils contaminated with petroleum hydrocarbons in oil fields and near abandoned wells are capable of being emitted into the air through anaerobic biodegradation. Unremediated, contaminated soil could pose a potentially significant impact to public health and safety, due to the potential for methane, total petroleum hydrocarbon (TPH) or volatile organic compound (VOC) gasses to accumulate under structures (otherwise known as vapor intrusion).

The potential for vapor instrusion resulting from residual petroleum hydrocarbons and petrochemical contaminants present on site can either be remediated (source removal) or mitigated (venting of gas and interruption of pathways). Some source removal already has occurred at the Project site as part of the Castaic Junction Oil Field abandonment and site remediation activities performed by Exxon. As discussed in greater detail in the Phase I for the Mission Village project and **Subsection 4.19(a)(1), Oil Wells, Oil Sumps and Associated Structures**, above, Exxon's decommissioning efforts included significant remediation and site restoration activities. According to the DOGGR, the Castaic Junction field was abandoned by Exxon according to current standards.

Methane

Methane is an odorless, colorless and flammable gas that is lighter than air. The lower explosive limit (LEL) of methane is approximately 5% (50,000 ppmv) and the upper explosive limit (UEL) is approximately 15% (150,000 ppmv). Methane is combustible or explosive at concentrations between these limits, assuming an ignition source is present. Methane is non-carcinogenic and is not toxic; however, at high concentrations in enclosed spaces, it can displace oxygen and cause asphyxiation. A methane concentration of 20% of the LEL, or 10,000 ppmv, is often used for building methane monitoring systems as a conservative early indication of the presence of elevated levels of methane gas.

Methane is the main constituent in natural gas that is used for many residential, commercial, and industrial applications, including heating, cooking, and power generation. Methane gas occurs naturally in oil reservoirs and is often found in association with petroleum deposits. Methane also is produced by the bacterial breakdown (i.e., biodegradation) of crude oil and other organic materials.

Total Petroleum Hydrocarbons (TPH)

Total petroleum hydrocarbons (TPH) is a term used to describe a large family of several hundred chemical compounds that originally come from crude oil. They are called hydrocarbons because almost all of them are made entirely from hydrogen and carbon. Crude oils can vary in how much of each chemical they contain, and so can the petroleum products that are made from crude oils. Contamination caused by petroleum products will contain a variety of these hydrocarbons. Some chemicals that may be found in TPH are hexane, jet fuels, mineral oils, benzene, toluene, xylenes, naphthalene, and fluorene, as well as other petroleum products and gasoline components. Light-end TPHs within the gasoline range were assessed for the Mission Village project site for their potential to biodegrade and become a potential source of vapor intrusion.

Volatile Organic Compounds (VOCs)

Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors. VOCs are emitted by a wide array of products numbering in the thousands. Examples include: paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings, office equipment such as copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesives, permanent markers, and photographic solutions. The majority of these VOCs are found to emit from indoor materials and processes. Some may produce odors at very low levels that are considered objectionable. Many VOCs are irritants and can result in headaches and eye, nose and throat irritation, and dizziness. At high concentrations, some VOCs are toxic. "Organic" is a chemical term meaning that these types of chemicals contain carbon. Since carbon burns, many of these chemicals, including organic solvents, are flammable. Common VOCs in homes, offices, and schools include formaldehyde, decane, butoxyethanol, isopentane, limonene, styrene, xylenes, perchloroethylene, methylene chloride, toluene, and vinyl chloride.

Soil Vapor Survey

In April 2011, B.A. Environmental prepared the Limited Soil Vapor Survey for the Mission Village project site in response to County comments. B.A. Environmental used the following methodology to test the site for potential vapor instrusion related to methane, light end petroleum hydrocarbons and VOCs:

a) A site-specific health and safety plan was prepared prior to initiating the fieldwork;

b) A professsional geologist visited the subject property and marked the proposed soil boring locations. A minimum of one probe was located in the area of each oil well drill pad, former tank battery, drill sump and production sump located on proposed developed land or beneath sensitive receptor areas (i.e., schools and public parks), as well as oil well pads, which extend beneath developed land, former oil field production facilities and oil wells or oil well pads, which are located beneath streets. These locations included the well pads for Newhall Land and Farming Nos. 3, 4, 5, 6, 7, 8, 10, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 34, 39, 40, 41, 42, 48, 49 and 59 (35 probe locations total). In addition, vapor probes were installed in the areas of former tank batteries 2, 3, 4, 5 (2 sample locations), 6, and 7, and the "Roundhouse Tank Battery (8 probe locations total)." Soil vapor probes were installed in the area of 17 identified and suspect sumps, including those for Drill Pads #6, 14 (2 suspected sumps), 20, 24, 25, 27, 28 and 63, Tank Batteries 2, 3, 4 and possibly 6, the former Flair on Exxon Mesa, the Former Gas Plant and a suspected sump below the "roundhouse." Soil vapor probes also were installed at two production facilities, the "Roundhouse" field office and the Gas Plant. One probe also was installed in a former landfill identified in the 2004 Phase I ESA;

c) Each area planned to be drilled for surface evidence of petroleum hydrocarbon contamination was visually assessed;

d) GPS coordinates were identified for all temporary vapor monitoring well locations;

e) A maximum of 63 shallow soil vapor probe borings were advanced using tracked Geoprobe® equipment to a maximum depth of 10 feet bgs. Five of these locations were redrilled due to no flow conditions within the vapor probe;

f) The probe borings were then converted into temporary soil vapor monitoring wells;

g) Soil vapor samples were collected from each temporary soil vapor monitoring well. Collection methods were performed in accordance with DTSC protocols;

h) A mobile laboratory was utilized to analyze all soil vapor samples on-site for methane, light end petroleum hydrocarbons and VOCs. Additional QA/QC samples were collected to meet DTSC analytical requirements. Methane and light end hydrocarbons were analyzed in general accordance with EPA Method 8015M. VOCs were analyzed in general accordance with EPA Method No. 8260B.

Well pads, sumps and tank batteries located in the proposed project's open areas and spineflower preserves were not sampled during the investigation, as these well pads are in areas not to be developed, and, therefore, do not pose a threat for vapor intrusion into the proposed on-site structures. These locations included the well pads for Newhall Land and Farming Nos. 1, 11, 46, 56, 58, 63, 64, 65, 66, 67, 71, 72 and 76.

Each of the soil vapor probe locations was visually assessed for surface petroleum hydrocarbon contamination. Scatterings of some asphalt and asphaltic sand were observed at most of the drilling locations. Some locations were observed to have scattered tar clumps. Additionally, one asphalt improved road and residual evidence of roads improved by the application of oil to the roadbed were observed on the subject site. The roads improved by the application of oil were likely sprayed with crude oil.

The soil vapor samples collected from the soil probe borings were analyzed for Methane and TPHs in the gasoline range. Based on the laboratory analysis, the vapor samples collected from probe borings were reported not to contain detectable concentrations of Methane or TPHs in the gasoline range. Additionally, the soil vapor samples were analyzed for VOCs; no detectable concentrations of VOCs were identified, with the exception of a sample taken at a location of a former drilling or production sump, which recorded 0.013 micrograms per liter (µg/l) of perchloroethylene (PCE). This PCE concentration is below the California Human Health Screening Level (CHHSL) for PCE, and, therefore, does not pose an immediate threat to human health or the environment. However, based on the recommendation in the B.A. Environmental's Survey, an additional mitigation measure has been recommended to ensure that the low level concentration of PCE is remediated prior to site grading.

In the event that contamination is encountered during Project activities, implementation of Mitigation Measures 4.19-10 and 4.19-11, which require development of specific plans that address assessment and cleanup actions for contaminated soils, would remediate any contamination per regulatory standards, and reduce any associated hazards to less than significant. In addition, implementation of Mitigation Measure 4.19-12 would reduce potential impacts from abandoned oil wells to less than significant by providing for the application of construction-related Best Management Practices. The project also would implement Mitigation Measures 4.19-13 through 4.19-16, as recommended by the Limited Soil Vapor Survey. Mitigation Measure 4.19-13 would require low level PCE impacted soil be remediated prior to the initiation of grading activities. Mitigation Measure 4.19-14 requires that surficial contamination, including asphalt, asphaltic sand, and scattered tar clumps located at former oil drilling locations, and the asphaltic sand observed within the washes connected to Middle Canyon and Lyon Canyon, respectively, be remediated prior to the initiation of grading activities. Mitigation Measure 4.19-15 requires that any asphalt improved road and/or residual evidence of roads improved by the application of oil to the roadbed be remediated during grading activities, and that contaminated soil be properly disposed of off-site. Mitigation Measure 4.19-16 would require that any unidentified structures or pipelines is to be properly assessed and/or remediated in accordance with the soils mitigation plan during the grading activities.

The proposed Project also would comply with Mitigation Measure SP 4.5-7, which requires that all buildings located within 25 feet of oil or gas wells be designed according to recommendations contained in a report prepared by a licensed civil engineer and approved by the Building Official, and buildings located within 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current DOGGR rules and regulations, in accordance with Los Angeles County Code is section 110.4. Therefore, potential impacts due to methane, TPH or VOC migration would be reduced to less than significant.

6. MITIGATION MEASURES

The County previously adopted mitigation measures relative to potential environmental safety impacts that are required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures are found in the previously certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Mission Village project site. The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan and will implement the mitigation measures recommended for the proposed Mission Village project to ensure that future development of the project site and related off-site grading activities would be safe

SP 4.5-5 The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements. These requirements would be explicitly defined at the future tentative map stage. *(The Mission Village tentative tract map incorporates all applicable requirements of the Southern California Gas Company [SCGC] with respect to pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements.)*

SP 4.5-6 All potential buyers or tenants of property in the vicinity of SCGC transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains. *(This mitigation measure will be implemented concurrent with project development.)*

SP 4.5-7 In accordance with the provisions of the 2008 Los Angeles County Building Code (Title 26), Section 110.4 ~~308(d)~~, all buildings and enclosed structures that would be constructed within the Specific Plan located within 25 feet of oil or gas wells shall be designed according to recommendations contained in a report prepared by a licensed civil engineer and approved by the Building Official ~~provided with methane gas protection systems~~. Buildings located within 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current rules and regulations of the State of California Division of Oil and Gas. *(This mitigation measure has been updated to reflect changes in the Los Angeles County Building Code.)~~(This mitigation measure does not apply to Mission Village because there are no active wells within the project site.)~~*

SP 4.5-8 In accordance with the provisions of the 2008 Los Angeles County Building Code (Title 26), Section ~~308(c)~~110.3, all buildings and structures located within 1,000 feet of a landfill containing decomposable material (in this case, Chiquita Canyon Landfill) shall be provided with a landfill gas migration protection and/or control system. *(This mitigation measure has been updated to reflect changes in the Los Angeles County Building Code. This mitigation measure does not apply to Mission Village because Mission Village is located more than 1,000 feet from Chiquita Canyon.*)

SP 4.5-9 In accordance with the provisions of the Los Angeles County Code, Title 11, Division 4, Underground Storage of Hazardous Materials regulations, the County of Los Angeles Department of Public Works shall review, prior to the issuance of building permits by the County of Los Angeles, any plans for underground hazardous materials storage facilities (e.g., gasoline) that may be constructed or installed within the Specific Plan. *(This mitigation measure will be implemented prior to the issuance of building permits.)*

b. Additional Mitigation Measures Proposed By This EIR

The following project-specific mitigation measures are proposed to mitigate the potentially significant environmental safety impacts that may occur with implementation of the Mission Village project. These

mitigation measures are in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR. To indicate that the measures relate specifically to the Mission Village project, each measure is preceded by "MV," which stands for Mission Village.

(1) Oil Wells

MV 4.19-1 During grading operations, all former oil wells located on the Mission Village development property shall be reabandoned and the sites remediated, if necessary, according to the requirements of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources, if such sites are to be disturbed or are located in an area of development.

(2) Above-Ground Storage Tanks, Agricultural Storage Areas, and Soil Staining

MV 4.19-2 During grading operations, those areas of the Mission Village development property identified as formerly containing above-ground storage tanks, current agricultural storage areas and current soil staining by the *Phase I Environmental Site Assessment of Proposed The Mesas East, Valencia, California* (BA Environmental, February 2005), shall be investigated for the presence of petroleum hydrocarbons and hazardous materials and/or wastes, and, where necessary, shall be remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).

(3) Pipelines

MV 4.19-3 During grading operations, all pipelines located on the Mission Village development property that will no longer be used to transport oil products shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources. The soil beneath these pipelines shall be assessed for petroleum hydrocarbons. Any identified contaminated soil shall be remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).

(4) Water Wells

MV 4.19-4 During grading operations, all groundwater monitoring wells and production water wells not intended for future use shall be abandoned according to applicable federal, state and local regulations.

(5) Polychlorinated Biphenyls (PCBs)

MV 4.19-5 Prior to demolition or rehabilitation, all electrical poles and facilities to be demolished or rehabilitated shall be surveyed to determine if they contain PCBs. If PCBs are present, they shall be removed and disposed of by a licensed and certified PCB removal contractor, in accordance with all federal, state, and local regulations.

(6) Ponds

MV 4.19-6 Prior to the issuance of grading permits, all ponds located on the project site that may have been used for the treatment or disposal of hazardous wastes shall be tested for environmental hazards and remediated, if necessary, in accordance with all federal, state, and local regulations.

(7) Soil Staining

MV 4.19-7 Areas of visible soil staining not planned for excavation~~, or located in an area planned to be raised in grade,~~ shall be assessed for environmental hazards and treated, as necessary, in accordance with all federal, state, and local regulations. Areas of visible soil staining that are scheduled to be excavated shall have any visibly impacted soil disposed of in accordance with all federal, state, and local regulations.

(8) Previously Unidentified Hazards

MV 4.19-8 In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, underground storage tanks, sumps, debris, asbestos, septic tanks, cesspools or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities in the vicinity of the find shall cease immediately until the project site is evaluated by a qualified professional. Work shall not resume until appropriate actions recommended by the professional have been implemented and it has been demonstrated that the identified contaminants have been remediated or removed from the project site in accordance with applicable law.

(9) Water Quality Control Basin

MV 4.19-9 Soils excavated for construction of the unlined water quality control basin will not be used for construction of the basin. If discolored soil is encountered, it will be excavated and will not be used in construction of the basin.

(10) Soil Gas Remediation

MV 4.19-10 In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, debris, or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities shall cease immediately until the affected area is evaluated by a qualified professional. A remediation plan shall be developed in consultation with the appropriate regulatory authorities and the remediation identified shall be completed. Work shall not resume in the affected area until appropriate actions have been implemented in accordance with the remediation plan. The remediation action plan shall include the following:

- Remediation goals and cleanup criteria that could include, but are not necessarily limited to, excavation and on-site treatment, excavation and off-site treatment, and/or removal of contaminated soil and/or groundwater;
- A detailed description of the access points and haul-out routes for remedial activities; remediation methods and procedures; mitigation of dust; minimization or avoidance of disturbance to sensitive ecosystems; and verification soil sampling and analysis.
- Included in the discussion shall be information on disposal sites, transport and disposal methods, as well as recordkeeping methods for documenting remediation, regulatory compliance, and health and safety programs for on-site workers; and
- Removal of oil development equipment and debris.

MV 4.19-11 A Soil Management Plan for the residential development envelopes and recreational construction areas shall be developed and implemented, as appropriate. The objective of the Soil Management Plan is to provide guidance for the proper handling, on-site management, and disposal of impacted soil that may be encountered during construction activities (*i.e.*, excavation and grading). The plan shall include practices that are consistent with the California Division of Occupational Safety and Health regulations,

California Code of Regulations, title 8, as well as Certified Unified Program Agency remediation standards that are protective of the planned use. Appropriately trained professionals will be on site during preparation, grading, and related earthwork activities to monitor soil conditions encountered. In order to confirm the absence or presence of hazardous substances associated with former land use, a sampling strategy shall be implemented. The sampling strategy shall include procedures regarding logging/sampling and laboratory analyses. The Soil Management Plan will outline guidelines for the following:

- Identifying impacted soil;
- Assessing impacted soil;
- Soil excavation;
- Impacted soil storage;
- Verification sampling; and
- Impacted soil characterization and disposal.

In the event that potentially contaminated soils are encountered within the footprint of construction, soils will be tested and stockpiled. The Certified Unified Program Agency will determine whether further assessment is warranted. The Certified Unified Program Agency shall determine and oversee the handling and disposal of impacted soils.

MV 4.19-12 To reduce potentially hazardous conditions and minimize the impacts from handling potentially hazardous materials, the owner shall include the following in its construction contract documents prior to the initiation of construction activities:

- The Contractor(s) shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains per the County's NPDES guidelines and as outlined in the Stormwater Pollution and Prevention Plan; and
- The Contractor(s) shall prepare a Health and Safety Plan. The plan shall include measures to be taken in the event of an accidental spill. In addition, the Contractor(s) shall store all reserve fuel supplies only within the confines of a designated construction staging area, refuel equipment only within the

designated construction staging area, and regularly inspect all construction equipment for leaks.

MV 4.19-13 Prior to the initiation of grading activities, low level PCE impacted soil located on the Mission Village project site, as identified in Final EIR Appendix F4.19, shall be remediated pursuant to the practices set forth in the Soil Management Plan.

MV 4.19-14 Prior to the initiation of grading activities, surficial contamination, including asphalt, asphaltic sand, and scattered tar clumps located at former oil drilling locations, and the asphaltic sand located within the washes connected to Middle Canyon and Lyon Canyon, respectively, shall be remediated pursuant to the practices set forth in the Soil Management Plan.

MV 4.19-15 During grading activities, any asphalt improved road and/or residual evidence of roads improved by the application of oil to the roadbed shall be remediated pursuant to the practices set forth in the Soil Management Plan and the contaminated soil is to be properly disposed of off-site.

MV 4.19-16 During grading activities, any unidentified structures or pipelines shall be properly assessed and/or remediated in accordance pursuant to the practices set forth in the Soil Management Plan.

7. CUMULATIVE IMPACTS

As man-made hazards typically are site-specific issues, the proposed project would not result in cumulatively considerable impacts relative to environmental safety and no impacts would occur with respect to cumulative impacts.

8. CUMULATIVE MITIGATION MEASURES

There would be no cumulative impacts with regard to man-made hazards, consequently, no cumulative mitigation measures are required.

9. UNAVOIDABLE SIGNIFICANT IMPACTS

a. Mission Village Project Site

With implementation of the mitigation measures listed above and compliance with federal, state and local regulations, any potentially significant project-related impact associated with environmental safety would be reduced to below a level of significance.

b. Surrounding Property

No potentially significant impacts were identified with respect to the property surrounding the Mission Village site. Therefore, there are no significant unavoidable impacts.

MV 4.20-1 Although no other significant cultural resources were observed or recorded, all grading activities and surface modifications must be confined to only those areas of absolute necessity to reduce any form of impact on unrecorded (buried) cultural resources that may exist within the confines of the project area. In the event that previously undetected archaeological, paleontological, and/or historical resources are found during construction, activity in the immediate area of the find shall stop and a qualified archaeologist or paleontologist, as applicable, shall be contacted to evaluate the resource(s). If the find is determined to be a historical or unique archaeological resource, as defined by CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archaeological mitigation takes place, pursuant to *State CEQA Guidelines* Section 15064.5(f) and Public Resources Code Section 21083.2(i).

MV 4.20-2 Following recordation of the applicable unit of the Mission Village tract map, the Asistencia de San Francisco (CA-LAN-962H) site shall be dedicated to The Archaeological Conservancy.

MV 4.20-3 Scientific specimens are to become the property of a public, nonprofit educational institution, such as the Los Angeles County Museum of Natural History (or similar institution). Most institutions are now requiring, as conditions for accepting the materials, that significant fossils be prepared, identified to a reasonable level, and catalogued before donation. Therefore, to meet these requirements, prior to the start of Project-related grading, an agreement shall be reached with a suitable scientific repository regarding acceptance of the fossil collection.

MV 4.20-4 A trained paleontologist acceptable to Los Angeles County shall be retained to monitor and salvage scientifically significant fossil remains. The duration of these inspections depends on the potential for the discovery of fossils, the rate of excavation, and the abundance of fossils.

(a) The Saugus and Pico Formations have a high potential to yield paleontological resources and will require continuous monitoring during all grading activities. This may require use of multiple paleontologists working on the site at the same time if simultaneous ground disturbing activities are occurring over an extensive area to assure all areas of excavation are being fully monitored for the presence of paleontological resources. The number of required monitors shall be determined by Project's monitoring paleontologist.

(b) The older dissected Pleistocene formations have a moderate potential to yield paleontological resources and will require half-time monitoring during all grading activities by a qualified paleontologist(s).

Periodic review of the paleontological potential assigned to each rock unit shall be conducted at the end of each phase of grading. This reassessment of potential will be used to develop mitigation plans for future phases of development. If fossil production is lower than expected, the duration of the monitoring efforts should be reduced to less than continuous monitoring during all grading activities.

MV 4.20-5 The paleontologist, in consultation with the grading contractor, developer, and Los Angeles County inspector, shall have the power to divert temporarily or direct grading efforts in the area of an exposed fossil to allow evaluation and, if necessary, salvage of exposed fossils.

8. CUMULATIVE IMPACTS

Impacts upon cultural and paleontological resources tend to be site-specific and are assessed on a site-by-site basis. As discussed above, the Mission Village study area contains cultural resources. Where these resources exist, implementation of the proposed project would represent an incremental adverse cumulative impact to cultural resources. However, provided that proper mitigation is implemented by the proposed project, the impacts of the Mission Village project would be fully mitigated and would not be cumulatively considerable or substantially contribute to significant cumulative impacts. In fact, if mitigation is properly carried out, a positive impact on cumulative cultural resource information would occur; that is, mitigation measures would result in the acquisition of additional scientific information about the prehistory of the region, thereby serving to clarify reconstruction of prehistoric lifeways, while the artifacts obtained from the sites during mitigation procedures would be preserved for future analysis, study and viewing.

9. CUMULATIVE MITIGATION MEASURES

Other than complying with the same mitigation that is required of the proposed project, no further mitigation is recommended or required because the project does not contribute to any cumulatively considerable cultural or paleontological impacts.

10. UNAVOIDABLE SIGNIFICANT IMPACTS

a. Project-Specific Impacts

Provided that proposed mitigation measures are properly implemented, no significant unavoidable impacts are expected to result from implementation of the proposed project.

b. Cumulative Impacts

Provided that mitigation measures are properly implemented, no significant unavoidable cumulative impacts are expected to result from implementation of the proposed project.

4.22 WATER QUALITY

This section has been revised in response to comments received on the Draft EIR (October 2010), particularly comments received from the Regional Water Quality Control Board. The revised analysis presented herein is based on the Project's vesting tentative tract map, revised as of December 15, 2010. Please see **Topical Response 4**: Revised Project Design for the revised analysis to other sections of this EIR. The revised or additional text is shown in double-underline; deleted text is shown in ~~strikeout~~.

1. SUMMARY

This section is based on the Mission Village Water Quality Technical Report and related appendices, prepared by Geosyntec Consultants (2010), and the "Mission Village Final EIR water quality related ~~R~~responses to ~~C~~comments, Topical Response 5: Chlorides and Topical Response 6: Water Quality" prepared by Geosyntec Consultants (2011).~~)~~. ~~A copy of t~~The Mission Village Water Quality Technical Report~~this report~~ is included in ***Appendix 4.22*** *of this EIR. In addition, various materials and documents were used or referenced in connection with the preparation of this section. The documents are available for public review at the County of Los Angeles Department of Regional Planning and are incorporated by this reference. The report and this section focus on potential water quality impacts. For analysis of the potential hydrological impacts of the project, please see* ***Section 4.2***, ***Hydrology****.*

The Mission Village tract map site presently consists of open space, agriculture, and oil and gas extraction wells with associated access roads, and runoff is conveyed via natural drainages and existing concrete channels to ultimately discharge to the Santa Clara River. Construction and operation of the Mission Village project would replace open space, agricultural land, and extraction well pad runoff with urban runoff. The following summarizes the impacts of the pollutants of concern under wet- and dry-weather conditions in the post-developed conditions:

- ***Sediments:*** *Municipal Separate Storm Sewer System (MS4) Permit, Construction General Permit, Dewatering General Permit, ~~and~~ Standard Urban Stormwater Mitigation Plan (SUSMP) and Low Impact Development (LID)-compliant Best Management Practices (BMPs) would be incorporated into the project to address sediment in both the construction phase and post-development. Mean total suspended solids concentration and loads are predicted to be less in the post-development condition than in the existing conditions. Turbidity in stormwater runoff would be controlled through implementation of a Construction Stormwater Pollution Prevention Plan (SWPPP) and would be permanently reduced through the stabilization of erodible soils with development. On this basis, the impact of the project on sediments is considered less than significant.*

- ***Nutrients (Phosphorus and Nitrogen [Nitrate+Nitrite-N and Ammonia-N]):*** *MS4 Permit, Construction General Permit, Dewatering General Permit, ~~and~~ SUSMP, and LID-compliant BMPs would be incorporated into the project to address nutrients in both the construction phase and post-development. Average annual loads for- ammonia ~~total phosphorus, nitrate plus nitrite and ammonia~~ are predicted to increase from the project due to increased average annual runoff volume. Average annual loads of total phosphorus and nitrate- plus nitrite-N are predicted to decrease. Average concentrations are predicted to decrease for total phosphorus,*

nitrate-N plus nitrite-N and~~, and~~ ammonia.~~.~~ Average concentrations are predicted to be within the range of observed wet weather values for Santa Clara River Reach 5. Average nitrate-N plus nitrite-N and ammonia-N concentrations are predicted to be well below Los Angeles Regional Water Quality Control Board Basin Plan objectives and Total Maximum Daily Load (TMDL) wasteload allocations. The predicted nutrient concentrations are not expected to cause increased algae growth. On this basis, the impact of the project on nutrients is considered less than significant.

- ***Trace Metals:*** *MS4 Permit, Construction General Permit, General Dewatering Permit~~, and~~ SUSMP and LID-compliant BMPs would be incorporated into the project to address trace metals in both the construction phase and post-development. The~~Aside from dissolved copper concentrations which are predicted to increase, the~~ average annual concentrations of all modeled trace metals~~metal concentrations~~ are predicted to decrease with project development. Average annual trace metal loads are predicted to increase for dissolved copper and total aluminum due to the increase in average annual runoff volume, and are predicted to decrease for total lead and dissolved zinc. These differences in loads and volumes concerning trace metals are due to the change of land use (from agriculture, oil and gas extraction, and open space to developed) condition and the application of LID BMPs. Predicted average annual concentrations of dissolved copper, total lead, dissolved zinc, and total aluminum are below benchmark Basin Plan objectives, California Toxics Rule (CTR) criteria, and National Ambient Water Quality Criteria (NAWQC) criteria. Cadmium is not expected to be present at significant levels in runoff discharges from the project. On this basis, the impact of the project on trace metals is considered less than significant.*

- ***Chloride:*** *MS4 Permit, Construction General Permit, Dewatering General Permit, and SUSMP and LID-compliant BMPs would be incorporated into the project to address chloride in both the construction phase and post-development. The mean predicted concentration and load of chloride is predicted to increase with development, although the predicted concentration is well below the Basin Plan objective and is near the low end of the range of observed values in the Santa Clara River Reach 5. On this basis, the impact of the project on chloride is considered less than significant.*

- ***Pesticides:*** *Pesticides in runoff may or may not increase in the post-development phase as a result of landscape applications. Proposed pesticide management practices, including source control, removal with sediments in LID BMP~~treatment control PDF~~s, and advanced irrigation controls, would minimize the presence of pesticides in runoff. During the construction phase of the project, erosion and sediment control BMPs and source controls implemented per General Permit and General De-Watering Permit requirements would prevent pesticides associated with sediment from being discharged. Final site stabilization would limit mobility of legacy pesticides that may be present in pre-development conditions. On this basis, the impact of pesticides is considered less than significant.*

- ***Pathogens:*** *Post-development pathogen sources include both natural and anthropogenic sources. The natural sources include bird and mammal excrement. Anthropogenic sources include leaking septic and sewer systems and pet wastes. Removal of agriculture and ranching operations and a reduction in open space within the project area would reduce the bacteria produced by livestock and wildlife. The project would not include septic systems and the sewer system would be designed to current standards, minimizing the potential for leaks. Thus, pet wastes are the primary source of concern. Pathogens are not expected to occur at elevated levels during the construction phase of the project. The project design features (PDFs) would include source controls and LID BMPs~~treatment controls~~ which in combination should help to reduce pathogen indicator levels in post-development stormwater runoff. On this basis, the project's impact on pathogen and pathogen indicators is considered less than significant.*

- ***Hydrocarbons:*** *Hydrocarbon concentrations would likely increase post-development because of vehicular emissions and leaks. In stormwater runoff, hydrocarbons are often associated with soot particles that can combine with other solids in the runoff. Such materials are subject to treatment in the proposed LID BMPs.~~extended detention basins and bioretention areas.~~ Source control BMPs incorporated in compliance with the MS4 Permit, the Construction General Permit, and the SUSMP would also minimize the presence of hydrocarbons in runoff. During the construction phase of the project, pursuant to the Construction General Permit, the Construction Stormwater Pollution Prevention Plan must include BMPs that address proper handling of petroleum products on the construction site, such as proper petroleum product storage and spill response practices, and those BMPs must effectively prevent the release of hydrocarbons to runoff per the Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology (BAT/BCT) standards. On this basis, the impact of the project on hydrocarbons is considered less than significant.*

- ***Trash and Debris:*** *Trash and debris in runoff are likely to increase with development. However, the project PDFs, including source control and LID ~~treatment~~ BMPs incorporated in compliance with the MS4 Permit,~~and the~~ SUSMP requirements, and the LID Performance Standard, would minimize the adverse impacts of trash and debris. Source controls, such as street sweeping, public education, fines for littering, covered trash receptacles, and storm drain stenciling are effective in reducing the amount of trash and debris that is available for mobilization during wet weather. Trash and debris would be captured in catch basin inserts in the commercial area parking lots and in the LID BMP~~treatment control PDF~~s. During the construction phase of the project, PDFs implemented per Construction General Permit and Dewatering General Permit requirements would remove trash and debris through the use of BMPs such as catch basin inserts and by general good housekeeping practices. Trash and debris are not expected to significantly impact receiving waters due to the implementation of the project PDFs.*

- ***Methylene Blue Activated Substances (MBAS):*** *The presence of soap in runoff from the project would be controlled through the source control PDFs, including a public education program on residential and charity car washing and the provision of a centralized car wash area directed to the sanitary sewer in the multi-family residential areas. Project source control PDFs would reduce the impacts of soaps in post-construction runoff. Other sources of MBAS, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices. During the construction phase of the project, equipment and vehicle washing would not use soaps or any other MBAS sources. Therefore, MBAS are not expected to significantly impact the receiving waters of the proposed project.*

- ***Cyanide****: In addition to the expected relatively low level of cyanide in untreated stormwater, cyanide in runoff from the project would be readily removed by biological uptake, degradation by microorganisms, and by volatilization in the LID BMP~~treatment PDF~~s. Therefore, cyanide is not expected to significantly impact the receiving waters of the proposed project.*

- ***Bioaccumulation:*** *According to scientific literature, the primary pollutants that are of concern with regard to bioaccumulation are mercury and selenium. However, selenium and mercury are not of concern in this watershed, so bioaccumulation of selenium and mercury is also not expected to result either during the construction or post-development project phases. On this basis, the potential for bioaccumulation in the Santa Clara River and adverse effects on waterfowl and other species is considered less than significant.*

- ***Construction Impacts:*** *Construction impacts on water quality are generally caused by soil disturbance and subsequent suspended solids discharge, or by discharge of certain non-sediment-related pollutants, including construction materials (e.g., paint, stucco, etc); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants. These impacts*

would be minimized through implementation of construction BMPs that would meet or exceed measures required by the Construction General Permit, as well as BMPs that control the other potential construction-related pollutants (e.g., petroleum hydrocarbons and metals). A SWPPP specifying BMPs for the site that meet or exceed BAT/BCT standards would be developed as required by, and in compliance with, the Construction General Permit and Los Angeles County Standard Conditions. Erosion control BMPs, including but not limited to hydro-mulch, erosion control blankets, stockpile stabilization, and other physical soil stabilization techniques, also would be implemented to prevent erosion, whereas sediment controls, including but not limited to silt fencing, sedimentation ponds, and secondary containment on stockpiles, would be implemented to trap sediment and prevent discharge. Non-stormwater and construction waste and materials management BMPs (such as vehicle and equipment fueling and washing BMPs; nonvisible pollutant monitoring; and BMPs to manage materials, products, and solid, sanitary, concrete, hazardous, and hydrocarbon wastes) also would be deployed to protect construction site runoff quality. On this basis, the construction-related impact of the project on water quality is considered less than significant.

- ***Regulatory Requirements:*** *The proposed project satisfies MS4 Permit requirements for new development, including SUSMP requirements, ~~and~~ low impact development (LID) requirements, and satisfies construction-related requirements of the Construction General Permit and General Dewatering Permit. Therefore, the project would comply with water quality regulatory requirements applicable to stormwater runoff.*

Finally, the proposed Mission Village project, including proposed drainage and hydromodification controls, would not substantially alter the existing drainage pattern of the Santa Clara River in a manner that would cause substantial erosion, siltation, or channel instability; or substantially increase the rates, velocities, frequencies, duration, and/or seasonality of flows in a manner that causes channel instability or in a manner that harms sensitive habitats or species in the River. Therefore, the impact of the project on hydromodification is considered less than significant.

2. INTRODUCTION

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

Section 4.2 of the Newhall Ranch Specific Plan (NRSP) Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with the impacts on hydrology and water quality for the entire Specific Plan. The Newhall Ranch mitigation program was adopted by the County in findings and in the revised Mitigation Monitoring Plans for the Specific Plan and Water Reclamation Plant (WRP). The NRSP Program EIR concluded that Specific Plan implementation would result in significant impacts, but that the identified mitigation measures would reduce the impacts to below a level of significance. The EIR also determined that site-specific final hydrology and grading plans would be required as the Specific Plan is implemented through the application and processing of tentative subdivision maps for Newhall Ranch. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, and the County of Los Angeles General Plan and Santa Clarita Valley Area Plan.

This project-level EIR is tiering from the previously certified Specific Plan Program EIR. **Section 4.22** assesses the Mission Village project's existing conditions, the project's potential water quality impacts, the applicable mitigation measures from the Specific Plan Program EIR and any new project-specific mitigation measures recommended by this EIR for the Mission Village project.

b. Definitions

Several terms and acronyms are identified below and used throughout this section of the EIR.

Acute Toxicity	The toxic effect that occurs immediately or shortly after a single, episodic exposure (four days or less).
USACE	United States Army Corps of Engineers.
Basin Plan	California Regional Water Quality Control Board, Los Angeles Region, (RWQCBLAR) Water Quality Control Plan (Basin Plan) for the Los Angeles Region (dated 13 June 1994; approved 23 February 1995).
Beneficial Uses	The existing or potential uses of receiving waters in the permit area as designated in the Basin Plan.[1]
Best Available Technology Economically Achievable (BAT)	A point source best management practice that reduces toxic (including heavy metals and man-made organics) and non-conventional (such as chloride and nitrogen) pollutants in discharges.
Best Conventional Pollutant Control Technology (BCT)	A best management practice that reduces conventional pollutants (including Total Suspended Solids [TSS], oil and grease, fecal coliform, pH, and bacteria) in discharges from construction sites.
Best Management Practices (BMPs)	In water pollution control, the best means available to control pollution of waterways from non-point sources, as opposed to best available technology, which applies to pollution control for point sources. BMPs include methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and non-point source discharges including storm water. BMPs include structural and nonstructural controls and operation and maintenance procedures that can be applied before, during, and/or after pollution producing activities.[2]
Bioretention	Bioretention areas are vegetated (i.e., landscaped) shallow depressions that provide storage, infiltration, and evapotranspiration, and also provide for

1 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

2 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

pollutant removal (e.g., filtration, adsorption, nutrient uptake) by filtering stormwater through the vegetation and soils. In bioretention areas, pore spaces and organic material in the soils help to retain water in the form of soil moisture and to promote the adsorption of pollutants (e.g., dissolved metals and petroleum hydrocarbons) into the soil matrix. Plants utilize soil moisture and promote the drying of the soil through transpiration.

Capital Flood (Qcap) — Theoretical 50-year design storm assumed to occur over a drainage area that has been burned and that contributes debris to runoff. Use in flood control design is required by Los Angeles County for major systems and sump conditions.

Cartridge Media Filtration — Cartridge media filtration is a passive, flow-through filtration system typically comprised of a vault (or catch basin for small drainage catchments) that houses rechargeable, media-filled cartridges that trap particulates and remove pollutants such as dissolved metals, nutrients, and hydrocarbons. During the filtering process, the treatment system also removes surface scum and floating oil and grease.

Chronic Toxicity — A toxic effect that occurs after repeated or prolonged exposure.

CDFG — California Department of Fish and Game.

CTR — California Toxics Rule (40 CFR 131.38).

CWA — The Federal Clean Water Act (33 USC Sections 1251 *et seq*.).

~~Dry Extended Detention Basins~~ — ~~Dry extended detention basins are surface impoundments designed with outlets that detain the runoff volume from the water quality design storm for some minimum time (typically 36 to 48 hours) to allow particulates and associated pollutants (phosphorus, trace metals, some pesticides, and other pollutants) to settle out.~~

EMC — Event Mean Concentration, which is the average concentration of a pollutant in the runoff from a storm event, equal to the total mass of pollutant divided by the total volume of storm runoff.

ESA — Endangered Species Act (7 USC Section 136, 16 USC Sections 460 *et seq*.).

First Flush — The first storm events in the wet season typically have higher concentrations of pollutants due to accumulation during the dry months. Pollutants deposited onto exposed areas can be dislodged and entrained by runoff; therefore, the storm water that initially runs off an area would be more polluted than the storm water that runs off after the initial rainfall. The storm water containing this high initial pollutant load is called the "first flush." Storm events occurring later in the wet season would typically have lower concentrations as less time elapses between storm events and less

	accumulation occurs. In general terms, the water quality design storms defined by SUSMP approximate the first flush event (see SUSMP).
General MS4 Permit	Regional Water Quality Control Board, Los Angeles Region Order No. 01-182, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS004001 (December 13, 2001).
HSS	Hydrodynamic separation systems (HSS) are flow-through BMPs that are installed within a storm line in order to remove large sediment particles and associated storm water pollutants, as well as floatable trash, oils, and grease.
LACDPW	Los Angeles County Department of Public Works.
LID	Low Impact Development (LID) is an approach for stormwater management that includes: minimizing impervious area/maximize permeability, minimizing directly connected impervious areas (DCIA), conserving natural areas, selecting appropriate building materials, protecting slopes and channels, and managing stormwater close to its source. The primary goals of the LID approach are to maintain a landscape functionally equivalent to pre-development hydrologic conditions and to minimize the generation of pollutants of concern. LID includes non-structural site design elements and structural BMPs (LID BMPs) at all project scales.
Low Impact/Site Design	Non-structural site design elements of the LID stormwater management approach. This term is specifically used to differentiate these BMP types from engineered structural LID BMPs that are also part of the LID stormwater management approach.
LID BMPs	Structural BMPs based on LID principles, including retention, bioinfiltration, and biofiltration. This term is used specifically to refer to engineered structural BMPs and is used to differentiate these BMPs from non-structural LID site design elements. LID BMPs provide treatment control of the stormwater that is captured and discharged.
Parcel-based LID BMPs	LID BMPs implemented at the scale of land use parcels, including retention, bioinfiltration, and biofiltration BMP types. Also referred to as Parcel-based BMPs.
Regional LID BMPs	LID BMPs implemented at the scale of project drainage areas, including regional infiltration facilities, bioinfiltration facilities, and biofiltration facilities. Also referred to as Regional Infiltration, Bioinfiltration, or Biofiltration Facilities.
Retention BMPs	LID BMPs designed to contain the design volume without discharging to the storm drain or surface waters unless this design volume is exceeded.
Biofiltration BMPs	LID BMPs designed principally to filter stormwater through media and/or vegetation.

Bioinfiltration BMPs	LID BMPs designed with retention and biofiltration components such that a portion of the design volume is retained and the remaining portion of the design volume is biofiltered and discharged.
Single Family HSCs	Hydrologic source controls (HSCs) specifically tailored to single family residential land uses, include disconnection of downspouts and impervious surfaces to landscaped areas, percolation trenches, and/or rain barrels. Considered to be a form of Parcel-based LID BMP.
Regional Infiltration / Biofiltration Facilities	LID BMPs installed at the scale of project drainage areas, incorporating a combination of infiltration and biofiltration mechanisms. Designed based on the same principles as parcel-based LID BMPs.
MEP	Maximum Extent Practicable, the standard established by Section 402(p) of the Federal Clean Water Act (33 USC Section 1342(p)) for the implementation of storm water management programs to reduce pollutants in storm water. CWA Section 402(p)(3)(B)(iii) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the administrator or the state determines appropriate for the control of such pollutants."[3] This standard has been defined to include technical feasibility, cost, and benefit derived with the burden being on the municipality to demonstrate compliance with MEP by showing that a BMP is not technically feasible in the locality or that BMPs costs would exceed any benefit to be derived.[4]
MS4	Municipal Separate Storm Sewer System, a conveyance or system of conveyances (including roads with drainage systems, municipal streets, alleys, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned by a state, city, county town or other public body, that is designed or used for collecting or conveying storm water, which is not a combined sewer, and which is not part of a publicly owned treatment works, and which discharges to "waters of the U.S." (See definition, below).[5]
NAWQC	National Ambient Water Quality Criteria.
Non-Storm Water Discharge	Any discharge to a storm drain that is not composed entirely of storm water.[6]

3 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

4 February 11, 1993 memorandum issued by the Office of Chief Counsel of the State Water Resources Control Board.

5 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

6 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

NPDES	National Pollutant Discharge Elimination System, the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements, under CWA Sections 307, 402, 318, and 405.[7]
Receiving Waters	All surface water bodies and groundwater in the Los Angeles Region that are identified in the Basin Plan and to which the proposed project discharges.[8]
RWQCB	Regional Water Quality Control Board, Los Angeles Region.
Source Control BMP	Any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices, or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source of pollution.[9]
SUSMP	The Los Angeles Countywide Standard Urban Storm Water Mitigation Plan, which addresses conditions and requirements of new development.[10]
SWRCB	State Water Resources Control Board.
SQMP	The Los Angeles Countywide Stormwater Quality Management Program, which includes descriptions of programs, collectively developed by the permittees under the General MS4 Permit in accordance with provisions of the NPDES Permit, to comply with applicable federal and state law, as the same is amended from time to time.[11]
SWPPP	Storm Water Pollution Prevention Plan, a plan, as required by a State General Construction Activity Storm Water Permit, identifying potential pollutant sources and describing the design, placement and implementation of BMPs, to effectively prevent non-storm water discharges and reduce pollutants in storm water discharges during activities covered by the General Permit.[12]
Structural BMP	Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution.[13]
TMDL	Total Maximum Daily Load, the sum of the individual wasteload allocations for point sources and load allocations for non-point sources, and natural sources that a water body may receive without compromising the designated

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7 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

8 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

9 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

10 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

11 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

12 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

13 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

beneficial use.[14] TMDLs are designated only for impaired (i.e., Section 303(d) listed) water bodies and then only as necessary to address the impairment.

Treatment Control BMP — Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process[15] (see Structural BMP). LID BMPs that treat and discharge stormwater are considered to be treatment control BMPs, however not all treatment control BMPs are characterized as LID BMPs.

U.S. EPA — United States Environmental Protection Agency.

USFWS — United States Fish and Wildlife Service.

~~Vegetated Swales — Vegetated swales are vegetated channels specifically designed to remove particulates and to reduce the velocity of runoff through the storm system. Swales provide pollutant removal through settling and filtration in the vegetation (often grasses) lining the channels and also provide the opportunity for volume reduction through infiltration and evapotranspiration.~~

Waters of the U.S. — All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; all interstate waters including interstate wetlands; all other waters, such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters (1) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (2) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) which are used or could be used for industrial purposes by industries in interstate commerce. Also included are all impoundments of waters otherwise defined as "waters of the U.S." under the definition; tributaries of water identified above; the territorial seas; and wetlands adjacent to waters (other than the waters that are themselves wetlands) identified above.[16]

By USACE definition, "waters of the U.S." are defined by the ordinary high water mark, which can be identified by physical characteristics, such as channel scouring, bank shelving, areas cleared of terrestrial vegetation, litter and debris, or other indications that may be appropriate.

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14 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

15 RWQCBLAR Order No. 01-182, NPDES Permit No. CAS004001, Glossary section.

16 33 Code of Federal Regulations (CFR) Part 328.3a.

Wetlands	Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.[17]

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

The Newhall Ranch Specific Plan Program EIR identified certain potentially significant impacts related to water quality from implementation of the Specific Plan. Specifically, the Program EIR, and related findings, determined that implementation of the adopted Specific Plan would significantly increase the potential for erosion and sediment discharge downstream during grading activity. Ongoing operation of urban uses also could result in the release of fertilizers, herbicides, or other types of contaminants that could potentially impact surface water quality. Without mitigation, impacts would be significant.

In response to identified significant impacts, the Specific Plan Program EIR identified seven feasible mitigation measures.[18] Based on substantial evidence in the record, the Board of Supervisors found that adoption of the recommended mitigation measures would reduce the identified potentially significant impacts to less than significant levels.

4. EXISTING CONDITIONS

a. Regulatory Setting

(1) Federal Clean Water Act

The CWA sets forth the national strategy for controlling water quality. The primary purpose of the act is "… to restore and maintain the chemical, physical, and biological integrity of the Nation's waters…" and to attain a level of water quality "… which provides for the protection of and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water …" (33 United States Code [USC] Section 1251(a)).

In 1972, the CWA was amended to require NPDES permits for the discharge of pollutants to waters of the United States from any point source. In 1987, the CWA again was amended to require that the U.S. EPA establish regulations for the permitting of municipal and industrial stormwater discharges under the NPDES permit program. The U.S. EPA published final regulations regarding stormwater discharges on

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17 33 Code of Federal Regulations (CFR) Part 328.3a.

18 See, Mitigation Measures 4.2-1 through 4.2-7 in both the certified NRSP Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

November 16, 1990. The regulations require that MS4 discharges to surface waters be regulated by an NPDES permit.

In addition, the CWA requires the states to adopt water quality standards for receiving water bodies and to have those standards approved by the U.S. EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing, etc.), along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents—such as lead, suspended sediment, and fecal coliform bacteria—or narrative statements which represent the quality of water that support a particular use. Because California did not establish a complete list of acceptable water quality criteria, U.S. EPA established, in the CTR, numeric water quality criteria for certain toxic constituents in receiving waters with human health or aquatic life designated uses (40 CFR Section 131.38).

(a) CWA Section 303(d) – TMDLs

When designated beneficial uses of a particular receiving water body are being compromised by water quality, Section 303(d) of the CWA requires identifying and listing that water body as "impaired." Once a water body has been deemed impaired, a TMDL must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (with a "factor of safety" included). Once established, the TMDL allocates the loads among current and future pollutant sources to the water body.

The Mission Village project would discharge stormwater and runoff to Santa Clara River Reach 5. **Table 4.22-1, ~~2006~~ 2010 CWA Section 303(d) Listings for the Santa Clara River Main Stem**, lists the water quality impairments for the Santa Clara River main stem as reported on the ~~2006~~ 2010 CWA Section 303(d) List of Water Quality Limited Segments, including reaches upstream of the project location. Reach 7 of the Santa Clara River (Bouquet Canyon Road to above Lang Gaging Station) is listed for coliform bacteria. Reach 6 (West Pier Highway 99 to Bouquet Canyon Road) is listed for coliform bacteria, chlorpyrifos, diazinon, toxicity, iron, and copper. Reach 5 of the Santa Clara River is listed for coliform bacteria and iron. Santa Clara River Reach 3, approximately 25 miles downstream of the project location and below the Dry Gap in Reach 4, is listed for total dissolved solids (TDS) and toxicity. Santa Clara River Reach 1, approximately 30 miles downstream of the project location, is listed for toxicity. The Santa Clara River estuary, located approximately 40 miles downstream of the project location, is listed for coliform, chlorinated legacy pesticides, ~~and~~ Toxaphene, toxicity, and nitrate-nitrogen.

The RWQCB has adopted nitrogen compounds (nitrate-nitrogen plus nitrite-nitrogen and ammonia), chloride; and indicator bacteria TMDLs in the Basin Plan. **Table 4.22-2, ~~2006~~ 2010 CWA Section 303(d) List of Water Quality Limited Segments Being Addressed By EPA Approved TMDLs,** lists the ~~2006~~ 2010 Section 303(d) List of Water Quality Limited Segments Being Addressed by EPA Approved TMDLs.

The Indicator Bacteria TMDL, adopted by the Regional Board on July 8, 2010, must be submitted for review and approval to the SWRCB, the State Office of Administrative Law, and the U.S. EPA. ~~Reach 7 of the Santa Clara River (Bouquet Canyon Road to above Lang Gaging Station) is listed for coliform bacteria. Reach 6 (West Pier Highway 99 to Bouquet Canyon Road) is listed for coliform bacteria, chlorpyrifos, diazinon, and toxicity; ammonia and chloride are listed as "being addressed" in the reach.~~ The wasteload allocations for municipal stormwater discharges into Reach 5 of the Santa Clara River are summarized in **Table 4.22-3, TMDL Wasteload Allocations for MS4 and Stormwater Sources to Santa Clara River Reach 5**. Pollutant reductions are regulated through effluent limits prescribed in Publicly Owned Treatment Works (POTW) and minor point source NPDES Permits, BMPs required in NPDES MS4 Permits, and SWRCB Management Measures for non-point source discharges. ~~The RWQCB has not yet adopted a TMDL for coliform in Reach 5.~~

Table 4.22-1
~~2006~~ 2010 CWA Section 303(d) Listings for the Santa Clara River Main Stem

Santa Clara River Reach or Tributary[1]	Geographic Description and Distance from Project to Upstream End of Reach	Pollutants	303(d) List Proposed TMDL Completion	Potential Sources
7	Bouquet Canyon Rd to above Lang Gaging Station (5 miles upstream)	1) Coliform Bacteria	1) Requires TMDL/2019[2]	1) Nonpoint and Point Sources
6	West Pier Hwy 99 to Bouquet Cyn Rd (Directly upstream of Project site)	1) Coliform Bacteria 2) Chlorpyrifos 3) Diazinon 4) Toxicity 5) ~~Ammonia~~Iron 6) ~~Chloride~~Copper	1) Requires TMDL/2019[2] 2) Requires TMDL/2019 3) Requires TMDL/2019 4) Requires TMDL/2019 5) Requires TMDL/2021~~Approved TMDL/2004~~ 6) Requires TMDL/2021~~Approved TMDL/2005~~	1) Source Unknown 2) Nonpoint and Point Sources 3) Source Unknown] 4) Source Unknown 5) Source Unknown 6) Nonpoint and Point Sources
5	Blue Cut Gaging Station to West Pier Hwy 99 (Project location)	1) ~~1)~~ High Coliform Count 2) Iron	1) 2019[2] 2) 2021	1) Nonpoint and Point Sources 2) Source Unkown
3	Freeman diversion dam to "A" street [1] (25 miles downstream)	1) ~~1)~~ Total Dissolved Solids 2) Toxicity	1) 201~~9~~5 2) 2021	1) Nonpoint and Point Sources

Santa Clara River Reach or Tributary[1]	Geographic Description and Distance from Project to Upstream End of Reach	Pollutants	303(d) List Proposed TMDL Completion	Potential Sources
1	Estuary to Highway 101 Bridge (30 miles downstream)	1) Toxicity	1) 2019	1) Source Unknown
--	Estuary (40 miles downstream)	1) ChemA[3] 2) Coliform 3) Toxaphene 4) Toxicity 5) Nitrate	1) 2019 2) 2019[2] 3) 2019 4) 2019 5) 2021	1) Source Unknown 2) Nonpoint Source 3) Nonpoint Source 4) Source Unknown 5) Source Unknown

Source: Geosyntec, 2010.

[1] *Reach 3 is downgradient of the "dry gap" in Reach 4.*

[2] *Indicator Bacteria TMDL adopted by LARWQCB in July 2010; not yet approved by SWRCB and U.S. EPA.*

[3] *ChemA suite of chlorinated legacy pesticides include: Aldrin, chlordane, Dieldrin, Endosulfan I/II, Endrin, gamma-BHC, heptachlor, heptachlor epoxide, and Toxaphene.*

Table 4.22-2
2010 CWA Section 303(d) List of Water Quality Limited Segments Being Addressed By EPA Approved TMDLs

Water Body Name	Pollutants	Potential Sources	EPA Approved TMDL
Santa Clara River Reach 6	Ammonia Chloride	Nonpoint/Point Source Nonpoint/Point Source	2004 2005
Santa Clara River Reach 5	Chloride	Nonpoint/Point Source	2005
Santa Clara River Reach 3	Ammonia Chloride	Nonpoint/Point Source Nonpoint/Point Source	2004~~2~~ 2002

Source: Geosyntec, 2010.

Table 4.22-3
TMDL Waste Load Allocations for MS4 and Stormwater Sources to Santa Clara River Reach 5

Impairing Pollutant	Numeric Water Quality Objective	Waste Load Allocation
Chloride	Reach 5: 150 mg/L only when chloride load reductions and/or chloride export projects are in operation and reduce chloride loading; otherwise: 100 mg/L.	Conditional waste load allocations (WLAs) for the Saugus Wastewater Reclamation Plant (WRP) and the Valencia WRP were revised from the Chloride TMDL (03-008). Other NPDES discharges contribute a minor chloride load. The conditional waste load allocations for these point sources is 150 mg/L (12-month average) and 230 mg/L (daily maximum). The source analysis indicates that non-point sources are not a major source of chloride. The conditional load allocations for non-point sources for Reach 5 is 150 mg/L (12-month average) and 230 mg/L (daily maximum). The conditional WLAs for chloride for all point sources shall apply only when chloride load reductions and/or chloride export projects are in operation by the Santa Clarita Valley Sanitation District. If these conditions are not met, waste load allocations shall be based on existing water quality objectives for chloride of 100 mg/L.

<table>
<tr><th>Impairing Pollutant</th><th>Numeric Water Quality Objective</th><th>Waste Load Allocation</th></tr>
<tr>
<td>Indicator Bacteria (Resolution R10-006)</td>
<td>
Numeric Targets:
<table>
<tr><th>Constituent</th><th>SCR Reach 5 Requirement</th></tr>
<tr><td>E. Coli
(Single Sample)</td><td>235/100 mL</td></tr>
<tr><td>E. Coli
(Geometric Mean)</td><td>126/100 mL</td></tr>
</table>
</td>
<td>
Wasteload Allocations are given in terms of allowable exceedance days. The numeric targets may not be exceeded more than the number of allowable exceedance days allotted in the tables below.

Interim Allowable Exceedance Days

(Enforceable 4 years after effective date of TMDL):
<table>
<tr><th>Time Period</th><th>Santa Clara River Reach 5</th></tr>
<tr><td>Dry Weather</td><td>17 allowable exceedance days of singe sample objectives.</td></tr>
<tr><td>Wet Weather</td><td>61 allowable exceedance days of singe sample objectives;</td></tr>
</table>

Allowable Exceedance Days

(Dry Weather enforceable 11 years after effective date of TMDL; Wet Weather enforceable 17 years after effective date of TMDL):
<table>
<tr><th>Time Period</th><th>Santa Clara River Reach 5</th></tr>
<tr><td>Dry Weather</td><td>5 allowable exceedance days of singe sample objectives:
0 allowable exceedances of geometric mean objectives</td></tr>
<tr><td>Wet Weather</td><td>16 allowable exceedance days of singe sample objectives;
0 allowable exceedances of geometric mean objectives</td></tr>
</table>
</td>
</tr>
</table>

Impairing Pollutant	Numeric Water Quality Objective			Waste Load Allocation
Nitrogen Compounds	The numeric target for nitrogen in this TMDL is based on achieving the existing nitrogen water quality objective of 5 mg/L NO_3-N + NO_2-N. (The numeric target that is used to calculate the waste load allocations includes a 10% margin of safety; thus the numeric target is 4.5 mg/L NO_3-N + NO_2-N) (30 day average). The water quality objective for ammonia in Reach 5 used in the Nitrogen Compounds TMDL were based on temperature and pH for different river segments within the reach:			Concentration-based waste loads are allocated to municipal, industrial and construction stormwater sources regulated under NPDES permits. For stormwater permittees discharging into Reach 5, the following waste load allocations apply: 30-day average nitrate plus nitrite =6.8 mg/L (NO_3-N + NO_2-N) 1-hour average ammonia = 5.2 mg/L (NH_3 as N) 30-day average ammonia = 1.75 mg/l (NH_3 as N)
	Ammonia Water Quality Objective (mg/L as N)[1]			
	Santa Clara River Reach	**1-hour average**	**30-day average**	
	Reach 5 at County Line	3.4	1.2	
	Reach 5 below Valencia	5.5	2.0	
	Reach 5 above Valencia	4.8	2.0	

Source: Geosyntec, 2010.

[1] *The numeric targets are 10 percent smaller, to incorporate a margin of safety.*

mg/L = milligrams per liter.

The Los Angeles Region 2008 Integrated Report and updated 303(d) list was approved by the Los Angeles Regional Board in July, 2009. The Integrated Report, including the updated 303(d) list, was submitted to the State Water Resources Control Board for approval along with the other Region's reports. The full State Integrated Report will then be submitted to the U.S. EPA for approval and will then be final. The Santa Clara River impairments in the draft 2008 303(d) list are summarized in Table 3-4 below. Table 3-5 lists the 2008 Section 303(d) List of Water Quality Limited Segments Being Addressed by EPA Approved TMDLs. There are no changes in the listed impairments for Reach 1. New impairments are listed for nitrate in the estuary, toxicity in the estuary and Reach 3, iron in Reach 5 and Reach 6, benthic-macroinvertebrate bioassessment in Reach 6, and copper in Reach 6. Ammonia, nitrate and nitrite are proposed for delisting in Reach 5 and ammonia is proposed for delisting in Reach 6.

(2) California Toxics Rule

The CTR is a federal regulation issued by the U.S. EPA providing water quality criteria for potentially toxic constituents in receiving waters with human health or aquatic life designated uses in the State of California. CTR criteria are applicable to the receiving water body and therefore must be calculated based upon the probable hardness values of the receiving waters for evaluation of acute (and chronic) toxicity criteria. At higher hardness values for the receiving water, copper, lead, and zinc are more likely to be complexed (bound with) components in the water column. This in turn reduces the bioavailability and resulting potential toxicity of these metals.

Due to the intermittent nature of stormwater runoff (especially in Southern California), the acute criteria are considered to be more applicable to stormwater conditions than chronic criteria and therefore are used in assessing Project impacts. For example, the average storm duration for storms greater than 0.1 inch in the 40-year Newhall rain gauge record is 1211.4 hours. Acute criteria represent the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (one hour) without deleterious effects; chronic criteria equal the highest concentration to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects.

The minimum wet-weather hardness value of 250 mg/L as $CaCO_3$ from USGS station 11108500 was used to approximate CTR criteria for metals. This value is likely to be more representative of conditions in the Santa Clara River within the Project area than the SCR Station 29 based on the water quality data summarized above. As per requirements of their discharge permit, the Valencia Water Reclamation Plant has a monitoring station just upstream of the Project area. Monthly hardness values for the Santa Clara River at this station ranged from 326 to 360 mg/L as $CaCO_3$ in 2004. Other water quality comparisons to this station were not made due to lack of wet weather monitoring. The hardness value of 250 mg/L is a conservative estimate of wet-weather hardness values that should occur in the Project area, although higher values are likely to occur.

In this document, the CTR criteria are used as one type of benchmark to evaluate the potential ecological impacts of Project runoff on the receiving waters.

(3) California Porter-Cologne Act

The federal CWA places the primary responsibility for the control of water pollution and for planning the development and use of water resources with the states, although it does establish certain guidelines for the states to follow in developing their programs.

California's primary statute governing water quality and water pollution issues is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the federal CWA. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to: adopt plans and policies; regulate discharges of waste to surface and groundwater; regulate waste disposal sites; and, require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region. The Basin Plan must conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its state water policy. To implement state and federal law, the Basin Plan establishes beneficial uses for surface and groundwaters in the region, and sets forth narrative and numeric water quality standards to protect those beneficial uses. The Porter-Cologne Act also provides that a RWQCB may include, within its regional plan, water discharge prohibitions applicable to particular conditions, areas, or types of waste.

(4) Basin Plan

The Basin Plan (1994, as amended) for the Los Angeles region provides quantitative and narrative criteria for a range of water quality constituents applicable to certain receiving water bodies. Specific criteria are provided for the larger, designated water bodies within the region, as well as general criteria or guidelines for ocean waters, bays and estuaries, inland surface waters and groundwaters. In general, the narrative criteria require that degradation of water quality does not occur due to increases in pollutant loads that would adversely impact the designated beneficial uses of a water body. For example, the Los Angeles Basin Plan requires that "[i]nland surface waters shall not contain suspended or settleable solids in amounts which cause a nuisance or adversely affect beneficial uses as a result of controllable water quality factors." Water quality criteria apply within receiving waters as opposed to applying directly to runoff; therefore, water quality criteria from the Basin Plan are utilized as benchmarks to evaluate the potential ecological impacts of project runoff on the receiving waters of the proposed project.

(5) MS4 Permit

In 2001, the RWQCB issued an NPDES Permit and Waste Discharge Requirements (Order No. 01-182) under the CWA and the Porter-Cologne Act for discharges of urban runoff in public storm drains in Los Angeles County. The permittees are Los Angeles County and the cities in the County (collectively "the co-permittees"). This permit regulates stormwater discharges from MS4s in the project area. The NPDES permit details requirements for new development and significant redevelopment, including specific sizing criteria for treatment BMPs and flow control requirements.

To implement the requirements of the NPDES permit, the co-permittees have established development planning guidance and control measures that regulate and mitigate stormwater quality and quantity impacts to receiving waters as a result of new development and redevelopment. The co-permittees are also required to implement other municipal source detection and elimination programs, as well as maintenance measures.

(a) Stormwater Quality Management Program

The MS4 Permit contains the following provisions for implementation of the SQMP by the co-permittees:

- General Requirements – Each permittee is required to implement the SQMP to comply with applicable storm water program requirements and implement additional controls where necessary to reduce the discharge of pollutants in stormwater to the MEP.

- BMP Implementation – Permittees are required to implement the most effective combination of BMPs for stormwater/urban runoff pollution control. The project would implement BMPs, consistent with the County's Low Impact Development Standards Manual (January 2009), as applicable.

- SQMP Revision – Permittees are required to revise the SQMP to comply with regional, watershed specific requirements and/or waste load allocations for implementation of TMDLs for impaired waterbodies.

- Responsibilities of the Principal Permittee – The responsibilities of the LACDPW (as the Principal Permittee) include, but are not limited to, coordinating activities necessary to comply with the NPDES permit, providing personnel and fiscal resources for SQMP updates and annual reports and summaries of reports required under the SQMP and implementing and evaluating the results of a county-wide monitoring program.

- Responsibilities of Permittees – Each permittee is required to comply with the requirements of the SQMP applicable to the discharges within its boundaries.

- Watershed Management Committees (WMCs) – WMCs are comprised of a voting representative from each permittee within the Watershed Management Areas (WMAs). WMCs are required to facilitate efforts and exchange of information between permittees, establish additional goals for WMAs, prioritize pollution control efforts, monitor implementation of tasks designated for the WMA and assess the effectiveness of and recommend revisions to the SQMP.

- Legal Authority – Permittees are granted the necessary legal authority to prohibit non-stormwater discharges to the storm drain system.

The objective of the SQMP is to reduce pollutants in urban stormwater discharges to the "maximum extent practicable" in order to attain water quality objectives and to protect the beneficial uses of receiving waters in Los Angeles County. Special provisions are provided in the MS4 Permit to facilitate implementation of the SQMP. These provisions include:

- BMP substitution – Substitution of site-specific BMPs is allowed, provided the alternative BMP would meet or exceed pollutant reduction of the original BMP, the fiscal burden of the original BMP is substantially greater than the proposed alternative, and the alternative BMP would be implemented within a similar period.

- Public Information and Participation Program (PIPP) – This requires the permittee to identify how public education needs were determined, who is responsible for developing and implementing the program, and the method used to determine its effectiveness.

- Industrial/Commercial Facilities Control Program – This requires the permittee to develop a plan for managing stormwater runoff from industrial and commercial facilities. This program would track, inspect, and ensure compliance at industrial and commercial facilities that are the sources of pollutants in storm water.

- Development Planning Program – This requires the permittee to implement a development-planning program that requires new development and redevelopment projects to minimize impacts from stormwater and urban runoff.

- Development Construction Program – This requires the permittee to implement a program to control runoff from construction activity to minimize erosion and transportation of sediment and prevent non-stormwater discharges from equipment and vehicle washing.

- Public Agency Activities Program – This requires municipalities to evaluate existing public agency activities that have an impact on stormwater quality (such as vehicle maintenance, landscape maintenance and weed control, and construction and maintenance of streets, roads, and flood control systems) and to develop a program to reduce stormwater impacts with a schedule for implementation.

- Illicit Connections and Illicit Discharges Elimination Program – This requires each permittee to have a plan for finding and preventing illegal connections and discharges and a mechanism for enforcing against illegal connections and discharges.

(b) Standard Urban Stormwater Mitigation Plan

On March 8, 2000, the development planning program requirements, including the SUSMP requirements (collectively, SUSMP requirements), were approved by the RWQCB as part of the MS4 program to address stormwater pollution from new construction and redevelopment. The SUSMP contains a list of minimum BMPs that must be employed to infiltrate or treat stormwater runoff, control peak flow discharge, and reduce the post-project discharge of pollutants from stormwater conveyance systems. The SUSMP defines, based upon land use type, the types of practices that must be included and issues that

must be addressed as appropriate to the development type and size. Compliance with SUSMP requirements is used as one method to evaluate significance of project development impacts on surface water runoff.

Finalized in May 2000, the County of Los Angeles' *Manual for the Standard Urban Stormwater Mitigation Plan* (Manual) details the requirements for new development and significant redevelopment BMPs. The Manual is a model guidance document for use by permittees and individual project owners to select post-construction BMPs and otherwise comply with the SUSMP requirements. It addresses water quality and drainage issues by specifying design standards for structural or treatment control BMPs that infiltrate or treat stormwater runoff and control peak flow discharge. BMPs are defined in the Manual and SUSMP requirements as any program, technology, process, sizing criteria, operational methods or measures, or engineered systems, which, when implemented, prevent, control, remove or reduce pollution. Treatment BMP designs criteria and guidance are also contained in the MS4 Permit, the SUSMP Manual, and in the *Stormwater Best Management Practice Design and Maintenance Manual For Publicly Maintained Storm Drain Systems* (LACDPW, 2009).

One of the most important requirements within the SUSMP is the specific sizing criterion for stormwater treatment BMPs for new development and significant redevelopment projects. The SUSMP includes sizing criteria for both volume-based and flow-based BMPs. The sizing criteria options for volume-based BMPs, such as infiltration~~extended detention~~ basins, are as follows:

1. The 85th percentile 24-hour runoff storm event determined as the maximized capture stormwater volume for the area, from the formula recommended in Urban Runoff Quality Management, Water Environment Federation (WEF) Manual of Practice No. 23/American Society of Civil Engineers (ASCE) Manual of Practice No. 87;
2. The volume of annual runoff based on unit basin storage volume, to achieve 80 percent or more volume treatment by the method recommended in the 1993 *California Stormwater Best Management Practices Handbook – Industrial/Commercial*;
3. The volume of runoff produced from a 0.75-inch storm event, prior to its discharge to a stormwater conveyance system; or
4. The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for "treatment" (0.75 inch average for the Los Angeles County Area) that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile, 24-hour runoff event.

Flow-based BMPs, such as vegetated swales, must be designed to infiltrate or treat the maximum flow rate generated from one of the following scenarios:

1. The flow of runoff produced from a rain event equal to at least 0.2 inch per hour intensity;
2. The flow of runoff produced from a rain event equal to at least two times the 85th percentile hourly rainfall intensity for Los Angeles County; or
3. The flow of runoff produced from a rain event that would result in treatment of the same portion of runoff as treated using volumetric standards above.

Also, the SUSMP includes general design specifications for individual priority project categories. These include:

- single-family hillside homes;
- 100,000-square-foot commercial developments;
- restaurants;
- retail gasoline outlets;
- automotive repair shops; and
- parking lots.

For example, commercial developments must have properly designed loading and unloading dock areas, repair and maintenance bays, and vehicle equipment wash areas. Restaurants need to have properly designed equipment and accessory wash areas. Parking lots have to be properly designed to limit oil contamination and have regular maintenance of parking lot stormwater treatment systems (e.g., storm drain filters and biofilters).

The RWQCB issued a letter in December 2006 that clarifies the Board's compliance expectations for the development planning requirements in Part 4.D of the MS4 Permit. (LARWQCB, 2006. Letter to Mark Pastrella, Assistant Deputy Director, Department of Public Works, County of Los Angeles, from Jonathan Biship, P.E., Executive Officer, California Regional Water Quality Control Board, Los Angeles Region. December 15, 2006.) Per the clarification letter, the three provisions in Part 4.D that are essential for compliance are: (1) maximization of the percentage of pervious surfaces to allow percolation of storm water into the ground; (2) minimization o the quantity of storm water directed to impervious surfaces and the MS4; and (3) minimization of the pollution emanating from parking lots through the use of appropriate treatment control BMPs and good housekeeping practices.

The proposed Mission Village project is required to incorporate appropriate SUSMP requirements into its plans as part of the approval process for building and grading permits. This analysis will identify at a project level, and consistent with the framework, conclusions, and requirements of the *Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan*, the design specifications related to treatment control BMPs and other project features associated with the Mission Village project. (Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan. Prepared for Newhall Land by Geosyntec Consultants, April 2008.) Design of these BMPs would be finalized by the project engineer with the hydrology study prior to issuance of grading permits to ensure consistency with this analysis. Geosyntec's *Sub-Regional Plan* is provided in **Appendix 4.22**.

(c) Hydromodification and Peak Flow Control

Part 4, Section D.1. of the MS4 Permit notes that increased volume, velocity, and discharge duration of stormwater runoff from developed areas may potentially accelerate downstream erosion and impair habitat-related beneficial uses in natural drainage systems. As a result, the permit stipulates that permittees shall control post-development peak storm water runoff discharge rates, velocities, and durations in natural drainage systems to prevent accelerated stream erosion and to protect stream habitat. Natural drainage systems are defined by the permit to include the Santa Clara River.

Further, under Part 4, Section D.1. of the MS4 Permit, the County and its co-permittees (the County and all cities within the County, except for the City of Long Beach) were required to develop and implement numeric criteria for peak flow control in accordance with the findings of the Peak Discharge Impact Study analyzing the potential impacts on natural streams due to impervious development by February 1, 2005. The LACDPW and the Southern California Storm Water Monitoring Coalition did not complete the Peak Discharge Impact Study in time to meet this deadline. Therefore, on January 31, 2005, the County adopted and submitted to the RWQCB an Interim Peak Flow Standard (Interim Standard) to be in effect until such time as a final standard can be adopted based on a completed study.

The adopted Los Angeles County Interim Standard was derived from a similar Interim Peak Flow Standard for Ventura County approved by the RWQCB under the SUSMP requirements provisions of the MS4 Permit. The intent of the Interim Standard, as described by the County, is to provide protection for natural streams to the extent supported by findings from the ongoing study, and consistent with practical construction practices.

The Interim Standard adopted by the County requires all post development runoff from a 2-year, 24-hour storm not to exceed the predevelopment peak flow rate, burned, from a 2-year, 24-hour storm when the predevelopment peak flow rate equals or exceeds 5 cubic feet per second. Discharge flow rates shall be calculated using the County of Los Angeles Modified Rational Method. The Peak Flow Standard also requires that post development runoff from the 50-year capital storm not exceed the predevelopment peak flow rate, burned and bulked, from the 50-year capital storm.[19]

As this is an Interim Standard, the County is aware that upon completion of the Peak Discharge Impact Study, new peak flow standards may be determined to be appropriate. Therefore, following final approval of the Peak Flow Interim Standard (PFIS), the County's peak flow requirements may be different.

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[19] See, January 31, 2005, letter, signed by Donald L. Wolfe, transmitting the Interim Standard to Jonathan Bishop of the LARWQCB. A copy of this letter is included in the Geosyntec report (2007).

Per Section 4.D(9) of the MS4 Permit, the *Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan* provides an alternative performance standard for Specific Plan projects, including Mission Village, to the Interim Peak Flow Standard. The Mission Village project would be conditioned to require, as a project design feature, sizing and design of hydraulic features as necessary to control hydromodification impacts in accordance with performance standards designed to protect channel integrity of the Santa Clara River. The proposed project would incorporate hydromodification control facilities in accordance with this analysis, and the *Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan*. As part of the hydrology study, and prior to issuance of a grading permit, the project engineer must analyze and design the drainage facilities to meet the performance standards set forth in this analysis and the *Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan*.

(6) Los Angeles County Low Impact (LID) Development Ordinance

Chapter 12.84 of the Los Angeles County Municipal Code requires the use of LID standards in development projects. Chapter 12.84 requires that applicable development projects:

- Mimic undeveloped stormwater and urban runoff rates and volumes in any storm event up to and including the "50-year capital design storm event," as defined by LACDPW;
- Prevent pollutants of concern from leaving the development site in stormwater as the result of storms, up to and including a water quality design storm event; and
- Minimize hydromodification impacts to natural drainage systems.

To meet these standards, development projects that consist of five or more residential units, or nonresidential development, shall comply with the following:

- The excess volume (defined as the post-developed runoff volume minus the pre-developed runoff volume for the 85th percentile storm event) from each lot upon which such development is occurring shall be infiltrated at the lot level, or in the alternative, the excess volume from the entire development site, including streets and public right-of-way, shall be infiltrated in sub-regional facilities. The tributary area of a sub-regional facility shall be limited to 5 acres, but may be exceeded with approval of the Director of LACDPW. When infiltration of all excess volume is not technically feasible, on-site storage, reuse, or other water conservation uses of the excess volume is required and shall be implemented as authorized by the Director of LACDPW.

LACDPW has developed a LID Standards Manual that outlines stormwater runoff quantity and quality control development principles, technologies, and design standards for achieving the LID Standards of Chapter 12.84. The LID Standards Manual requires that large scale residential and nonresidential development projects prioritize the selection of BMPs to treat stormwater pollutants, reduce stormwater runoff volume, and promote groundwater infiltration and stormwater reuse in an integrated approach to

protecting water quality and managing water resources. The Manual states that BMPs should be implemented in the following order of preference:

1. BMPs that promote infiltration.
2. BMPs that store and beneficially use stormwater runoff.
3. BMPs that utilize the runoff for other water conservation uses including, but not limited to, BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction and integrate multiple uses, and BMPs that percolate runoff through engineered soil and allow it to discharge downstream slowly.

If compliance with the above LID requirements is technically infeasible, in whole or in part, the project must incorporate design features demonstrating compliance with the LID requirements to the maximum extent practicable. The LID goals of increasing groundwater recharge, enhancing water quality, and preventing degradation to downstream natural drainage courses would be considered by LACDPW in the determination of infeasibility.

The LID Standards Manual outlines site conditions where infiltration may not be possible:

- Locations where seasonal high groundwater is within 10 feet of the surface.
- Within 100 feet of a groundwater well used for drinking water.
- Brownfield development sites or other locations where pollutant mobilization is a documented concern.
- Locations with potential geotechnical hazards as outlined in a report prepared and stamped by a licensed geotechnical engineer.
- Locations with natural, undisturbed soil infiltration rates of less than 0.5 inch per hour that do not support infiltration-based BMPs.
- Locations where infiltration could cause adverse impacts to biological resources.
- Development projects in which the use of infiltration BMPs would conflict with local, state, or federal ordinances or building codes.
- Locations where infiltration would cause health and safety concerns.

The LID Standards Manual outlines where storage and reuse of the excess volume may not be possible:

- Projects that would not provide sufficient irrigation or (where permitted) domestic grey water demand for use of stored runoff due to limited landscaping or extensive use of low water use plant palettes in landscaped areas.
- Projects that are required to use reclaimed water for irrigation of landscaping.

- Development projects in which the storage and reuse of stormwater runoff would conflict with local, state, or federal ordinances or building codes.
- Locations where storage facilities would cause potential geotechnical hazards as outlined in a report prepared and stamped by a licensed geotechnical engineer.
- Locations where storage facilities would cause health and safety concerns.

The LID Standards Manual also contains drainage analysis requirements for hydromodification impacts to off-site property. Although project applicants must still demonstrate that the project mitigates for hydromodification impacts to the satisfaction of the Director of Public Works, the LID Standards Manual provides for the following exemptions from conducting a full analysis for hydromodification impacts:

- Projects that disturb less than 1 acre.
- Less than 10,000 square feet of new impervious area.
- Projects that do not increase impervious area or decrease the infiltration capacity of pervious areas compared to pre-project conditions.
- Projects that are replacement, maintenance, or repair of an existing permitted flood control facility.
- Projects within a watershed or subwatershed where a geomorphically based watershed study has been prepared that establishes that the potential for hydromodification impacts is not present based on appropriate assessment and evaluation of relevant factors, including: runoff characteristics, soil conditions, watershed size and conditions, channel conditions, and proposed levels of development within the watershed.
- Projects that discharge directly or via a storm drain into concrete or significantly hardened channels, which in turn discharge into a sump area under tidal influence, or other receiving water that is not susceptible to hydromodification impacts.
- Projects that have hydrologic control measures that include sufficient subregional, regional, in-stream control measures, or a combination thereof such that hydromodification will not occur.

(7) Construction Permits

Pursuant to the CWA Section 402(p), which requires regulations for permitting of certain stormwater discharges, the SWRCB has issued a statewide general NPDES Permit and Waste Discharge Requirements for stormwater discharges from construction sites (NPDES No. CAS000002). (See California Water Resources Control Board Resolution No. 2001-046; Modification of Water Quality Order 99-08-DWQ SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity (adopted by the SWRCB on April 26, 2001).

Under this Construction General Permit, discharges of stormwater from construction sites with a disturbed area of 1 or more acres (effective July 1, 2010) are required to either obtain individual NPDES

permits for stormwater discharges or be covered by the Construction General Permit. Coverage under the Construction General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB. Each applicant under the Construction General Permit must ensure that a construction site risk assessment to determine appropriate coverage level; preparing an SWPPP is prepared prior to grading), including site maps, a Construction Site Monitoring Program (CSMP), and sediment basin design calculations; for projects located outside of a Phase I or Phase II permit area, completing a post-construction water balance calculation for hydromodification controls; and implemented during construction. completing a Notice of Intent. All of these documents must be electronically submitted to the SWRCB for General Permit coverage. The primary objective of the SWPPP is to identify, construct, implement, and maintain proper construction, implementation, and maintenance of BMPs to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction. The SWPPP also outlines the monitoring and sampling program required for the construction site to verify compliance with the requirements of discharge Numeric Action Levels (NALs) set by the Construction General Permit is used as one method to evaluate project construction-related impacts on surface water quality.

(8) General Waste Discharge Requirements for Dischargers of Groundwater From Construction and Project Dewatering

The Los Angeles RWQCB has issued a General NPDES Permit and General Waste Discharge Requirements (WDRs) (Order No. R4-2008-0032, NPDES No. CAG994004), which superseded the former dewatering permit (Order No. R4 2003-011). This permit governs construction-related dewatering discharges within the project development areas (the "General Dewatering Permit"). This permit addresses discharges from temporary dewatering operations during construction and permanent dewatering operations associated with development. The discharge requirements include provisions mandating notification, sampling and analysis, and reporting of dewatering and testing-related discharges. The General Dewatering Permit authorizes construction-related activities so long as all conditions of the permit are fulfilled. The primary objective of the General Dewatering Permit conditions is to identify and control pollutants in construction-related dewatering discharges. Compliance with the requirements of the General Dewatering Permit is used as one method to evaluate project construction-related impacts on surface water quality.

(9) Discharge of Fill or Dredge Materials

Hydrologic conditions of concern addressed in this report include in-stream changes in sediment transport, erosion, sedimentation and ultimately channel stability. There is a nexus between these concerns and the stream, habitat, and species protection programs administered by USACE, CDFG, and USFWS.

Section 404 of the CWA is a program that regulates the discharge of dredged and fill material into "waters of the United States," including wetlands. Activities in waters of the United States that are regulated under this program include fills for development (including physical alterations to drainages to accommodate storm drainage, stabilization, and flood control improvements), water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. The U.S. EPA and the USACE have issued Section 404(b)(1) Guidelines (40 CFR Section 230) that regulate dredge and fill activities, including water quality aspects of such activities. Subpart C, at Sections 230.20 through 230.25, contains water quality regulations applicable to dredge and fill activities. Among other topics, these guidelines address discharges that alter substrate elevation or contours, suspended particulates, water clarity, nutrients and chemical content, current patterns and water circulation, water fluctuations (including those that alter erosion or sediment rates) and salinity gradients.

Section 401 of the CWA requires that any person applying for a federal permit or license that may result in a discharge of pollutants into waters of the United States obtain a state water quality certification that the activity complies with all applicable water quality standards, limitations, and restrictions. No license or permit may be issued by a federal agency until certification required by Section 401 has been granted. Further, no license or permit may be issued if certification has been denied. CWA Section 404 permits and authorizations are subject to Section 401 certification by the RWQCBs.

The CDFG is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the law requires the proponent of a project that may impact a river, stream, or lake to notify the CDFG before beginning the project. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life, and watercourses having a surface or subsurface flow that support or have supported riparian vegetation.

Section 1602 of the Fish and Game Code requires any person who proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake or use materials from a streambed to notify the CDFG before beginning the project. Similarly, under Section 1602, before any state or local governmental agency or public utility begins a construction project that will (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake, it must first notify the CDFG of the proposed project. If the CDFG determines that the project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required. (The impacts associated with physical alterations to jurisdictional areas are evaluated in **Section 4.4, Biota**, of this EIR.) However, the direct and indirect effects on water quality associated with the proposed project, including physical alterations to jurisdictional areas, are evaluated

below. In addition, potential changes in flow characteristics that affect beneficial uses and water quality due to increased erosion, deposition, or changes in channel stability are considered in this section.

b. Physical Setting

(1) Receiving Water Bodies and Beneficial Uses

(a) Santa Clara River

The Mission Village project consists of an approximately 1,261.8-gross-acre tract map site, of which 217 acres are within the Santa Clara River and would not be developed, as well as off-site improvements necessary to support the development. Off-site improvements include a utility corridor, Magic Mountain Parkway roadway extension, off-site grading for Commerce Center Drive and Westridge Parkway extensions, Southern California electrical substation, potable and reclaimed water tank sites, debris basins and a regional biofiltration facility (i.e., water quality basin) (Please see Project Description Section 4.1, for more detail). The proposed project also includes construction of the Commerce Center Drive Bridge component of the Specific Plan. As shown in **Figure 4.22-1**, the tract map site abuts Six Flags Magic Mountain Theme Park to the east, the proposed Entrada project (VTTM 53295) lies to the east, with the existing community of Westridge and the proposed Legacy Village (VTTM 61996) project further to the southeast and south, respectively. The proposed Homestead project (VTTM 60678) within Newhall Ranch Specific Plan lies to the west of the project boundaries, and the proposed Landmark Village (VTTM 53108) lies northwest at the confluence of Castaic Creek and the Santa Clara River. The Commerce Center Drive Bridge is on the northeast side of the tract map site, and it would span approximately 1,300 feet over the Santa Clara River, with a width of about 120–129 feet. Support for the bridge would involve construction of concrete piers within the river corridor. Each pier would be spaced about 100 feet apart. Abutments and bank stabilization would be required on both sides of the bridge to protect against erosive forces. The tract map site itself consists of open space, land under agricultural cultivation, and oil and gas extraction wells with associated access roads.

The utility corridor runs parallel to State Route (SR) 126 on the north side of the Santa Clara River, from the approved Newhall Ranch WRP near the Los Angeles County/Ventura County line to Interstate 5 (I-5), and then easterly to the existing Los Angeles County Sanitation District 32 Water Reclamation Plant. The Magic Mountain Parkway extension would proceed southwest from its existing terminus at The Old Road for a distance of approximately 5,000 feet before intersecting with the project site. Two alternative locations for a Southern California Edison substation are located adjacent to the Edison powerlines in the Potrero area of the NRSP and Legacy Village (VTTM 61996), west of the project. The water tanks are located off site just south of the project boundary. Existing conditions of the utility corridor, roadway extension, Edison substation, and potable and reclaimed water tank sites are undeveloped open space or agricultural lands.

The project is located adjacent to Santa Clara River Reach 5,[20] immediately upstream of its confluence with Lion Canyon. The tentative tract map site boundary comprises 1,261.8 gross acres within a 2,650 acre drainage area within the 1,634-square-mile Santa Clara River Watershed.

The Los Angeles Basin Plan lists the beneficial uses of major water bodies within this region and includes Santa Clara River Reach 5 as shown in **Table 4.22-4, Beneficial Uses of Receiving Waters**.

Table 4.22-4
Beneficial Uses of Receiving Waters

Water Body	Beneficial Uses[1]											
	MUN	IND	PROC	AGR	GWR	FRSH	REC1	REC2	WARM	WILD	RARE	WET1
Santa Clara River (Hydrologic Unit 403.51)	P*	E	E	E	E	E	E	E	E	E	E	E

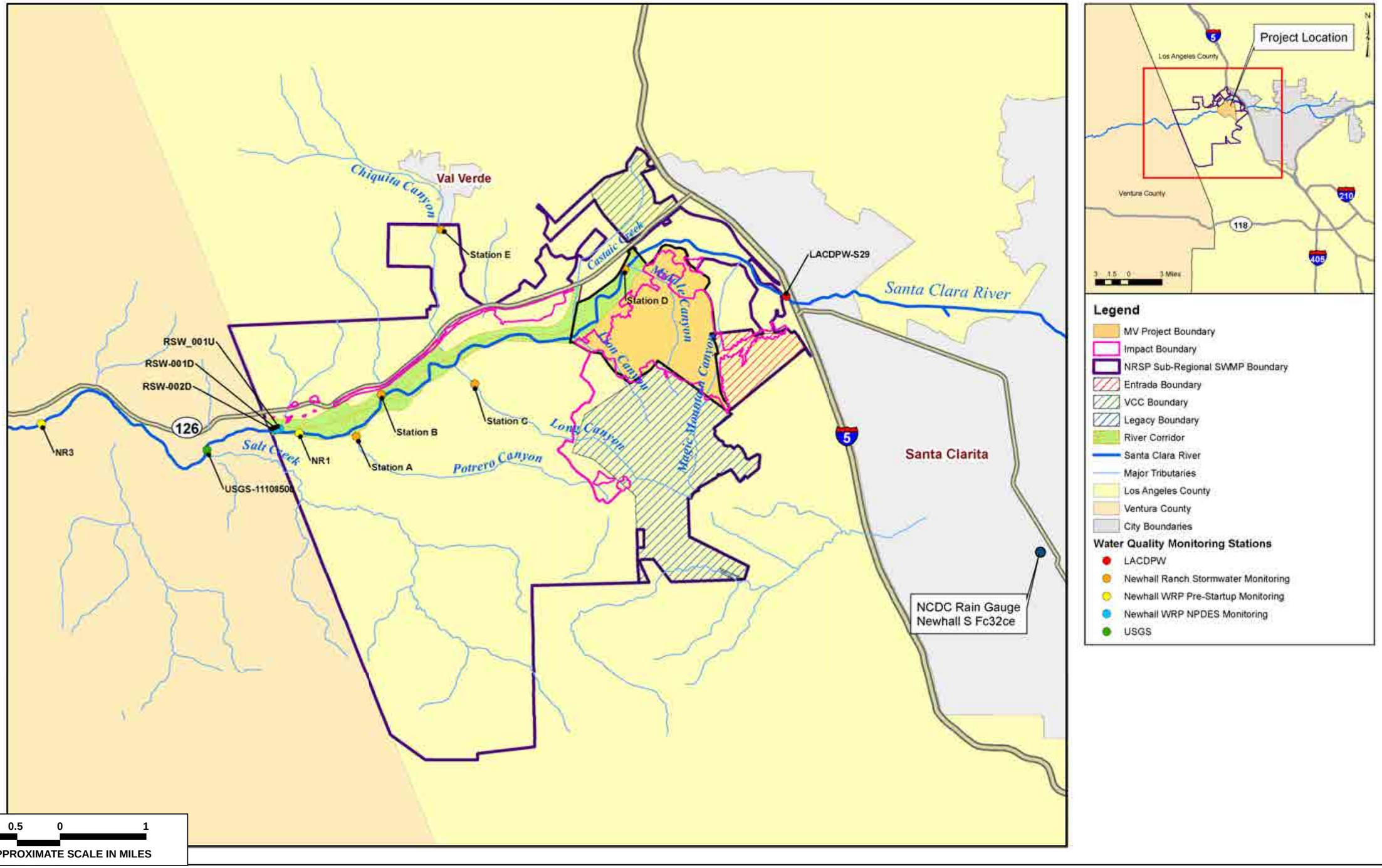
Source: Geosyntec, 2010.

[1] *Waterbodies designated as WET may have wetlands habitat associated with only a portion of the waterbody. Any regulatory action would require a detailed analysis of the area.*

E – Existing beneficial use; P – Potential beneficial use

* *Asterisked MUN designations are designated under SB 88-63 and RB 89-03. Some designations may be considered for exemptions at a later date.*

20 The Santa Clara River is divided into reaches for purposes of establishing beneficial uses and water quality objectives. However, there are two reach classifications, one established by the LARWQCB and one established by the U.S. EPA. Both of these reach classifications are used by the LARWQCB and the EPA in various documents, which at times is a source of confusion. This report will use the LARWQCB reach numbers.



SOURCE: GeoSyntec - March 2010

FIGURE **4.22-1**

Project Location Map

32-99•08/10

As identified in **Table 4.22-4** above, the existing and potential beneficial uses of Santa Clara River Reach 5 include the following:

MUN: community, military or individual water supply systems including, but not limited to, drinking water supply (a potential beneficial use)

IND: industrial activities that do not depend primarily on water quality

PROC: industrial activities that depend primarily on water quality

AGR: agricultural supply waters used for farming, horticulture or ranching

GWR: groundwater recharge for natural or artificial recharge of groundwater

REC1: water contact recreation involving body contact with water where ingestion is reasonably possible

REC2: non-contact water recreation for activities in proximity to water, but not involving body contact

WARM: warm freshwater habitat to support warm water ecosystems

WILD: wildlife habitat waters that support wildlife habitats

RARE: waters that support rare, threatened or endangered species and associated habitats

WET: wetland ecosystems

The Santa Clara River watershed drains an area of 1,634 square miles in the Transverse mountain range of Southern California. The Santa Clara River flows generally west from its headwaters near Acton to the Pacific Ocean near the City of Ventura, approximately 40 miles downstream of the project location. The River exhibits some perennial flow in its eastern-most stretches within the Angeles National Forest, then flows intermittently westward within Los Angeles County. The principal tributaries of the upper watershed in Los Angeles County are Castaic Creek, Bouquet Canyon Creek, San Francisquito Creek, and the South Fork of the Santa Clara River. Placerita Creek is a large tributary draining the western-most end of the San Gabriel Mountains; it joins the South Fork, which flows directly into the Santa Clara River. Castaic Creek is a south-trending creek that confluences with the Santa Clara River upstream and adjacent to the project. (Castaic Lake is a California Department of Water Resources (DWR) owned reservoir located on Castaic Creek.) San Francisquito Canyon Creek is an intermittent stream in the watershed adjacent to Bouquet Canyon and to the southeast. Elevations within the watershed range from sea level at the River mouth to 8,800 feet at the summit of Mount Pinos in the northwest corner of the watershed.

The principal sources of water contributing to the base flow of the Santa Clara River are (1) groundwater from the Alluvial aquifer basin in Los Angeles County, which seeps into the riverbed near, and downstream of, Round Mountain (located just below the mouth of San Francisquito Creek); (2) tertiary-treated water discharged to the Santa Clara River from two existing Los Angeles County Sanitation District WRPs—the Saugus WRP, located near Bouquet Canyon Road bridge and the Valencia WRP, located immediately downstream of I-5 (for locations, see **Figure 2.0-1**); and (3) in some years, DWR-released flood flows from Castaic Lake into Castaic Creek during winter and spring months. The Saugus WRP, located near Bouquet Canyon Road bridge, has a permitted dry weather average design capacity of 6.5 million gallons per day (mgd), creating surface flows from the outfall to near I-5. The Valencia WRP outfall is located immediately downstream of the I-5 bridge and has a permitted dry weather average design capacity of 21.6 mgd, creating surface flows extending through the project area and into the far eastern portion of Ventura County. The combined average treated discharge from both WRPs between January 2004 and June 2007 was approximately 20 mgd.

The reach of the Santa Clara River within and adjacent to the project has multiple channels (braided). This kind of system is characterized by high sediment loads, high bank erodibility, and intense and intermittent runoff conditions. Combined with the relatively flat gradient of the Santa Clara River at this point (less than one percent), the Santa Clara River has a high potential to aggrade (deposit sediment) at low flow velocities (PACE, 2007).

Physiography. The Santa Clara River flows through a complex, tectonically active trough. Some of the most rapid rates of geologically current uplift in the world are reported from the Ventura anticline and San Gabriel Mountains, just to the northwest and southeast, respectively, of the river. Slopes are very steep, with local relief of 3,000 to 4,000 feet being common. Geologic faults in the area, have brought harder, more resistant sedimentary rocks over softer and younger sedimentary formations, though all formations are fundamentally soft and erodible. On either side of the faults, sandstone and mudstones formations are dominant. The northeastern and southeastern corners of the watershed are underlain by deeply weathered granitic and schistose rocks, which produce sands that are coarser than those of other rock units when they weather and erode. The San Gabriel fault crosses the valley, bringing slightly more resistant rock to the surface and creating a local base level reflected as a slight rise or 'bump' on the river's longitudinal profile.

Most geologic materials in the watershed decompose mainly to silt, clay, and sand, with some coarser materials. Most sediment moved by the Santa Clara River and its main tributaries is fine, with less than 5 percent bedload-sized material (>0.25 millimeters [mm], or about 0.01 inch in diameter). Some gravels and cobbles do occur within the beds of the stream and in their alluvium. Nonetheless, both the bed and the sediment transported by the river tend to be finer than in most Southern California watersheds.

Flows. Downstream of the Valencia WRP, the Santa Clara River is perennial past the Los Angeles/Ventura County line to approximately Rancho Camulos. Flows in the Santa Clara River can also be affected by groundwater dewatering operations or by diversions for agriculture or groundwater recharge. Throughout the Santa Clara River channel, there are complex surface water/groundwater interactions where both gaining and losing river segments are found. Downstream of the County line, however, the Santa Clara River flows through the Piru groundwater basin, which represents a "Dry Gap" where dry-season surface flows are interrupted and streamflow entirely infiltrates to groundwater.

The Santa Clara River is underlain by several distinct alluvial groundwater basins in Ventura County—the Piru, Fillmore, and Santa Paula Basins. These basins are divided longitudinally by sills or ridges of bedrock that support areas of locally high (shallow) groundwater, including the area upstream from the County line (above the Piru Basin), and upstream from the mouth of Sespe Creek (the transition between the Piru and Fillmore Basins). This locally high groundwater sustains summer baseflow and riparian vegetation within the Santa Clara River corridor even through relatively dry climatic cycles.

Flows in the Santa Clara River, as in most Southern California streams, are highly episodic. For the gaged period between 1953 and 1996, annual flow at the Los Angeles/Ventura County line guage ranged between 253,000 acre-feet (1969) and 561 acre-feet (1961). Annual peak flows at the County line between 1953 and 1996 ranged from 68,800 cubic feet per second (cfs) (1969) to 109 cfs (1960). Of note is that the second highest annual peak, 32,000 cfs in 1966, was less than half of the highest peak (68,800 in 1969). These large episodic events have a significant impact on the geomorphic characteristics of the Santa Clara River mainstem.

After studying the response of the river to several different anthropogenic and natural disturbances, Balance Hydrologics concluded that the Santa Clara River, as with many streams in semi-arid Southern California, is highly episodic. Concepts of "normal" or "average" sediment-supply and flow conditions have limited value in this "flashy" environment, where episodic storm and wildfire events have enormous influence on sediment and storm flow conditions. In these streams, a large portion of the sediment movement events can occur in a matter of hours or days. Other perturbations that can potentially affect channel geometry appear to have transitory or minor manifestations. For example, effects on Santa Clara River channel width due to the 1980s levee construction was barely discernible by the first few years of the 21st century, probably mostly due to morphologic compensation associated with the storm events in the mid- to late-1990s. As a result, channel morphology, stability, and character of the Santa Clara River is almost entirely determined by the "reset" events that occur within the watershed.

Vegetation and Habitat Types. Much of the watershed upstream of the Specific Plan area receives rainfall averaging about 18 to 25 inches per year. As throughout Southern California, rainfall in the Santa Clara

River watershed alternates between wet and dry periods, a variation that is central to understanding the geomorphic history of the watershed. Wet cycles tend to persist for several years, sometimes for periods of six or eight years, during which rainfall, although variable, may average about 140 to 150 percent of the long-term average. For the woody riparian vegetation along the banks and on islands in the braided channels, these are crucial periods for establishment and growth. During dry cycles, the roots of the riparian vegetation must grow downward to the water table or perched zones, and where it cannot do so, this band of vegetation will die back.

The existing Santa Clara River channel contains a variety of vegetation types. (Impact Sciences, 2003. Revised Additional Analysis to the Newhall Ranch Specific Plan and WRP Final EIR, Volume VIII. Prepared for Los Angeles County Department of Regional Planning by Impact Sciences Inc., May 2003.). The active Santa Clara River channel is mostly barren due to scouring by seasonal storm flows. However, vegetation types on the adjacent terraces vary based on elevation relative to the active channel bottom and the frequency of flooding. The following series of vegetation types occur along a vertical gradient from the channel bottom to the highest Santa Clara River terrace on the floodplain: emergent herbaceous, woody shrubs, and trees.

The Santa Clara River corridor at the project site supports three general categories of habitat: (1) aquatic habitats, consisting of flowing or ponded water; (2) wetland habitats, consisting of emergent herbs rooted in ponded water or saturated soils along the margins of the active channel; and (3) riparian habitat, consisting of woody vegetation along the margins of the active channel and on the floodplain. (See Impact Sciences, 2003. Revised Additional Analysis to the Newhall Ranch Specific Plan and WRP Final EIR, Volume VIII. Prepared for Los Angeles County Department of Regional Planning by Impact Sciences Inc. May 2003.) Both year-round and seasonal aquatic habitats are provided and are subject to periodic disturbances from winter flood flows. These flows inundate areas that are dry most of the year. They also carry and deposit sediment, seeds, and organic debris; form new sandbars and destroy old ones; and erode stands of vegetation. New stands of vegetation are created where vegetation becomes established by seeds or buried stems. Thus, the aquatic habitats of the river are in a constant state of creation, development, disturbance, and destruction.

(b) Tributaries to the Santa Clara River

Three tributary watersheds to the Santa Clara River lie within the Mission Village project boundary: Middle Canyon, Magic Mountain Canyon, and Lion Canyon. Lion Canyon and Middle Canyon are unimproved in the existing condition. The Magic Mountain Canyon tributary watershed drains to an existing concrete channel that runs through the Six Flags Magic Mountain Theme Park. The tentative tract

map site discharges sheet flows to these tributaries in the existing condition, but would not discharge to the tributaries in the post-developed condition.

The 0.53-square-mile (340-acre) Middle Canyon watershed is a tributary to the southern bank of the Santa Clara River. The total length of the mainstem channel is approximately 7,967 feet, with an average overall slope of 3.7 percent. Approximately 272 acres (80 percent) of the watershed is located within the Specific Plan boundary. Generally, the soils in the watershed are characterized as Castaic-Balcom silty clay loams, and predominately are classified as being in hydrologic soil group "C" (higher runoff potential). This watershed is dominated by California sagebrush scrub, with small pockets of mixed chaparral and California grassland. The stream channel flows through California grassland, agricultural areas, alluvial scrub, and live oak woodland. A freshwater marsh is present at the Santa Clara River confluence.

The 1.32-square-mile (847-acre) Magic Mountain Canyon watershed is a tributary to the southern bank of the Santa Clara River. The total length of the mainstem channel is approximately 4,813 feet, with an average overall slope of 3.4 percent. Approximately 178 acres (27 percent) of the watershed is located within the Specific Plan boundary. Generally, the soils in the watershed are characterized as Castaic and Saugus soils and Castaic-Balcom silty clay loams, and predominately are classified as being in hydrologic soil group "C" (higher runoff potential). The associated vegetative cover within the watershed varies, but primarily consists of California sagebrush scrub and disturbed land.

The 0.84-square-mile (539 acre) Lion Canyon watershed is a tributary to the southern bank of the Santa Clara River. The total length of the mainstem channel is approximately 4,761 feet, with an average overall slope of 4.6 percent. Approximately 280 acres (52 percent) of the watershed area is located within the Specific Plan boundary, the remainder is upstream in the Legacy Village project (see **Figure 4.22-1**). The creek flows in a general east to west direction and joins the Santa Clara River floodplain valley. Generally, the soils in the watershed are characterized as Castaic and Saugus soils with Saugus loam, and predominately are classified as being in hydrologic soil group "B/C" (moderate runoff potential). The associated vegetative cover within the watershed varies, but primarily consists of California sagebrush scrub and chaparral.

(2) Water Quality Leaving Tract Map Site

The tract map site is presently either open space, under agricultural cultivation, or oil and gas extraction wells with associated access roads, and runoff discharges via sheet flow to one of the three tributaries to the Santa Clara River—Middle Canyon, Magic Mountain Canyon, or Lion Canyon. The following tables provide modeling estimates for pollutants of concern presently contained in existing average annual stormwater runoff leaving the tract map site.

Table 4.22-5, Existing Modeled Pollutant Loads and Concentrations, shows predicted concentrations and loads of contaminants for which sufficient flow composite sampling data exists in the Los Angeles County database to conduct modeling predictions under existing conditions. As can be seen, the average annual TSS concentration is predicted to be 238~~233~~ mg/L, while the average annual TSS load is predicted to be 100,000 pounds (50 tons) per year. The average annual total phosphorus concentration is predicted to be 0.47 mg/L, while the average annual load is predicted to be 196~~198~~ pounds per year. The average annual nitrate-nitrogen plus nitrite nitrogen concentration is predicted to be 1.5 mg/L, while the average annual load is predicted to be 647 pounds per year. This table also indicates that the average annual ammonia concentrations are estimated at 0.46 mg/L, while the average annual load is estimated to be 177~~179~~ pounds. Finally, the average annual chloride concentrations are estimated at 12 mg/L, while the average annual load is estimated at 4,000 pounds (2 tons).

Table 4.22-5
Existing Modeled Pollutant Loads and Concentrations

Constituent	Average Annual Concentration (mg/L)	Average Annual Load (lbs/year)
Total Suspended Solids	238~~233~~	100,000
Total Phosphorus	0.47	196~~198~~
Nitrate-nitrogen plus nitrite-nitrogen	1.5	647
Ammonia	0.46	177~~179~~
Chloride	12	4,000

Source: Geosyntec, 2011~~2010~~.

Site runoff is also predicted to contain metals in the existing condition such as aluminum, copper, lead, and zinc. Existing modeled concentrations and loads for these metals in site runoff are contained in **Table 4.22-6, Existing Modeled Metals**. As shown, modeled average annual concentrations of copper are estimated at 10 micrograms per liter (µg/L), lead is estimated at 12 µg/L, zinc is estimated at 282 µg/L, and aluminum is estimated at 1,430~~427~~ µg/L. Average annual loadings of copper and lead are also similar at 4 and 5 pounds per year, respectively, while zinc and aluminum loadings are much higher at an estimated 104~~105~~ pounds per year and 567~~568~~ pounds per year, respectively.

Table 4.22-6
Existing Modeled Metals

Constituent	Average Annual Concentration (µg/l)	Average Annual Load (lbs/year)
Copper*	10	4
Lead	12	5
Zinc*	282	104~~105~~
Aluminum	1,430~~427~~	567~~568~~

Source: Geosyntec, 2011~~2010~~.
** Dissolved Form*

(3) Receiving Water Quality

In the *Mission Village Water Quality Technical Report* (Geosyntec, 2010, **Appendix 4.22**), the existing wet and dry weather surface water quality in the project area was characterized from available water quality monitoring data obtained from the following four sources:

1. **Newhall Ranch Tributary Stormwater Monitoring**. Two storm events were monitored in Potrero Canyon, San Martinez Grande Canyon, Middle Canyon, Chiquito Canyon, and an unnamed tributary in Long Canyon. This data is relevant in terms of characterizing the existing stormwater runoff within the Project area. Although limited, this data is relevant in terms of characterizing the existing stormwater runoff within the Santa Clara River tributaries within the NRSP area as the conditions within these watersheds have not been altered since 2000.

   The stormwater samples were collected at five monitoring locations shown on **Figure 4.22-1**. Three of the five stations were located at the mouths of river tributaries in Potrero (Station A), San Martinez (Station B), and Middle Canyons (Station D). The other two monitoring stations were located on tributaries upstream from the main stem of the river; one was just downstream of Val Verde in Chiquito Canyon (Station E) and one was on an unnamed tributary in Long Canyon, 0.25 mile upstream of the "Onion Field" (Station C). Aside from Station E, which is downgradient of existing residential uses, the land uses in the areas tributary to Stations A, B, C, and D are predominantly open space with some agricultural, natural gas, and oil extraction operations.

2. **Newhall WRP**. The Newhall Ranch is required to conduct pre-startup water quality monitoring at upstream and downstream locations from the outfall of the approved Newhall WRP. Wet and dry weather monitoring data were collected from two stations in the SCR from the spring of 2004 through 2007: one station is near the downstream boundary of the NRSP area near to the proposed WRP outfall location, and the second is about 2.5 miles further downstream. Additionally, dry weather monitoring has been conducted at three stations (RSW-001U, RSW-001D, RSW-002D) as required by the Newhall WRP NPDES Permit (LARWQCB, 2007). These stations are referred to below as the "Newhall WRP NPDES Stations."

3. **Los Angeles County Monitoring**. The County of Los Angeles conducts in-stream water quality monitoring on the mainstem of the Santa Clara River at a mass emission station located at The Old Road, which is at the upstream boundary of the Specific Plan area. Wet weather monitoring data are available from November 2002 through February 2009. The County monitoring data are the most current and are the only source of wet weather monitoring in the Santa Clara River immediately upstream of the Specific Plan area.

4. **USGS Monitoring**. The US Geological Survey (USGS) has collected stream flow and water quality data in the Santa Clara River near the county line (USGS station 11108500) from 1951 through 1995. These data provide a historical perspective of wet and dry weather water quality in the River immediately downstream from the Specific Plan area.

Table 4.22-7, Average Wet Weather Monitoring Data for 2-Day Precedent Rainfall between 0.1 and 1.0 Inches, and **Table 4.22-8, Average Wet Weather Monitoring Data for 2-Day Precedent Rainfall of >1 Inch**, summarize the average values from wet weather monitoring data for all monitoring locations within the Newhall Ranch area. To facilitate interpretation, the wet weather water quality data were grouped into two categories depending on the depth of two-day antecedent rainfall measured at the Newhall rain gauge:

1. 0.1–1 inch. Rainfall depths that would likely produce runoff volumes characteristic of more frequent, smaller storm events.

2. >1 inch. Rainfall depths that would likely produce runoff volumes characteristic of larger, less frequent storm events.

Table 4.22-7
Average Wet Weather Monitoring Data for 2-Day Precedent Rainfall between 0.1 and 1.0 Inch

Constituent	LACDPW Mass Emission Station	Newhall Ranch Specific Plan Area Tributary Monitoring					Newhall Ranch WRP Startup Monitoring		USGS Wet Weather Monitoring
	S29	*Site A*	*Site B*	*Site C*	*Site D*	*Site E*	*NR1*	*NR3*	*USGS*
TSS (mg/L)	729	835	41,100	36,000	5,650	6,645	58	112	2,291
Hardness (mg/L)	419	7,380	2,825	190	160	205	855	1,076	1,437 [1]
TDS (mg/L)	223	2,225	1,205	147	59	107	387	475	773
Chloride (mg/L)	59.6	870	125	3	3	11	-	-	122
Total P (mg/L)	0.62	-	-	-	-	-	0.4	0.4	1.28
Nitrate-N (mg/L)	0.81	17.5[2]	3.0[2]	1.6[2]	15.3[2]	2.8[2]	3.2	3.0	2.1[2]
Nitrite-N (mg/L)	0.12	-	-	-	-	-	<0.005	<0.005	-
Ammonia-N (mg/L)	0.17	-	-	-	-	-	0.2	0.1	0.16
TKN (mg/L)	2.61	-	-	-	-	-	0.3	0.4	0.64
Dissolved copper (μg/L)	6.4	-	-	-	-	-	4.6	3.6	-
Total copper (μg/L)	29.8	15	175	170	10	70	4.9	5.9	30
Dissolved lead (μg/L)	0.5	-	-	-	-	-	<0.07	<0.07	7.8
Total lead (μg/L)	8.6	6.1	53.5	95.2	7.6	36.8	1	0.8	-
Dissolved zinc (μg/L)	14	-	-	-	-	-	12	8.7	10
Total zinc (μg/L)	71	40	330	330	30	225	17.5	15	150
Dissolved aluminum (μg/L)	264	-	-	-	-	-	27	19	-
Total aluminum (μg/L)	5,770	-	-	-	-	-	740	770	-
Fecal Coliform MPN/100mL	101,000	3,300	590	4,200	>19,600	19,600	87	258	300
Total Coliform MPN/100mL	7,000	38,700	>160,000	120,000	>89,400	>19,600	284	549	-

Source: Geosyntec, 2010.
[1] *Derived from Specific Conductance,* [2] *Nitrate + Nitrite-N, ND = non detected, - = no or insufficient data*

Table 4.22-8
Average Wet Weather Monitoring Data for 2-Day Precedent Rainfall of > 1 Inch

Constituent	USGS Wet Weather Monitoring *11108500*	LACDPW Santa Clara River Mass Emission Station *S29*	Newhall WRP Startup Monitoring *NR3*
General and Conventional Parameters			
TSS (mg/L)	10,711	1,482	43,360
TDS (mg/L)	838[1]	101	2,100
Hardness (mg/L)	546	197	832
Chloride (mg/L)	61	22	-
Nutrients			
Total P (mg/L)	1.02	0.54	13.4
Nitrate-N (mg/L)	1.7[2]	0.74	1.4
Nitrite-N (mg/L)		0.13	ND
Ammonia-N (mg/L)	-	0.23	0.5
TKN (mg/L)	0.69	4.32	46.0
Metals			
Dissolved copper (μg/L)	-	8.4	-
Total copper (μg/L)	-	31.1	-
Dissolved lead (μg/L)	ND	2.4	-
Total lead (μg/L)	ND	29.9	-
Dissolved zinc (μg/L)	-	24	-
Total zinc (μg/L)	-	126	-
Dissolved aluminum (μg/L)	-	420	-
Total aluminum (μg/L)	-	5,161	-
Coliform Bacteria			
Fecal Coliform (MPN/100 mL)	2,700	36,000	>1,600
Total Coliform (MPN/100 mL)	-	198,000	>1,600

Source: Geosyntec, 2010.
[1] *Derived from Specific Conductance,* [2] *Nitrate + Nitrite-N, ND = Not Detected in Sample, - = no or insufficient data*

The wet weather monitoring data indicate the following existing water quality conditions:

Total Suspended Solids (TSS). The total solids in a liquid sample consist of total dissolved solids and total suspended solids. Total dissolved solids (TDS, discussed below) are materials in the water, primarily inorganic salts (calcium, magnesium, potassium, sodium, chlorides, and sulfates), that would pass through a filter with a 2.0 micrometer or smaller nominal average pore size; the material retained by the

filter is the TSS. (Sawyer et al., 1994. Chemistry for Environmental Engineering, Fourth Edition. Claire Sawyer, Perry McCarty, and Gene Parkin. McGraw-Hill, Inc., 1994.) It is generally expected that TSS concentrations in alluvial streams can be greatly elevated during storm runoff because of the combination of high sediment supply and a high capacity for in-stream transport and erosion. Average TSS concentrations in the Santa Clara River were sometimes very high due to the highly erodible, easily transportable, sandy alluvial soils and sediments, and average concentrations were much higher for the larger storms than the smaller storms. These results show the capacity of high flows in the Santa Clara River for sediment transport and are consistent with other data showing that large rainfall events result in a "reset" of the main channel. As concluded by Balance Hydrologics (2005), concepts of "normal" or "average" sediment-supply and flow conditions have limited value in this "flashy" environment, where episodic storm and wildfire events have enormous influence on sediment and storm flow conditions. In the Santa Clara River, a large portion of sediment movement events can occur in a matter of hours or days.

Total Dissolved Solids (TDS). Stormwater monitoring data collected in the tributaries showed greatly differing TDS levels among the five monitoring stations. Measured TDS concentrations were very high at Sites A (Potrero Canyon) and B (San Martinez Grande Canyon), while TDS concentrations at the other three sites were low. Elevated TDS levels in runoff at Site A and B are likely a result of the natural soil properties of the marine layers of the Pico formation and the high groundwater table conditions in these two canyons, suggesting that groundwater discharges to the streams contributed to the elevated TDS levels. These greatly differing dissolved solid (TDS) concentrations are also reflected in some of the components that make up the TDS (chloride and hardness), as described below.

Concentrations of TDS in the Santa Clarita River were low to moderate, and maximums did not approach the high values observed in tributaries A and B. Average concentrations of TDS in the Santa Clara River were moderate to high, ranging from 216 mg/L to 2,100 mg/L. Using an estimate of 0.64 times the specific conductance for the USGS data, the TDS concentrations at this station averaged around 1,400 mg/L for storm flows. The Basin Plan objective for TDS in Santa Clara River Reach 5 is 1,000 mg/L.

Much higher average concentrations were observed at the three downstream SCR stations (NR-1, NR-3, USGS) compared with the upstream LACDPW station, and this could be due to their location downstream of the tributaries represented by Sites A and B, with their much higher salt content.

TDS concentrations were generally lower in the larger storms, reflecting a dilution effect.

Hardness. Hardness is a measure of the multivalent metallic cations in water, principally calcium, magnesium, strontium, iron, and manganese. (Sawyer *et al*., 1994. Chemistry for Environmental Engineering, Fourth Edition. Claire Sawyer, Perry McCarty, and Gene Parkin. McGraw-Hill, Inc., 1994.)

These cations are capable of reacting with soap to form precipitates, and with certain anions to form scale. The hardness in water is derived largely from contact with soil and rock formations, and hardness affects the CTR values for certain metals, as discussed above. Waters with a hardness concentration from 150 mg/L to 300 mg/L as $CaCO_3$ are considered hard; waters with a hardness concentration above 300 mg/L as $CaCO_3$ are considered very hard.

The stormwater monitoring data for hardness were analogous to the data for TDS. Hardness concentrations were very high at the tributary Sites A and B, and low to moderate at the other three tributary sites. High hardness at Sites A and B are likely due to natural high levels of calcium and magnesium in the local soils and sedimentary formations (such as lime and gypsum deposits), and the high groundwater table conditions in these two canyons, suggesting again that groundwater discharges contributed to the elevated hardness levels.

In the Santa Clara River, average hardness values were greater downstream (NR3, NR1, USGS sites) than at the upstream LACDPW station, and generally decreased with larger antecedent rainfall depth. This is most likely due to the influence of tributary inflows of high hardness waters (such as measured at Sites A and B), other groundwater inputs, and agricultural return flows that enter the Santa Clara River between these stations.

Chloride. Similar to TDS and hardness, monitoring data collected in the tributaries found very high chloride concentrations at Site A, high levels at Site B. were lower than those measured at the downstream USGS site.

Overall, the average chloride concentrations during recent stormwater monitoring were highly variable and ranged between 3 mg/L and 125 mg/L, with the exception of the very high chloride concentrations detected at the mouth of Potrero Canyon (Site A). Average chloride concentrations at the USGS station were about 61 mg/L for storm flows. The Basin Plan objective for chloride is 100 mg/L.

Phosphorus. Recent wet weather monitoring (LACDPW mass emission station and Newhall Ranch WRP start-up monitoring) showed somewhat consistent total phosphorus levels, averaging about 0.4 to 0.6 mg/L. An exception was the large storm sample (>1.0 inch) collected at station NR-3, which measured 13.4 mg/L. This is likely due to the high concentration of TSS measured during the same storm event, because total phosphorus is predominately found in the particulate-phase in stormwater runoff. Historical average total phosphorus concentrations at the USGS station were somewhat higher than recent results at 1.0 to 1.3 mg/L and appear to be somewhat independent of storm event size. The Basin Plan water quality objective for phosphorus is a narrative standard, which states, "waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance of adversely affects beneficial uses."

Nitrogen. Measured nitrate-nitrogen concentrations in the tributary stormwater monitoring were generally low (less than 3 mg/L) at three of the sites, and were elevated at Sites A and D (17.5 mg/L and 15.3 mg/L, respectively). The numeric target for nitrate plus nitrite-nitrogen in the Santa Clara River nitrogen compounds TMDL is 4.5 mg/L (30-day average), which is based on achieving the Basin Plan water quality objective of 5 mg/L. (Note that nitrate-nitrogen is typically an order of magnitude greater than nitrite-nitrogen in natural waters, as nitrite is converted to nitrate in aerobic conditions.) The Santa Clara River average nitrate-nitrogen concentrations were below this objective (0.8 mg/L to 3.0 mg/L). The average historical nitrate-N + nitrite-N concentrations at the USGS station were roughly similar, varying from 2.1 mg/L for lower storm flows to 1.7 mg/L for higher storm flows.

Average ammonia concentrations are low and range from 0.1 to 0.5 mg/L. The ammonia water quality objectives in the Santa Clara River nitrogen compounds TMDL range from 3.4 mg/L to 5.5 mg/L (1-hour average) and 1.2 mg/L to 2.0 mg/L (30-day average).

Average Total Kjeldahl nitrogen (TKN) concentrations, which is the measure of ammonia plus the organic forms of nitrogen, generally ranged from 0.4 mg/L to 4.3 mg/L. One exception was concentration found in the large storm at NR-3, which measured 46 mg/L. As with total phosphorus, the organic forms of nitrogen in stormwater runoff are generally in the particulate-phase, and this result correlated with the high levels of total phosphorus and suspended solids measured during this same event described above.

Metals. Total copper, lead, and zinc concentration measured at Sites B and C were much higher than the concentrations measured at Sites A and D. Concentrations at Site E fell in the middle of the measured range. Elevated total metal concentrations are often associated with elevated TSS levels; however, this trend is not evident in the tributary monitoring data. The average total copper concentrations at Sites B, C, and E were greater than the CTR acute copper criterion. The average total copper concentrations ranged from 10 micrograms per liter (μg/L) to 175 μg/L; the CTR acute total copper criterion for a hardness concentration of greater than 400 mg/L is 52 μg/L. The average total lead and total zinc concentrations in all the tributaries were below the CTR acute criteria. The average total lead concentrations ranged from 6.1 μg/L to 95 μg/L; the CTR acute total lead criterion for a hardness concentration of greater than 400 mg/L is 480 μg/L. The average total zinc concentrations ranged from 30 μg/L to 330 μg/L; the CTR acute total zinc criterion for a hardness concentration of greater than 400 mg/L is 390 μg/L.

Average concentrations of dissolved and total copper measured in the Santa Clara River (3.6 μg/L to 8.4 μg/L, dissolved copper; 4.6 to 91 μg/L, total copper) were below the respective CTR acute criteria for the average hardness of 250 mg/L (32 μg/L, dissolved copper; 33 μg/L, total copper). Average concentrations of dissolved and total lead measured in the Santa Clara River (<0.07 μg/L to 23 μg/L,

dissolved lead; 0.8 to 110 μg/L, total lead) were well below the respective CTR acute criteria for the average hardness of 250 mg/L (170 μg/L, dissolved lead; 260 μg/L, total lead). Average concentrations of dissolved and total zinc measured in the Santa Clara River (8.7 μg/L to 37 μg/L, dissolved zinc; 11 to 353 μg/L, total zinc) were all well below the respective CTR acute criteria for the average hardness of 250 mg/L (250 μg/L, dissolved zinc; 260 μg/L, total zinc).

Pesticides. Data for pesticides are very limited. Chlorpyrifos was not detected at LACDPW station and diazinon was detected in 8 of the 25 wet-weather samples. Diazinon and chlorpyrifos were not detected further downstream in the Santa Clara River during Newhall WRP wet weather sampling and only detected in the one wet weather sample taken in the historical data.

Cyanide. Cyanide was detected in 7 of the 25 wet weather samples taken at the County's mass emission station. Concentrations of cyanide were very low, exceeding the CTR criterion for freshwater acute aquatic life protection of 22 μg/L in only one instance.

Coliform Bacteria. Consistent with other stormwater data for the region, concentrations of total and fecal coliform bacteria in wet weather flows at all tributary monitoring stations and the LACDPW mass emission station were highly variable and sometimes very high, ranging from <1 Most Probable Number per 100 milliliters (MPN/100 mL) to 300,000 MPN/100 mL. Average bacteria concentrations at the lower stations were significantly lower, but still elevated, and more so during larger storms. In waters designated for water contact recreation (REC-1), the Basin Plan objective for fecal coliform is a log mean of 200 MPN/100 mL (based on a minimum of not less than 10 percent of total samples during any 30-day period), nor shall more than 10 percent of the total number of samples during any 30-day period exceed 400 MPN/100 mL.

Dry Weather Monitoring Data Summary. Dry season base flows in the Santa Clara River through the proposed project area are perennial. Dry season base flows may include contributions from natural groundwater flows; however, discharges from the upstream Saugus and Valencia WRPs contribute the majority of base flow. Discharges from the WRPs during dry weather conditions are a source of impairing pollutants in downstream reaches, including chloride, TDS, and nitrogen compounds. Dry weather water quality monitoring data in the Santa Clara River are available from LACDPW sampling at the Santa Clara River mass emission station, Newhall Ranch WRP pre-startup monitoring, and USGS water quality monitoring. **Table 4.22-9, Average Dry Weather Monitoring Data in the Santa Clara River**, summarizes the average values from dry weather monitoring data for these monitoring locations.

Table 4.22-9
Average Dry Weather Monitoring Data in the Santa Clara River

Constituent	SCR Mass Emission Station	USGS Dry Weather Monitoring	Newhall Ranch WRP Pre-Startup Monitoring	
	S29	*11108500*	*NR1*	*NR3*
TSS (mg/L)	135	349	42	76
Hardness (mg/L)	411	881	323	380
TDS (mg/L)	806	1541[1]	853	930
Chloride (mg/L)	114	140	116	122
Total P (mg/L)	0.18	1.13	0.6	0.5
Nitrate-N (mg/L)	0.23	4[2]	2.4	2.4
Nitrite-N (mg/L)	1.16	-	<0.005	<0.005
Ammonia-N (mg/L)	0.08	0.18	0.1	0.1
TKN (mg/L)	0.08	0.83	0.7	0.7
Dissolved Copper (μg/L)	2.4	1.8	3.6	3.6
Total Copper (μg/L)	13	20	4.4	5.2
Dissolved Lead(μg/L)	<0.17	7.8	<0.05	<0.05
Total Lead (μg/L)	1.3	ND	0.6	0.9
Dissolved Zinc (μg/L)	7.9	15.8	14.1	11.8
Total Zinc (μg/L)	21	45	16	17
Dissolved Aluminum (μg/L)	36	-	36	54
Total Aluminum (μg/L)	566	-	325	530

Source: Geosyntec, 2010.
[1] CFU/100 mL, - = no or insufficient data, ND = none detected

The dry weather monitoring data indicate the following:

TSS. Relatively high average TSS concentrations were observed, particularly in the historical data from USGS station, which may have included samples taken during times of higher erosion or larger dry weather flows. Average dry weather flow TSS concentrations observed by the Newhall Ranch WRP pre-startup monitoring were similar to those observed for small storms in wet weather monitoring. Average concentrations of TSS appeared higher at the upstream LACDPW mass emission station than at the downstream Newhall Ranch WRP pre-startup sites. Differences may be due to physical factors such as channel substrate material, local flow regime, and tributary influences.

Hardness, TDS and Chloride. The average concentrations of hardness, TDS, and chloride were more similar between the LACDPW mass emission station and Newhall Ranch WRP monitoring locations. However, the USGS county line station historically recorded higher averages (approximately double) than the baseline data observed at the LACDPW mass emission station and Newhall Ranch WRP monitoring

locations. The baseline data suggests that the water flowing in the Santa Clara River in the proposed project area during dry weather is very hard and turbid with moderate levels of other dissolved salts, including chloride.

Phosphorus and Nitrogen. The average concentrations for total phosphorus and nitrate in dry weather flows increased downstream, while ammonia and total kjeldahl nitrogen concentrations were relatively consistent from upstream to downstream. All average nutrient concentrations were higher in the historical dataset. Nutrient concentrations measured in dry weather flows reflect the influence of the Saugus and Valencia WRPs. Lower average concentrations in the Newhall WRP startup monitoring, compared with the data at the USGS gauge, could be due to historically greater WRP nutrient discharge concentrations and/or less responsible use of fertilizers. Higher historic total kjeldahl nitrogen concentrations also could be attributed to the higher TSS concentrations, and hence particulate nutrients, observed at this site.

Metals. Concentrations of heavy metals in dry weather flows were generally low and, for the most part, reasonably similar. Total metal concentrations are related to TSS concentrations, and this is reflected in the difference between the historical data collected at the USGS site with higher TSS and the more recent data with lower TSS. Average dissolved copper concentrations were fairly similar and ranged from 1.8 to 4.2 μg/L. Average dissolved zinc concentrations also were fairly similar and ranged from 11 to 24 μg/L. Higher copper and zinc concentrations were observed at the upper SCR site, which may reflect its proximity to urban land uses; however, the data are too few to confidently assert a reason for these differences. Dissolved lead showed some large differences between the historical and more recent datasets, and this is likely due to difficulties in analyzing trace metals in the earlier dataset, and widespread use of leaded gasoline prior to 1995.

Aluminum concentrations only were measured at the Newhall Ranch WRP pre-startup monitoring stations. Average dissolved aluminum concentrations in the dry weather flows ranged from 170 μg/L to 289 μg/L. Total aluminum ranged from 1,018 μg/L to 1,685 μg/L. The NAWQC acute criterion for acid soluble aluminum is 750 μg/L for a pH range of 6.5 to 9.0. The CTR does not include an aluminum criterion.

Pesticides. Diazinon was detected at the upstream LACDPW site and historically at the USGS site in dry weather flows. The more extensive data set collected at NR1 and NR3 did not detect diazinon and this may be due to its recent phase-out by the U.S. EPA for residential uses.

Cyanide. Cyanide was measured but not detected in dry weather flows at the LACDPW mass emission station.

Coliform Bacteria. The concentrations of indicator bacteria indicated highly variable but generally elevated fecal indicator bacteria concentrations in dry weather flows. The observed data were above the REC-1 Basin Plan objective for fecal coliform (i.e., log mean of 200/100 mL (based on a minimum of not less than 10 percent of total samples during any 30-day period), nor shall more than 10 percent of the total number of samples during any 30-day period exceed 400/100 mL).

(4) Existing Groundwater Quality and Beneficial Uses

The project site is within the Basin Plan's Castaic Valley and Saugus Aquifer subbasin of the Santa Clarita Valley Groundwater Basin, East Subbasin. Beneficial uses for groundwaters for this subbasin are shown in **Table 4.22-10, Beneficial Uses of Groundwater**.

Table 4.22-10
Beneficial Uses of Groundwaters

Groundwater Basin	MUN
DWR 4.07 - Eastern Santa Clara Sub-basin: Castaic Valley and Saugus Aquifer	E

Source: Geosyntec 2010.
E=Existing Beneficial Use
MUN: Community, military, or individual water supply systems including, but not limited to, drinking water supply.

The project area lies at the western end of the upper Santa Clara River hydrologic area, as defined by the DWR. The Santa Clara River Valley East Groundwater Subbasin lies within this hydrologic area and is the source of essentially all local groundwater used for water supply in the Santa Clarita Valley. The local groundwater supplies are obtained from relatively young surficial alluvial deposits and from an older geologic unit (the Saugus Formation) that underlies the alluvium and adjoining areas. The alluvium and the Saugus Formation are underlain by bedrock units consisting of the Pico Formation in the project area and other geologic units in the eastern and northern portions of the Santa Clarita Valley. These deep bedrock units yield little water and are not considered viable for groundwater development.

The alluvial sediments lie within the portion of the Santa Clarita Valley occupied by the Santa Clara River and also are present in side canyons that contain tributaries to the River. The alluvium consists of extensively interlayered and interfingered mixtures of gravel and sand, with variable amounts of cobbles and boulders and minor amounts of silt and clay. Due to the unconsolidated to poorly consolidated condition of the alluvium, and its lack of cementation, the alluvium has relatively high permeability and porosity. The groundwater flow direction in the Alluvial aquifer follows the topography of the Valley and its tributaries. Groundwater recharge occurs in the eastern, northern, and southern portions of the Valley. Natural mechanisms for groundwater discharge occur at the west end of the Valley and consist of

discharge to the Santa Clara River, subsurface outflow beneath the River, and evapotranspiration by deep-rooted vegetation.

The Saugus Formation is present beneath the project site and most of the Santa Clarita Valley area east of the Specific Plan area. The upper subunits of the Saugus Formation consist of terrestrial sediments deposited by ancestral drainage systems in stream channels, floodplains, and alluvial fans. The upper subunits are a source of groundwater supply in the Santa Clarita Valley because of their productive nature and their good water quality. Deeper subunits of the Saugus Formation were deposited in a marine environment and are subsequently not used for water supplies because of their brackish water quality and fine-grained, low-permeability nature.

Faulting and folding of the Saugus Formation and the underlying bedrock units have created a bowl-shaped structure beneath the Santa Clarita Valley. The Saugus Formation and underlying bedrock generally dip downwards from the periphery of the Santa Clarita Valley towards the deepest portion of the "bowl" beneath the central portion of the Santa Clarita Valley. The thickness of the Saugus Formation also is controlled by the San Gabriel fault, which is present in the eastern and northern portions of the Santa Clarita Valley. Because of its structure and its connection with the overlying Alluvial aquifer, groundwater flow in the Saugus Formation generally is towards the center of the bowl and also towards the western portion of the Santa Clara River. Like the Alluvial aquifer, the Saugus Formation is recharged in the eastern and other peripheral portions of the Santa Clarita Valley. Groundwater discharge from the Saugus Formation occurs at the west end of the Santa Clarita Valley in the form of groundwater discharge into the overlying Alluvial aquifer, which in turn discharges to the River in the western end of the Santa Clarita Valley.

Alluvium. In terms of the aquifer system, there is no convenient long-term record of water quality (i.e., water quality data in one or more single wells that spans several decades and continues to the present). Thus, in order to examine a long-term record of water quality in the alluvium, individual records have been integrated from several wells completed in the same aquifer materials and in close proximity to each other to examine historical trends in general mineral groundwater quality throughout the basin. (Luhdorff & Scalmanini Consulting Engineers, 2008. Santa Clarita Valley Water Report 2007.) Based on these records of groundwater quality, wells within the alluvium have experienced historical fluctuations in general mineral content, as indicated by electrical conductivity (EC), which correlates with fluctuations of individual constituents that contribute to EC. However, the historic water quality data indicates that, on a long-term basis, there has not been a notable trend and, specifically, there has not been a decline in water quality within the alluvium.

Specific conductance within the alluvium exhibits a westward gradient, corresponding with the direction of groundwater flow in the alluvium. EC is lowest in the easternmost portion of the basin, and highest in the west, and generally exhibits an inverse correlation with precipitation and streamflow, with a stronger correlation in the easternmost portion of the basin where groundwater levels fluctuate the most. Wet periods have produced substantial recharge of higher quality (low EC) water, and dry periods have resulted in declines in groundwater levels, with a corresponding increase in EC (and individual contributing constituents) in the deeper parts of the alluvium.

The most notable groundwater quality issue in the alluvium is perchlorate contamination in a localized area situated about 3 miles east of the project area. In 2002, one well (the Santa Clarita Water Division's Stadium Well), located near the former Whittaker-Bermite facility, was inactivated for municipal water supply due to detection of perchlorate slightly below the notification level. In early 2005, perchlorate was detected in a second well, the Valencia Water Company's Well Q2. In October 2005, Well Q2 was returned to service with wellhead perchlorate treatment under a permit from the California Department of Health and Safety (DHS). Ongoing monitoring in the alluvium north of the Whittaker-Bermite site (an ammunition manufacturing site) has shown no detections of perchlorate in any other Alluvial municipal water supply wells in this area.

Table 4.22-11, Groundwater Monitoring Data, summarizes average metals, general chemistry, and organic compounds data for three Alluvial aquifer wells located in and near the project area (see **Figure 4.22-1**). One well is a municipal water supply well that belongs to the Valencia Water Company (E-15) and is located in the Valencia Commerce Center area, northeast of the project boundary. Two Newhall Ranch agricultural alluvial aquifer wells (C and B6) were monitored twice (once each in 2000 and 2001).

Laboratory testing indicates that all constituents tested were at acceptable levels for drinking water, for all tested wells, with the exception of sulfate and iron in the agricultural supply Well B6. Specifically, the average sulfate concentration (360 mg/L) exceeded the Basin Plan objective of 350 mg/L and the average iron concentration (0.4 mg/L) exceeded the secondary drinking water standard of 0.3 mg/L in Alluvial Well B6.

Tests conducted for perchlorate at the Alluvial aquifer wells listed in **Table 4.22-11, Groundwater Monitoring Data,** indicated "non-detect," meaning no perchlorate was detected. Furthermore, no organic contaminants have been detected in any alluvial aquifer wells.

Saugus Formation. Similar to the alluvial aquifer, groundwater quality in the Saugus Formation is a key factor in assessing that aquifer as a municipal and agricultural water supply. As with the alluvial aquifer, long-term Saugus groundwater quality data is not sufficiently extensive (few wells) to permit any

basin-wide analysis or assessment of pumping-related impacts on quality. Accordingly, EC has been chosen as an indicator of overall water quality, and records have been combined to produce a long-term depiction of water quality. Water quality in the Saugus Formation historically has not exhibited the precipitation-related fluctuations seen in the alluvial aquifer, and based on the historical record over the last 50 years; groundwater quality in the Saugus Formation has exhibited a slight overall increase in EC.

Table 4.22-11, Groundwater Monitoring Data, summarizes average metals, general chemistry, and organic compounds data for one Saugus aquifer well located near the project location (see **Figure 4.22-1**). Saugus Well 206 is a municipal water supply well that belongs to the Valencia Water Company. Laboratory testing indicates that all constituents tested were at acceptable levels for drinking water in Saugus Well 206.

As with the alluvial aquifer, the most notable groundwater quality issue in the Saugus Formation is perchlorate contamination. Since 1997, four Saugus wells located near the former Whittaker-Bermite facility (about 2 miles east of the project location) have been inactivated for water supply service due to the presence of perchlorate. A fifth well in that same location showed a detection of perchlorate below the DHS reporting level of 4 μg/L. To date, in the Saugus Formation, there have been no perchlorate detections in other active municipal-supply wells located down gradient (west) of the impacted wells. The development and implementation of a cleanup plan for the former Whittaker-Bermite facility and the impacted groundwater resources is being coordinated among the Castaic Lake Water Agency (CLWA), impacted purveyors, the California Department of Toxic Substances Control (DTSC), and the USACE. For the impacted groundwater, a Final Interim Remedial Action Plan for containment and extraction of perchlorate was completed and approved by DTSC in January 2006. Design of the treatment facilities and related pipelines also was completed in 2006. Construction of these facilities to implement the pump-and-treat program and to restore inactivated well capacity began in November 2007, with the facilities operational by 2009. (Luhdorff and Scalmanini Consulting Engineers, 2007. Santa Clarita Valley Water Report 2008.)

Table 4.22-11
Groundwater Monitoring Data

Parameter	Units	Basin Plan Objective /Maximum Contaminant Level	Average Concentration			
			Alluvial Well E-15	Alluvial Well C	Alluvial Well B6	Saugus Well 206
Aluminum	µg/L	1,000(2)	ND	ND	ND	ND
Arsenic	µg/L	50(2)	n/a	ND	ND	n/a
Barium	mg/L	1(2)	ND	0.02	0.03	ND
Beryllium	µg/L	4(2)	ND	n/a	n/a	ND
Cadmium	µg/L	5(2)	ND	ND	ND	ND
Chromium	µg/L	50(2)	ND	ND	ND	ND
Copper	µg/L	1,000(3)	ND	ND	ND	ND
Iron	mg/L	0.3(3)	ND	0.1	**0.4**	ND
Manganese	µg/L	50(3)	ND	ND	ND	ND
Mercury, Total	µg/L	2(2)	n/a	ND	ND	n/a
Nickel	µg/L	100(2)	ND	ND	ND	ND
Selenium	µg/L	50(2)	n/a	ND	ND	n/a
Silver	µg/L	100(3)	NA	ND	ND	n/a
Thallium	µg/L	2(2)	NA	ND	ND	n/a
Zinc	µg/L	5,000(3)	ND	ND	ND	ND
Alkalinity as CaCO3	mg/L	--	226	255	295	221
Boron	mg/L	1.0(1)	0.48	0.39	0.48	n/a
Chloride	mg/L	150(1)	90	57	82	45
Color	Color unit	15(3)	ND	ND	5	ND
Cyanide, total	mg/L	0.15(2)	n/a	ND	ND	n/a
Fluoride	mg/L	2.0(2)	0.8	0.7	0.8	0.2
Hardness as CaCO3	mg/L	--	499	410	510	464
MBAS	mg/L	0.5(3)	n/a	ND	ND	n/a
Nitrate as NO3	mg/L	45(1)	18.5	9.5	10.6	20.9
Nitrite as N	mg/L	1(1)	ND	ND	ND	ND
Nitrate+Nitrite as N	mg/L	10(1)	3.6	2.1	2.4	4.7
Odor	TON	3(3)	1.1	ND	ND	1
Specific Conductance	umhos/cm	900-1600(3)	1317	1150	1400	1158
Sulfate	mg/L	350(1)	314	285	**360**	293
TDS	mg/L	1,000(1)	969	760	950	861
Turbidity	NTU	5(3)	0.4	0.35	1.4	0.2

Parameter	Units	Basin Plan Objective /Maximum Contaminant Level	Average Concentration			
			Alluvial Well E-15	Alluvial Well C	Alluvial Well B6	Saugus Well 206
Volatile Organic Chemicals (VOCs)	µg/L	variable	ND	ND	ND	ND
Synthetic Organic Chemicals (SVOCs)	µg/L	variable	ND	ND	ND	ND
Key: **Bold = Exceeds Standard**						

Source: Geosyntec 2010.
-- = no applicable Basin Plan objective or MCL
n/a = not analyzed; ND = none detected
[1] *Los Angeles Basin Plan Regional Objectives for Groundwater.*
[2] *California Department of Public Health Primary Drinking Water MCL (Title 22 CCR Table 64431-A and Table 64444-A).*
[3] *California Department of Public Health Secondary Drinking Water MCL (Title 22 CCR Table 64449-A and Table 64449-B).*

5. POLLUTANTS AND CONDITIONS CONSIDERED

a. Surface Water Pollutants of Concern

Pollutants of concern, as defined in the Los Angeles County SUSMP Manual, consist of any pollutants that exhibit one or more of the following characteristics: current loadings or historic deposits of the pollutant are impacting the beneficial uses of a receiving water; elevated levels of the pollutant are found in sediments of a receiving water and/or have the potential to bioaccumulate in organisms therein; or detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna. The pollutants of concern for the water quality analysis are those that are anticipated or potentially could be generated by the project at concentrations, based on water quality data collected in Los Angeles County from land uses that are the same as those proposed by the project, that exhibit these characteristics. Identification of the pollutants of concern also considered Basin Plan beneficial uses and water quality objectives, CTR criteria, and current Section 303(d) listings and TMDLs in the Santa Clara River, as well as pollutants that have the potential to cause toxicity or bioaccumulate in the project's receiving waters.

The pollutants described below were chosen as pollutants of concern for purposes of evaluating water quality based upon the above considerations.

Sediments (TSS and Turbidity). Excessive erosion, transport, and deposition of sediment in surface waters are a significant form of pollution resulting in major water quality problems. Sediment imbalances impair designated uses of water. Excessive sediment can impair aquatic life by filling interstitial spaces of spawning gravels, impairing fish food sources, filling rearing pools, and reducing beneficial habitat structure in stream channels. In addition, excessive sediment can cause taste and odor problems in

drinking water supplies and block water intake structures. Turbidity is associated with project development primarily during the construction phase.

Nutrients (Phosphorus and Nitrogen (Nitrate+Nitrite-N, and Ammonia-N). Nutrients of concern include the inorganic forms of nitrogen (nitrate, nitrite, and ammonia) and phosphorus. Organic forms of nitrogen are associated with vegetative matter such as particulates from sticks and leaves. Inorganic forms of nitrogen include nitrate, nitrite, and ammonia. Phosphorus can be measured as total phosphorus (TP) or as dissolved phosphorus. Dissolved phosphorus is the more bioavailable form of phosphorus. TP is often composed mostly of soil-related particulate phosphorus. There are several sources of nutrients in urban areas, mainly fertilizers in runoff from lawns, pet wastes, failing septic systems, and atmospheric deposition from industry and automobile emissions, and soil erosion. Nutrient over-enrichment is especially prevalent in agricultural areas where manure and fertilizer inputs to crops significantly contribute to nitrogen and phosphorus levels in streams and other receiving waters. Eutrophication due to excessive nutrient input can lead to changes in algae, benthic, and fish communities; extreme eutrophication can cause hypoxia or anoxia, resulting in fish kills. Surface algal scum, water discoloration, and the release of toxins from sediment can also occur.

Various downstream reaches of the Santa Clara River are identified as impaired by ammonia and nitrate-plus nitrite-nitrogen. Evidence of impairment includes low diversity of benthic macroinvertebrates and observations of excessive algae growth. A source analysis found that the majority of ammonia and nitrate/nitrite loads are from point sources; primarily WRPs. (LARWQCB, 2003. Santa Clara River Total Maximum Daily Loads for Nitrogen Compounds Staff Report. California Regional Water Quality Control Board Los Angeles Region. June 16 2003.) Sources from municipal storm sewers are considered a minor source, but have a potential to cause significant local effects on water quality (LARWQCB, 2003. Santa Clara River Total Maximum Daily Loads for Nitrogen Compounds Staff Report. California Regional Water Quality Control Board Los Angeles Region. June 16 2003.) TMDLs have been developed and adopted into the Basin Plan for nitrogen compounds, including nitrate/nitrite and ammonia.

Trace Metals (Copper, Lead, and Zinc). The primary sources of trace metals in stormwater are typically commercially available metals used in transportation (e.g., automobiles), buildings, and infrastructure. Metals are also found in fuels, adhesives, paints, and other coatings. Copper, lead, and zinc are the most prevalent metals typically found in urban runoff. Other trace metals, such as cadmium, chromium, and mercury, are typically not detected in urban runoff or are detected at very low levels. (LACDPW, 2000. Los Angeles County 1994–2000 Integrated Receiving Water Impacts Report.) Metals are of concern because of the potential for toxic effects on aquatic life and the potential for ground water contamination. High metal concentrations can lead to bioaccumulation in fish and shellfish and affect beneficial uses of receiving waters.

Aluminum. Aluminum has been identified by the LACDPW as a constituent of concern for the Santa Clara River based on monitoring conducted at mass emission Station S29 (see **Existing Water Quality, Table 4.22-8**, above). In stormwater, the majority of aluminum is in the particulate phase. Its presence in stormwater is mainly due to aluminosilicate minerals found in soils, because stormwater particles are largely composed of eroded soils. Aluminum is a large component of soils and is the third most common element in the earth's crust. The average aluminum soil content is about 8 percent (or 80,000 mg/kg) and suspended sediments in rivers have total aluminum contents of a similar order of magnitude. Aluminosilicates include a wide range of minerals with varying properties; some are formed during the laying down of the earth's crust and some by weathering processes. In urban areas, aluminum building materials are a minor source of aluminum, as the metal is coated in unreactive aluminum oxide.

Pathogens (Bacteria, Viruses, and Protozoa). Elevated pathogens are typically caused by the transport of domestic animal, wildlife, or human fecal wastes from the watershed. Runoff that flows over land such as urban runoff can mobilize pathogens, including bacteria and viruses. Even runoff from natural areas can contain pathogens (e.g., from wildlife). Other sources of pathogens in urban areas include pets, septic systems, and leaky sanitary sewer pipes. The presence of pathogens in runoff can impair receiving waters and contaminate drinking water sources.

Historically an indicator organism such as fecal coliform has been used for pathogens due to the difficulty of monitoring for pathogens directly. More recently, the scientific community has questioned the use of certain indicator organisms, as there are various confounding factors that affect the reliability of some FIB as pathogen indicators in stormwater runoff. Santa Clara River Reaches 5, 6, and 7 and the Santa Clara River Estuary area both identified as impaired by high fecal coliform counts from point and non-point sources. An Indicator Bacteria TMDL was approved by the LARWQCB for these river reaches the Santa Clara River Estuary and Reaches 3, 5, 6, and 7 on July 8, 2010.

Petroleum Hydrocarbons (Oil and Grease and PAHs). The sources of oil, grease, and other petroleum hydrocarbons in urban areas include spillage fuels and lubricants, discharge of domestic and industrial wastes, atmospheric deposition, and runoff. Runoff can be contaminated by leachate from asphalt roads, wearing of tires, and deposition from automobile exhaust. Also, do-it-yourself auto mechanics may dump used oil and other automobile-related fluids directly into storm drains. Petroleum hydrocarbons, such as PAHs, can bioaccumulate in aquatic organisms from contaminated water, sediments, and food and are toxic to aquatic life at low concentrations. Hydrocarbons can persist in sediments for long periods of time and result in adverse impacts on the diversity and abundance of benthic communities. Hydrocarbons can be measured as total petroleum hydrocarbons (TPH), oil and grease, or as individual groups of hydrocarbons, such as PAHs.

Pesticides. Pesticides (including herbicides, insecticides, and fungicides) are chemical compounds commonly used to control insects, rodents, plant diseases, and weeds. Excessive application of a pesticide

in connection with agriculture cultivation or urban landscaping may result in runoff containing toxic levels of its active component. Pesticides may be classified as organochlorine pesticides or organophosphorus pesticides, the former being associated with persistent bioaccumulative pesticides (e.g., dichlorodiphenyltrichloroethane [DDT] and other legacy pesticides), which have been banned. Organophosphorus pesticides include diazinon and chlorpyrifos, the residential use of which is restricted by the U.S. EPA. The Santa Clara River estuary is listed as impaired for legacy pesticides including chlorinated pesticides. Santa Clara River Reaches 3, 1 and the estuary are proposed for or are also listed for toxicity, which can be a byproduct of pesticides. Toxic organophosphorous pesticides include diazinon and chlorpyrifos whose uses also are being banned of restricted by U.S. EPA. The current pesticides of concern for water quality are pyrethrums; parathyroid's (bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, and permethrin); carbaryl; malathion; and imidacloprid.

Trash and Debris. Trash (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic debris (such as leaves, grass cuttings, and food waste) are general waste products on the landscape that can be entrained in urban runoff. The presence of trash and debris may have a significant impact on the recreational value of a water body and aquatic habitat. Excess organic matter can create a high biochemical oxygen demand in a water body and, thereby, lower its water quality. Also, in areas where stagnant water exists, the presence of excess organic matter can promote septic conditions resulting in the growth of undesirable organisms and the release of odorous and hazardous compounds such as hydrogen sulfide.

Chloride. High levels of chloride in Santa Clara River Reaches 3, 5, and 6 are causing impairment of listed beneficial uses for agricultural irrigation. Irrigation of salt sensitive crops such as avocados and strawberries with water containing elevated levels of chloride can result in reduced crop yields. Chloride levels in some areas exceed water quality standards associated with groundwater recharge. Chloride TMDLs are included in the Basin Plan. The major sources of elevated chloride are dry-weather discharges from WRPs, contributing about 70 percent of the chloride load. Minor point sources are dewatering operations which may discharge chloride occurring naturally in groundwater, and uncontrolled swimming pool and water ride discharges.

Methylene Blue Activated Substances (MBAS). MBAS are related to the presence of detergents in water. Positive results may indicate the presence of wastewater or be associated with urban runoff due to commercial and/or residential vehicle washing or other outdoor washing activities. Surfactants disturb the surface tension, which affects insects and can affect gills in aquatic life.

Cyanide. Cyanide has been identified by the LACDPW as a constituent of concern for the Santa Clara River based on monitoring conducted at mass emission station S29. (LACDPW, 2005. Los Angeles County 1994–2005 Integrated Receiving Water Impacts Report Final Report - August 2005.) Cyanide is used in

electroplating, metallurgy, and mining. It is also used to make synthetic fibers, plastics, dyes, pharmaceuticals, and pesticides, including fumigants. In addition, cyanide serves as a chemical intermediate in various production processes. Natural cyanides are produced by certain bacteria, fungi, and algae, and they are present in a number of plants and foods as cyanogenic glycosides. Man-made cyanides typically enter the environment from metal finishing and organic chemical industries. Other sources include iron and steel works, municipal waste burning, cyanide-containing pesticides, road deicers, and vehicle exhaust.

Bioaccumulation. Certain pollutants, such as pesticides, selenium and mercury, have a tendency to bioaccumulate. The Basin Plan and the CTR criteria set forth toxicity objectives for receiving water levels of substances that bioaccumulate in aquatic resources to prohibit concentrations of toxic substances that are harmful to human health and adversely affect beneficial uses.

b. Other Constituents in Surface Water

This section discusses other constituents that are listed in the Basin Plan, but for reasons explained below, are not pollutants of concern for the Mission Village project.

BOD (Biochemical Oxygen Demand) and Dissolved Oxygen. Adequate levels of dissolved oxygen are necessary to support aquatic life. High levels of oxygen demanding substances discharged to receiving waters can depress oxygen levels and contribute to algal growth. Oxygen demanding substances are compounds that can be biologically degraded through aerobic processes. Nutrients in fertilizers and food wastes in trash are examples of likely oxygen demanding compounds that would be present on the project site. Other biodegradable organic materials include human and animal waste and vegetative matter. Biodegradable pollutants are largely subsumed by the nutrients and trash and debris categories above; therefore, these pollutants would not be discussed as a separate constituent category.

Chemical Constituents. Chemical constituents in excessive amounts in drinking water are harmful to human health. The Basin Plan objectives for chemical constituents states: "Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use." As Santa Clara River Reach 5 is not designated with a municipal water supply designated use, chemical constituents are not a pollutant of concern for the project.

Iron. Iron was included in the 2008 Los Angeles Region Integrated Report Clean Water Act Section 305(b) and proposed Section 303(d) List for Santa Clara River Reach 5. The listing referenced exceedances from Saugus and Valencia Water Reclamation Plant receiving water quality monitoring, based on U.S. EPA National Recommended Water Quality Criteria (1976) iron criterion of 1.0 mg/L for freshwater aquatic life. The U.S. EPA criterion is based on three studies that were conducted between 1948 and 1967 which observed fish toxicity effects at iron levels of 1–2 mg/L at low and unknown pH levels.

The presence of iron in the Santa Clara River is due to the fact that it is an abundant element in the earth's crust (the fourth most abundant element by weight); iron silicate minerals are a component of most rocks, including basalt. Iron is an important component in soil adhesion, and is additionally important biologically. Vertebrate animals utilize iron's oxidation-reduction mechanisms to transport oxygen in the bloodstream. Iron pollution sources include industrial wastewater, mine leachate, and groundwaters with high iron content. At low pH levels (below 5.5), iron from these sources complexes with hydroxide, and forms precipitates which can coat gills of fish and cement streambeds, making them unsuitable for spawning.

The Basin Plan and the CTR do not include a water quality criterion for iron. In-stream monitoring data in the Santa Clara River from 2002–2009 show concentrations of iron ranging from 400 to 44,400 μg/L, with no resultant toxicity. Iron concentrations from developed condition land uses typically range from 1,000 to 3,000 μg/L (LACDPW, 2000). Runoff from the project is unlikely to affect concentrations in the Santa Clara River.

Additionally, wet weather water quality monitoring data in the Santa Clara River gathered by LA County from 2002 to 2009 (station S29) show no correlation between toxicity and iron. Toxicity tests in two storm events from 2008-2009 showed no exceedances even with measured in-stream total iron levels as high as 31,000 μg/L and 39,600 μg/L, respectively. Therefore, iron is not anticipated to be a pollutant of concern for the project.

Temperature. Increase in temperature can result in lower dissolved oxygen levels, impairing habitat, and other beneficial uses of receiving waters. Discharges of wastewater can also cause unnatural and/or rapid changes in temperature of receiving waters, which can adversely affect aquatic life. Elevated temperatures are typically associated with discharges of process wastewaters or non-contact cooling waters. As the beneficial uses in the receiving waters for the project include warm freshwater habitat to support warm water ecosystems, temperatures of stormwater runoff from the project are not of concern.

Total Residual Chlorine. Total residual chlorine can be present in WRP discharges, or may be present in dry weather urban runoff from the emptying of swimming pools that have not been de-chlorinated. Chlorine is a strong oxidant and is therefore toxic to aquatic life. Municipal pools and private pools in areas served by a municipal sanitary system are required to be discharged into the sanitary system, and therefore, total residual chlorine would not be present in runoff from the project.

Color, Taste, and Odor. The Basin Plan contains narrative objectives for color, taste, or odor that causes a nuisance or adversely affects beneficial uses. Undesirable tastes and odors in water may be a nuisance and may indicate the presence of a pollutant(s). Odor associated with water can result from decomposition of organic matter or the reduction of inorganic compounds, such as sulfate. Other

potential sources of odor causing substances, such as industrial processes, would not occur as part of the project. Color in water may arise naturally, such as from minerals, plant matter, or algae, or may be caused by industrial pollutants. Project land uses would not include industrial land uses. Therefore, color-, taste-, or odor-producing substances are not pollutants of concern for the project.

Exotic Vegetation. Non-native (exotic) vegetation typically provides little habitat value and can out-compete native vegetation that is more suitable habitat for aquatic and terrestrial organisms. The Basin Plan objective for exotic vegetation states: "Exotic vegetation shall not be introduced around stream courses to the extent that such growth causes nuisance or adversely affects designated beneficial uses." The potential for non-native plant species to impact natural drainages is analyzed in **Section 4.3, Biota**, of this Draft EIR.

Mineral Quality: TDS, Sulfate, Boron, and Sodium Absorption Rate (SAR). Mineral quality in natural waters is largely determined by the mineral assemblage of soils and rocks near the land surface. Elevated mineral concentrations could impact beneficial uses; however, the minerals listed in the Basin Plan, except chloride and nitrogen, are not believed to be constituents of concern due to the absence of river impairments and/or because, as with TDS, anticipated post-development runoff concentrations are well below the Basin Plan objectives (**Table 4.22-12, Comparison of Mineral Basin Plan Objectives with Mean Measured Values in Los Angeles County**). Therefore, these constituents are not considered pollutants of concern for the project.

Table 4.22-12
Comparison of Mineral Basin Plan Objectives with Mean Measured Values in Los Angeles County

Mineral	Los Angeles Basin Plan Water Quality Objective for Santa Clara River Reach 5 (mg/L)	Range of Mean Concentration in Urban Runoff[1] (mg/L)
Total Dissolved Solids	1,000	53–226
Sulfate	400	7–35
Boron	1.5	0.16–0.25
Sodium Absorption Ratio[2]	10	0.4–1.9

Source: Geosyntec, 2010.
[1] *Los Angeles County, 2000. Land uses include SFR, MFR, commercial, education, transportation, light industrial, and mixed residential.*
[2] *Sodium absorption ratio (SAR) predicts the degree to which irrigation water tends to enter into cation-exchange reactions in soil.*

pH. The hydrogen ion activity of water (pH) is measured on a logarithmic scale, ranging from 0 to 14. While the pH of "pure" water at 25°C is 7.0, the pH of natural waters is usually slightly basic due to the

solubility of carbon dioxide from the atmosphere. Aquatic organisms can be highly sensitive to pH. The Basin Plan objective for pH states:

> *the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.5 units from natural conditions as a result of waste discharge.*

Mean runoff concentrations in the Los Angeles County stormwater monitoring data ranged from 6.5 for mixed- and single-family residential land uses to 7.0 for commercial land use. Therefore, it is not expected that pH in the Santa Clara River would be affected by runoff discharges from the project.

PCBs. Polychlorinated Biphenyls (PCBs) are highly toxic persistent chemicals that have been historically released into the environment from industrial uses, such as transformers, but are no longer produced in the United States. Due to their persistence, PCBs can still be detected in urban runoff due to historic industrial sources of these chemicals. The project area did not historically include PCB-producing land uses. Therefore, PCBs are not a pollutant of concern for the project.

Radioactive Substances. Radioactive substances typically occur at very low concentrations in natural waters. Some activities such as mining or certain industrial activities (e.g., energy production, fuel reprocessing) can increase the amount of radioactive substances impairing beneficial uses. The project would not have industrial or other activities that would be a source of any radioactive substances, and development would stabilize any naturally radioactive soils, though unlikely to be present in the project area. Therefore, radioactive substances are not a pollutant of concern for the project.

Toxicity. Certain pollutants in stormwater runoff have the potential to be highly toxic to aquatic organisms resulting in effects such as impaired reproduction or mortality. The Basin Plan water quality objective for toxicity is that "[a]ll surface waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life." Toxicity in urban runoff could be caused by ammonia, trace metals, PAHs, or pesticides. These constituents are subsumed by the pollutant of concern categories above.

c. Groundwater Pollutants

The project may require dewatering of shallow groundwater during the construction phase. The potential for dewatering discharges to affect surface water quality is addressed by considering surface water pollutants of concern. The project would allow for incidental infiltration of urban runoff to groundwater after receiving treatment in the project PDFs, as well as incidental infiltration of irrigation water. Research conducted on the effects on groundwater from stormwater infiltration by Pitt et al. (1994) indicate that the

potential for contamination due to infiltration is dependent on a number of factors, including the local hydrogeology and the chemical characteristics of the pollutants of concern.

Pollutant characteristics that influence the potential for groundwater impacts from infiltration include high mobility (low absorption potential), high solubility fractions, and abundance in runoff, including dry weather flows. As a class of constituents, trace metals tend to adsorb onto soil particles and are filtered out by the soils. This has been confirmed by extensive data collected beneath stormwater detention/retention ponds in Fresno (conducted as part of the Nationwide Urban Runoff Program), which showed that trace metals tended to be adsorbed in the upper few feet in the bottom sediments. (Brown & Caldwell, 1984. Fresno Nationwide Urban Runoff Program Project. Report for the Fresno Metropolitan Flood Control Board, May 1984.) Bacteria are also filtered out by soils. More mobile and soluble pollutants, such as chloride and nitrate, have a greater potential for impacting groundwater through infiltration.

(1) Groundwater Pollutants of Concern

The pollutants of concern for the groundwater quality analysis are those that are anticipated or potentially could be generated by the project at concentrations, based on water quality data collected in Los Angeles County from land uses that are the same as those included in the project, that exhibit these characteristics. Identification of the pollutants of concern for the project considered proposed land uses, as well as pollutants that have the potential to impair beneficial uses of the groundwaters below the project based on applicable water quality standards. The Los Angeles Basin Plan contains numerical objectives for bacteria, mineral quality, nitrogen, and various toxic chemical compounds, and contains qualitative objectives for taste and odor.

Nitrate+nitrite-N was chosen as the pollutant of concern for purposes of evaluating groundwater quality impacts based upon the above considerations. High nitrate levels in drinking water can cause health problems in humans. Infants can develop methemoglobinemia (blue-baby syndrome). Human activities and land use practices can influence nitrogen concentrations in groundwaters. For example, irrigation water containing fertilizers can increase levels of nitrogen in groundwater.

(2) Other Groundwater Constituents

Other constituents typically associated with groundwater include the following:

Bacteria. The Basin Plan contains numeric criteria for bacteria in drinking water sources. As bacteria are removed through straining in soils (for example, as with septic tank discharges), incidental infiltration of runoff in the project LID BMP~~treatment PDF~~s is not expected to affect bacteria levels in groundwater. The

WRP would include a disinfection process to reduce bacteria below levels of concern, and therefore bacteria in irrigation water are not expected to impact groundwater.

Chemical Constituents and Radioactivity. Drinking water limits for inorganic and organic chemicals that can be toxic to human health in excessive amounts and radionuclides are contained in Title 22 of the California Code of Regulations. These chemicals and radionuclides are not expected to occur in the project's runoff, because the project does not include industrial uses. Title 22 specifies California's Wastewater Reclamation Criteria (WRC) and the Newhall Ranch WRP's reclaimed water must meet or exceed these criteria. These criteria apply to the treatment processes; treatment performance standards, such as removal efficiencies and effluent water quality; process monitoring programs, including type and frequency of monitoring; facility operation plans; and necessary reliability features. Due to compliance with these criteria, chemical constituents and radionuclides are not expected to occur in irrigation water in amounts that would impact groundwater.

Taste and Odor. The Basin Plan contains a narrative objective for taste and odor that cause a nuisance or adversely affect beneficial uses. Undesirable tastes and odors in groundwater may be a nuisance and may indicate the presence of a pollutant(s). Odor associated with water can result from natural processes, such as the decomposition of organic matter or the reduction of inorganic compounds, such as sulfate. Pollutants causing taste and odor issues are not expected to occur in stormwater or irrigation water in amounts that would impact groundwater. Other potential sources of odor causing substances, such as industrial processes, would not occur as part of the project. Therefore, taste and odor-producing substances are not pollutants of concern for the project.

Mineral Quality: TDS, Sulfate, Chloride, and Boron. Mineral quality in groundwaters is largely influenced by the mineral assemblage of soils and rocks that it comes into contact with. Elevated mineral concentrations could impact beneficial uses; however, the minerals listed in the Basin Plan are not believed to be pollutants of concern due to the anticipated runoff concentrations and the expected mineral concentrations in Newhall Ranch WRP irrigation water, which are below the Basin Plan groundwater objectives for minerals. (**Table 4.22-13, Comparison of Basin Plan Mineral Groundwater Objectives with Mean Measured Values in Los Angeles County and Anticipated Irrigation Water Quality**). As required by the CWA, the Newhall Ranch WRP discharge permit would include effluent limitations that would require irrigation water to be sufficiently protective of receiving water quality and designated beneficial uses. Effluent limits in the WDR would be developed based on the most stringent of applicable technology-based and water quality-based standards, including Basin Plan surface and groundwater objectives, CTR criteria, and applicable TMDL waste load allocations. Therefore, these constituents are not considered pollutants of concern for the project.

Table 4.22-13
Comparison of Basin Plan Mineral Groundwater Objectives with Mean Measured Values in Los Angeles County and Anticipated Irrigation Water Quality

Mineral	Los Angeles Basin Plan Groundwater Quality Objective1 (mg/L)	Range of Mean Concentrations in Urban Runoff2 (mg/L)	Anticipated Average Concentration in Effluent from the NRSP WRP3(mg/L)
Total Dissolved Solids	1,000	53–237	790
Sulfate	350	7–35	165
Chloride	150	4–50	<150
Boron	1.0	0.2–0.3	0.69

Source: Geosyntec, 2010.
[1] *Eastern Santa Clara-Castaic Valley*
[2] *Source: LACDPW, 2000. Includes all monitored land uses.*
[3] *Source: CH2M Hill, 2006.*

d. Hydrologic Conditions of Concern (Hydromodification)

Urbanization modifies natural watershed and stream hydrologic and geomorphic processes by introducing increased volumes and duration of flow via increased runoff from impervious surfaces and drainage infrastructure. Several studies have evaluated effects of increased runoff associated with the introduction of impervious surfaces and drainage facilities on geomorphic processes (Southern California Coastal Water Research Project [SCCWRP], 2005; Geosyntec, 2002; Bledsoe & Watson, 2001; Booth, 1990; Hollis, 1975; Hammer, 1972). Potential changes to the hydrologic regime may include increased runoff volumes, frequency of runoff events, long-term cumulative duration, as well as increased peak flows. Urbanization may also introduce dry weather flows where only wet weather flows existed prior to development. These changes are referred to as "hydromodification."[21]

Hydromodification intensifies sediment transport and often leads to stream channel enlargement and loss of habitat and associated riparian species (SCCWRP, 2005; Geosyntec, 2002; Bledsoe & Watson, 2001; MacRae, 1992; Booth, 1990). Under certain circumstances, development can also cause a reduction in the amount of sediment supplied to the stream system, which can lead to stream channel incision and widening. These changes also have the potential to impact downstream channels and habitat integrity. A project that increases runoff due to impervious surfaces and traps sediment from upland watershed sources creates potential compounding effects.

[21] Hydromodification can also refer to physical alterations to drainage beds and banks. The impacts and affects resulting from these types of physical alterations, rather than the effects associated with changes in flows, are addressed in **Section 4.21, Floodplain Modification**.

A change to the project site's hydrologic regime would be considered a condition of concern if the change could have a significant impact on downstream natural channels and habitat integrity, alone or in conjunction with impacts of other projects.

6. POST DEVELOPMENT PROJECT DESIGN FEATURES

PDFs incorporated into the Mission Village tract map project and off-site improvements to address surface water quality and hydromodification impacts include ~~low impact/~~site design, source control LID, treatment control, and hydromodification control BMPs. Effective management of wet and dry weather runoff water quality begins with limiting increases in runoff pollutants and flows at the source. ~~Low impact/s~~Site design, LID and source control BMPs are practices designed to minimize runoff and the introduction of pollutants into runoff. Treatment control BMPs are designed to remove pollutants once they have been mobilized by rainfall and runoff. Hydromodification control BMPs are designed to control increases in post-development runoff flows, volumes, and/or durations.

a. ~~Low Impact/~~Site Design and LID BMPs

The purpose of ~~low impact/~~site design and LID BMPs, to the extent feasible, is to mimic the pre-developed hydrologic regime. ~~This low impact/site design philosophy is often referred to as LID.~~ (See County of Los Angeles Low Impact Development Standards Manual, January 2009.) The primary goals of ~~low impact/~~site design and LID BMPs are to maintain a landscape functionally equivalent to pre-development hydrologic conditions and to minimize the generation of pollutants of concern.

~~Low impact/s~~Site design and LID principles include:

Minimize Impervious Area/Maximize Permeability. Principles include preserving natural open space; reducing impervious surfaces (such as roads); using more permeable paving materials; reducing street widths; using minimal disturbance techniques during development to avoid soil compaction; reducing the land coverage of buildings by building taller and narrower footprints; minimizing the use of impervious materials, such as decorative concrete in landscape design; and incorporating detention or infiltration into landscape design.

Minimize Directly Connected Impervious Areas (DCIAs). Minimizing DCIA can be achieved by directing runoff from impervious areas to vegetated areas (e.g., landscaped areas or vegetated treatment control BMPs) or to ~~infiltration~~ LID BMPs.

Conserve Natural Areas. Conserving and protecting native soils, vegetation, and stream corridors helps to mimic the site's pre-development hydrologic regime. This may be accomplished by clustering development within portions of the site to conserve as much natural open space as possible, planting

additional vegetation, using native and/or non-native/non-invasive vegetation in parking lot islands and other landscape areas, and preserving and/or restoring riparian areas and wetlands.

Select Appropriate Building Materials. Use of appropriate building materials reduces the generation and discharge of pollutants of concern in runoff (and is, therefore, also a source control BMP). For example, restricting the use of architectural copper on the outside of buildings and reducing the use of galvanized materials would reduce the impact of copper and zinc to stormwater runoff.

Protect Slopes and Channels. Protecting slopes and channels reduces the potential for erosion and preserves natural sediment supply.

~~Implementation of these measures is required by the County Low Impact Development Manual. PDFs which meet the requirements in the Manual are listed in **Table 4.22-14, Mission Village Low Impact/Site Design BMPs**. Volume reductions provided by the PDFs meet Low Impact Development Manual volume reduction requirements.~~

Newhall Ranch LID BMP Performance Standard

A LID BMP Performance Standard conceptually similar to the LID requirements in the Ventura County NPDES MS4 Permit has been developed for the Project. The LID BMP Performance Standard is illustrated in **Figure 4.22-2, Mission Village LID BMP Performance Standard,** and is described below:

> *LID project design features (PDFs) shall be selected and sized to: (1) fully retain the volume of stormwater runoff produced from a 0.75 inch storm event; and (2) reduce the percentage of Effective Impervious Area (EIA) to five percent or less of the total project area within the vesting tentative map and associated off-site project area. Runoff from all EIA shall be subject to treatment control measures that are selected to address the pollutants of concern and are sized to capture and treat 80 percent of the average annual runoff volume.*

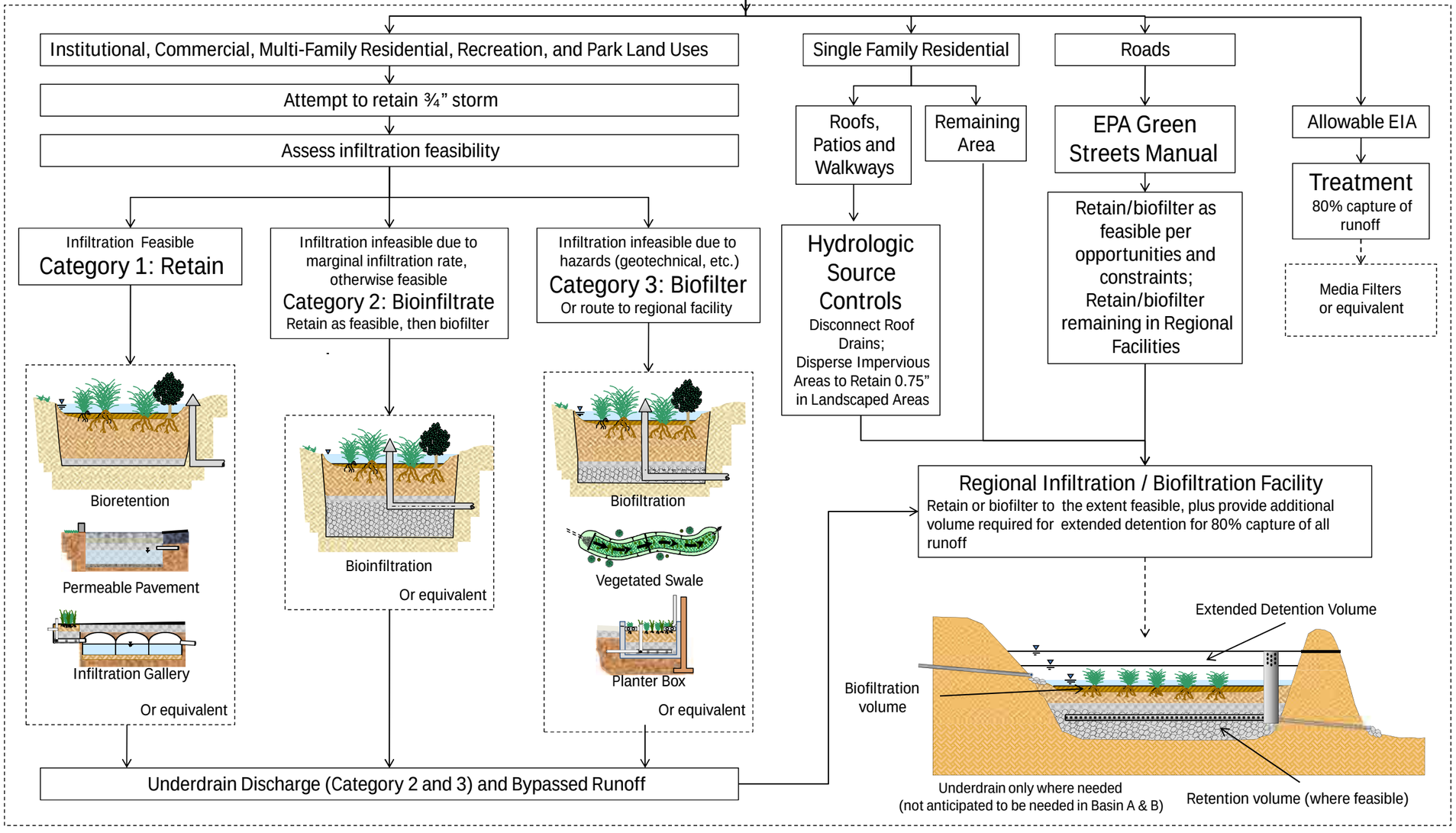
This LID Performance Standard would be implemented on the Project as follows:

1. Institutional, commercial, multi-family residential, recreation, and park land use parcels would implement retention or biofiltration BMPs on-site to the extent feasible. Based on an assessment of feasibility, one of three BMP strategies would be applied as outlined below:

   a. *Infiltration feasible*: If it is feasible to infiltrate all of the developed area runoff produced from the 0.75 inch design storm (i.e., soil infiltration rates are at least 0.5 inches per hour, fill depth is less than 10 feet, and no infiltration geotechnical hazards exist (such as landslides and terrace escarpments)), infiltration BMPs would be used. Infiltration BMPs include bioretention (without an underdrain), permeable pavement, infiltration galleries, infiltration basins or trenches, or an equivalent infiltration BMP.

MISSION VILLAGE LID PERFORMANCE STANDARD

LID project design features (PDFs) shall be selected and sized to retain the volume of stormwater runoff produced from a 0.75 inch storm event to reduce the percentage of Effective Impervious Area (EIA) to 5 percent or less of the total project area within the vesting tentative map project and associated off-site project area. Runoff from all EIA shall be treated with treatment control measures that are selected to address the pollutants of concern and are sized to capture and treat 80 percent of the average annual runoff volume.



SOURCE: Geosyntec Consultants – May 2011

FIGURE **4.22-2**

Mission Village LID BMP Performance Standard

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b. *Bioinfiltration allowable when low infiltration rates or deep fill depths are present*: If the parcel has low soil infiltration rates (i.e., the soil infiltration rate is less than 0.5 inches per hour) or the depth of fill is greater than 10 feet, but no other technical infeasibility concerns exist, bioinfiltration BMPs would be used. Bioinfiltration facilities are similar to bioretention facilities with an underdrain, but they include storage below the underdrain to maximize the volume infiltrated. These facilities would retain a portion of the runoff from the LID design storm, then biofilter the remaining runoff from the design storm.

c. *Infiltration is not allowable*: If infiltration is technically infeasible due to geotechnical hazards or a high ground water table, then biofiltration BMPs would be used. These BMPs would biofilter the runoff produced from the LID design storm from the developed area.

2. Runoff from roofs, patios, and walkways in single family residential parcels would be disconnected over landscaped areas designed to fully retain the volume of runoff from the LID design storm (0.75 inch storm event). Runoff from the remaining parcel area and that which does not infiltrate in the landscaped area would flow through the storm drain system to the regional infiltration/biofiltration facilities.

3. Runoff from roadways would be retained or biofiltered in retention or biofiltration BMPs sized to capture the LID design storm volume or flow, per the guidance in US EPA's *Managing Wet Weather with Green Infrastructure: Green Streets*.

4. No more than 5% of the total Project area would be treated using conventional treatment methods that address the pollutants of concern. In this case, media filters (or equivalent BMPs that address the pollutants of concern) would be sized to capture and treat 80% of the average annual runoff volume from the allowable EIA.

5. Regional infiltration/biofiltration facilities would also be implemented. The regional facilities would be designed to incorporate a biofilter in the bottom of the facility, which would allow for infiltration if feasible, with detention storage above the biofilter. The regional facilities would infiltrate or biofilter the LID design storm volume that has not been retained or biofiltered on the parcels in the area tributary to the regional facility and would provide extended detention treatment for the additional runoff volume required to provide 80% capture and treatment of the average annual runoff volume per the Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan treatment performance standard.

Implementation of LID measures is required by the County Low Impact Development Manual. PDFs which meet the Project LID Performance Standard and the requirements in the Manual are listed in **Table 4.22-14, Mission Village Site Design and LID BMPs**.

~~Low impact/s~~Site design and LID BMP implementation for the project occurs at different spatial scales of development. These spatial scales are listed below, from larger to smaller scale:

- Ranch scale – the Newhall Ranch Specific Plan subregion;
- Village scale – the Mission Village project;

- Land use scale – single family residential, multi-family residential, commercial, education, parks, and roadways within the Mission Village project, and
- Lot or parcel scale – individual lots or parcels within the Mission Village project.

Table 4.22-14
Mission Village ~~Low Impact~~/Site Design and LID BMPs

Low Impact Development Guidance	Spatial Scale	Corresponding ~~Low Impact~~/Site Design or LID BMP
Conserve natural areas, soils, and vegetation Site planning, design, and execution, where appropriate, should: • Conform to local watershed, conservation, and open space plans • Preserve sensitive environmental areas • Preserve historically undisturbed vegetated areas • Build upon the least porous soils or limit construction to areas with previously disturbed soils • Preserve the maximum surface area of undisturbed grades • Preserve native trees and restrict disturbance of soils beneath tree canopies • Avoid disturbing vegetation and soil on slopes and near surface waters • Leave an undisturbed buffer along both sides of natural streams • Avoid adding materials to the soil that decrease cation exchange capacity (CEC), such as sand, except where required for special water treatment needs.	Ranch Scale	The Newhall Ranch Specific Plan clusters development into villages. Approximately 74~~0~~% (10,1458~~,335~~ acres) of the Specific Plan subregion would remain undeveloped Open Areas.
		A system of Open Areas would weave through the Specific Plan area. The Open Areas include community parks, prominent ridges, bluffs, slopes, creek beds, and utility and trail system easements, and would often function as a transition between development areas and the Special Management Areas (SMAs), which include the Santa Clara River Corridor and the Newhall Ranch High Country. The Open Areas are designed to protect significant landforms and natural resources.
		The Newhall Ranch Specific Plan Land Use Plan designates a total of 5,161 acres for the SMAs. These SMAs are designed to protect the existing natural resources within Los Angeles County's Significant Ecological Areas (SEA) 20 and 23.
		The 976-acre Santa Clara River Corridor SMA is designed to protect the sensitive biological resources in SEA 23. The River Corridor SMA would be dedicated to the Center for Natural Lands Management, and the Center would assume responsibility for management of this area.
		The largest land use designation of the Specific Plan Land Use Plan is the 4,185-acre High Country SMA/SEA 20. The High Country SMA/SEA 20 is located in the southern portion of the subregion and includes oak savannahs, high ridgelines, and various canyon drainages, including Salt Creek, a regionally significant wildlife corridor that provides an important habitat link to the Santa Clara River. The High Country SMA/SEA 20 would be dedicated in fee to the Newhall Ranch Joint Powers Authority (JPA), consisting of the County of Los Angeles, the City of Santa Clarita, and the Santa Monica Mountains Conservancy; this JPA would assume responsibility for management of this area.
		As a result of approval of the Newhall Ranch Specific Plan, the 1,500-acre portion of the Salt Creek watershed situated in Ventura County, which is under the ownership of Newhall Land, would be dedicated to the JPA. This dedication area is west of Newhall Ranch, and would be managed in the same manner as the High Country SMA, discussed above.
		To minimize potential biological impacts to lands in Ventura County as a result of the proposed project, the 1,517-acre portion of the Salt Creek watershed situated in Ventura County, which is under the ownership of Newhall Land, would be dedicated to the public. This dedication area is west of Newhall Ranch, and would be managed in the same manner as the High Country SMA.
		Two conservation easements have been granted to CDFG for the purpose of conserving populations of spineflower that occur on the Specific Plan area.

Low Impact Development Guidance	Spatial Scale	Corresponding ~~Low Impact~~/Site Design or LID BMP
	Village Scale	Natural slopes and native vegetation on slopes adjacent to the Santa Clara River would be preserved and/or restored and enhanced.
		The ~~20.3 acre spineflower conservation easement within~~ Mission Village Project would include a 85.8~~be included in the 65.7~~ acre spineflower preserve. ~~increasing the natural open space by 45.4 acres.~~
	Land Use Scale	Native and/or non-native/non-invasive, climate-appropriate vegetation that requires less watering and chemical application would be utilized within the common area landscaping in commercial areas and multi-family residential areas.
Minimize disturbances to natural drainage patterns Site planning, design, and execution, where appropriate, should: • Maintain surface flow patterns of undeveloped sites • Maintain existing water body alignments, sizes, and shapes • Protect seasonal flooding patterns of wetlands • Restore streams and drainage corridors to achieve the same characteristics of timing, flow, and habitat as the original drainage courses in the event that preservation of natural drainage patterns cannot be maintained	Village Scale	Riparian buffers would be provided along the Santa Clara River Corridor and major tributaries by clustering development upland and away from the River and tributary drainages.
		In order to stabilize and restore the Lion Canyon drainage, a geomorphic channel design is proposed. This design would utilize boulder step-pool structures, biotechnical stabilization, soil cement, turf reinforcement mat and limited grading to enhance and restore the Lion Canyon drainage. The Lion Canyon restoration would also include plantings of upland and riparian vegetation to enhance the habitat-related beneficial uses.
	Land Use Scale	Landscape watering in common areas, commercial areas, multi-family residential areas, and in parks would use efficient recycled water irrigation technologies with centralized irrigation controls.

Low Impact Development Guidance	Spatial Scale	Corresponding ~~Low Impact~~/Site Design or LID BMP
Minimize and disconnect impervious surfaces Site planning, design, and execution, where appropriate, should: • Reduce overall impervious areas by maximizing landscaping and using pervious pavements • Reduce the amount of impervious areas that are hydraulically connected to impervious conveyances, such as driveways, walkways, culverts, swales, streets, or storm drains.	Ranch Scale	A system of Open Areas would weave through the central portion of the Specific Plan subregion. The Open Areas include community parks, prominent ridges, bluffs, slopes, creek beds, and utility and trail system easements, and would often function as a transition between development areas. The Open Areas are designed to protect significant landforms and natural resources, and to provide an opportunity to integrate the proposed development within its natural context.
	Village Scale	Impervious areas would be minimized by incorporating landscaped areas into each village, including Mission Village. Approximately 685~~627~~ acres of the 1,261.8 acre Mission Village Project area would be natural river corridor, open space, or parks.
		Project PDFs, including Parcel-based~~bioretention areas~~ and Regional LID BMPs~~water quality basins~~ (hydrologic source controls), would disconnect impervious areas and reduce flows to natural channels through infiltration and evapotranspiration.
	Land Use Scale	Streets, sidewalks, and parking lot aisles would be constructed to the minimum widths specified in the Specific Plan and in compliance with regulations for the Americans with Disabilities Act and safety requirements for fire and emergency vehicle access.
		Trails in Open Areas would incorporate open-jointed paving materials, granular materials, or other pervious materials.
		Impervious surfaces would be minimized in common area landscape design for commercial areas and multi-family residential areas.
	Lot Scale	Runoff from most sidewalks, walkways, trails, and patios would be directed into adjacent landscaping or to Parcel-based LID BMPs.~~vegetated swales.~~
		Landscaped areas would be integrated into each site.

Low Impact Development Guidance	Spatial Scale	Corresponding ~~Low Impact~~/Site Design or LID BMP
Minimize soil compaction Site planning, design, and execution, where appropriate, should: • Restrict grading and compaction to those areas that will support structures • Protect soils, especially porous soils, against compaction and rutting in areas where traffic is unavoidable • Minimize the size of construction easements and material storage areas • Site stockpiles within the development envelope during the construction phase of a project • Prohibit working on wet soils with heavy equipment • Restore compacted open space areas with tilling and soil amendments	Village Scale	In areas not subject to mass grading, the smallest site disturbance area possible would be delineated and flagged; temporary storage of construction equipment would be restricted in these areas to minimize soil compaction on site. Site clearing and grading would be limited to the footprint necessary to allow development, access, and provide fire protection.
		Natural slopes and native vegetation on slopes adjacent to the Santa Clara River would be preserved and/or restored and enhanced.

Low Impact Development Guidance	Spatial Scale	Corresponding ~~Low Impact~~/Site Design or LID BMP
Direct runoff from impervious areas to infiltration areas Site planning, design, and execution, where appropriate, should: • Grade surfaces to drain toward open space, or LID BMPs~~swales, or bioretention cells~~ with infiltration capability • Grade surfaces to drain through suitable pretreatment trains toward porous pavements with infiltration capability • Use grassed or vegetated swales with infiltration capability to convey runoff rather than using conduit and lined conveyances	Village Scale	The Mission Village stormwater treatment system would provide structural LID controls~~treatment control~~ for approximately 96 percent of the Project area via the use of vegetated Parcel-based BMPs (e.g., bioretention areas) and/or Regional LID BMPs (e.g., regional bioinfiltration facility)~~treatment BMPs~~ that provide for volume reduction through infiltration and evapotranspiration.~~, including one or more of the following volume reduction BMPs: bioretention, vegetated swales, and dry extended detention basins.~~
		The Village-level stormwater treatment system would include the use of vegetated LID~~treatment~~ BMPs, including infiltration, bioinfiltration~~bioretention, vegetated swales~~, and biofiltration BMPs implemented at the parcel and drainage area scale~~or extended detention basins~~.
	Lot Scale	Parcel-based LID BMPs (e.g., bioretention areas, porous pavement,~~Bioretention areas or vegetated~~ swales) would manage~~collect and treat~~ runoff from ~~some of the~~ commercial,~~ and~~ multi-family residential, institutional, recreational, and park land uses and infiltrate, bioinfiltration, or biofilter this runoff, as feasible based on geotechnical conditions.~~ areas.~~ These BMPs~~bioretention areas~~ would be located in parking lot islands and other on-site landscaped areas~~. Runoff from most sidewalks, walkways, trails, and patios would be directed into adjacent landscaping or to vegetated swales.~~
		Home builders would be required~~encouraged~~ to implement hydrologic source controls for rooftops, patios, patios and walkways to retain the LID design storm volume. Hydrologic source controls include but are not limited to directing~~direct~~ rooftop runoff through landscaped areas, installing percolation trenches, and installing rain barrels.
		~~Porous pavement would be used in some parking and low traffic areas.~~

Sources~~Source~~: Geosyntec, 2008, Geosyntec, 2011.

b. LID and Treatment Control BMPs

As currently planned, approximately 96 percent of stormwater runoff from ~~all urban~~ developed areas within the project site would be routed to LID BMPs implemented at the parcel~~bioretention areas, vegetated swales,~~ and regional scale ~~/or extended detention basin treatment control BMPs~~(**Figure 4.22-32**, **Project Design Features**). The remaining four percent would be treated in media filters or equivalent treatment control BMPs that address pollutants of concern. Catch basin inserts would also be used in high use parking lots. Collectively, the LID BMP~~water quality treatment control PDF~~s would treat the pollutants of concern in runoff from the project's developed area (approximately 607~~829~~ acres) and approximately 140 acres of off-site project components. The utility corridor maintenance access road and potential future trail, as well as the Edison substation, would drain to infiltration or bioinfiltration ~~biofiltration~~BMPs (vegetated swale~~, or~~ filter strip, porous pavement~~) or~~ or bioretention areas).~~treatments.~~ Runoff from the easterly extension of Magic Mountain Parkway to the Old Road, the Commerce Center Drive Bridge, and a section of Commerce Center Drive would be treated with media filtration or equivalent treatment method. The LID and treatment control BMPs~~These extended detention basin, vegetated swales, and bioretention areas~~ would be designed to ~~operate offline,~~ receiv~~ing~~e dry weather flows, small storm flows, and the initial portion of large storm flows~~ from a low flow diversion structure in the storm drain~~. The proposed LID BMPs~~PDFs~~~~treatment control PDFs~~ are illustrated in **Figure 4.22-4~~3~~**, **Examples of Infiltration, Bioinfiltration, and Biofiltration~~Bioretention~~ Facilities~~; Figure 4.22-4, Conceptual Illustration of Vegetated Swale~~**; and ~~**Figure 4.22-5, Conceptual Illustration of a Water Waste Basin**~~.

In addition to site design and source control BMPs, the LID BMP~~water quality treatment control~~ PDFs for the tract map site and off-site project features are described below. LID BMP~~Treatment control~~ PDFs for the tract map site are summarized in **Table 4.22-15, Project Drainage Areas and LID~~Treatment Control~~ BMPs**. LID BMP ~~Treatment control~~ PDFs for the off-site project components are summarized in **Table 4.22-16, Off-Site Project Component Drainage Areas and LID~~Treatment Control~~ BMPs**.

- ***Parcel-based Infiltration BMPs:*** Parcel-based infiltration BMPs include bioretention (without an underdrain), permeable pavement, infiltration galleries, infiltration basins or trenches, or an equivalent infiltration BMP.

- ***Parcel-based Bioinfiltration BMPs:*** Parcel-based bioinfiltration BMPs include bioretention (with an elevated underdrain), vegetated swales (with combined retention and treatment mechanisms), and other BMPs that are designed to retain a portion of the runoff from the LID design storm, then biofilter the remaining runoff from the design storm.

- ***Parcel-based Biofiltration BMPs*:** Parcel-based biofiltration BMPs~~• ***Bioretention:*** Bioretention areas are vegetated (i.e., landscaped) shallow depressions that provide storage, infiltration, and evapotranspiration, and also~~ provide for pollutant removal (e.g., filtration, adsorption, nutrient

uptake) by filtering stormwater through the vegetation and soils. These BMPs include bioretention with underdrains, vegetated media filters, vegetated swales, and filter strips. In bioretention areas, as well as in vegetated swales and filter strips, pore spaces and organic material in the soils help to retain water in the form of soil moisture and to promote the adsorption of pollutants (e.g., dissolved metals and petroleum hydrocarbons) into the soil matrix. Plants utilize soil moisture and promote the drying of the soil through transpiration.

- ***Single Family Hydrologic Source Controls (Single Family HSCs)***: Runoff from roofs, patios, and walkways in single family residential parcels would be disconnected over landscaped areas designed to fully retain the volume of runoff from the LID design storm (0.75 inch storm event). Single Family HSCs would provide volume reduction by routing downspouts to landscaped areas, shallow percolation trenches, rain barrels or other equivalent means of retaining the LID design storm. Storage volume would be recovered via in infiltration and evapotranspiration.

- ~~***Vegetated Swales*****:** Vegetated swales are engineered, vegetation-lined channels that provide water quality treatment in addition to conveying stormwater runoff. Swales provide pollutant removal through settling and filtration in the vegetation (often grasses) lining the channels and also provide the opportunity for volume reduction through infiltration and evapotranspiration. Swales are most effective where longitudinal slopes are small (2 percent to 6 percent), thereby increasing the residence time for treatment, and where water depths are less than the vegetation height. The project would incorporate vegetated swales with check dams wherever velocities or slopes are too high for vegetated swales alone.~~

- ~~***Cartridge***~~ ***Media Filtration:*** Media ~~Cartridge media~~ filtration is typically comprised of a vault ~~(~~or catch basin ~~for small drainage catchments)~~ that houses media designed to~~rechargeable, media filled cartridges that~~ trap particulates and remove pollutants such as dissolved metals, nutrients, and hydrocarbons. During the filtering process, the treatment system also removes surface scum and floating oil and grease. Media may be contained in cartridges or be placed directly in a media bed configuration.

- ***Regional Infiltration/Biofiltration Facilities:*** Regional infiltration/biofiltration facilities would be designed to incorporate a biofilter in the bottom of a regional basin, which would allow for infiltration if feasible, with detention storage above the biofilter. The regional facilities would infiltrate or biofilter the LID design storm volume that has not been retained or biofiltered on the parcels in the area tributary to the regional facility and would provide extended detention treatment for the additional runoff volume required to provide 80% capture and treatment of the average annual runoff volume per the Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan treatment performance standard. The design of the facility would be tailored to soil and hydrogeologic conditions in the facility location:

  - Regional facilities A and B would be located in well drained alluvial soils with greater than 10 feet separation to groundwater. These facilities would be designed to fully infiltrate the design volume.

  - Regional facility C would be located in an area where soils are not as conducive to infiltration and where excessive groundwater recharge could cause downstream hydrogeologic impacts. This facility would be designed with storage volume below the system underdrains to promote some infiltration, and with a vegetated media filter in the bottom of the facility to biofilter the remaining design volume.

- Regional facility D would be located in an area with very high groundwater and infiltration would not possible. This facility would be designed with a vegetated media filter in the bottom to biofilter the remaining design volume.

- Regional facility E would be located in an area underlain by terrace deposit where significant potential exist for infiltrated water to cause slope stability and/or unseasonal springs and seeps. This facility would be designed with a vegetated media filter in the bottom to biofilter the remaining design volume.

The Regional Infiltration/Biofiltration Facilities would provide a combination of volume reduction for the full LID design volume and treatment of 80 percent of the average annual runoff volume. Volume reduction would be provided via infiltration below the lowest surface discharge of the facility and via water retained in soil pores. In biofiltration media, sediment and sediment-bound pollutants are removed by filtration. Pore spaces and organic material in the soils help to retain water in the form of soil moisture and to promote the adsorption of pollutants (e.g., dissolved metals and petroleum hydrocarbons) into the soil matrix. Plants utilize soil moisture and promote the drying of the soil. Extended detention would provide pollutant removal through settling and biological uptake of nutrients and dissolved pollutants within the vegetation that would grow within the facilities. The facilities~~• ***Extended Detention Basins*:** Extended detention basins (EDBs) store stormwater runoff for sufficient periods of time to promote the removal of pollutants primarily through settling and sedimentation. Dry extended detention basins are designed with outlets that detain the runoff volume from the water quality design storm for some minimum time (in this case 48 hours) to allow particles and associated pollutants (phosphorus, trace metals, some pesticides, and other pollutants) to settle out. These basins are not designed or anticipated to contain standing water for periods in excess of 48 hours. The EDBs would also incorporate a series of gravel filled subsurface flow trenches that would provide water quality treatment and facilitate evapotranspiration (ET) and percolation of dry weather flows and small storm events within the basin footprint. As runoff flows through the trench gravel, pollutant removal is achieved through settling and biological uptake of nutrients and dissolved pollutants within the wetland plants that would grow within the trenches, filtration within the trench gravel, and percolation into underlying soils. In addition, a specially constructed dry well that would support deep subsurface percolation of dry weather flows that may exceed the capacity of the gravel trenches would be provided. It is anticipated that the dry well would receive water primarily during the winter months, when ET rates are lower.~~

In addition, a planned extension of Magic Mountain Parkway from the western Project boundary was included in the water quality model as it would be tributary to Regional ~~Extended Detention Basin~~Facility A, although it is not an off-site project component as it would be constructed as part of another Newhall Ranch Specific Plan project.

c. Hydromodification Control BMPs

Post-development flows would be directed to the Santa Clara River after treatment; no flows would be directed to the on-site restored tributary Lion Canyon. A series of progressive hydromodification control measures would be used to prevent and control hydromodification impacts to the Santa Clara River:

- Avoid, to the maximum extent practicable, the need to mitigate for hydromodification impacts by preserving natural hydrologic conditions and protecting sensitive hydrologic features, sediment sources, and sensitive habitats.
- Minimize the effects of development through ~~low impact~~/site design ~~practices~~ and LID BMPs (e.g., reducing connected impervious surfaces) and implementation of stormwater volume-reducing LID BMPs (project-based hydrologic source control).
- Mitigate hydromodification impacts in-stream using geomorphically based channel design.

Table 4.22-15
Project Drainage Areas and LID and Treatment Control BMPs

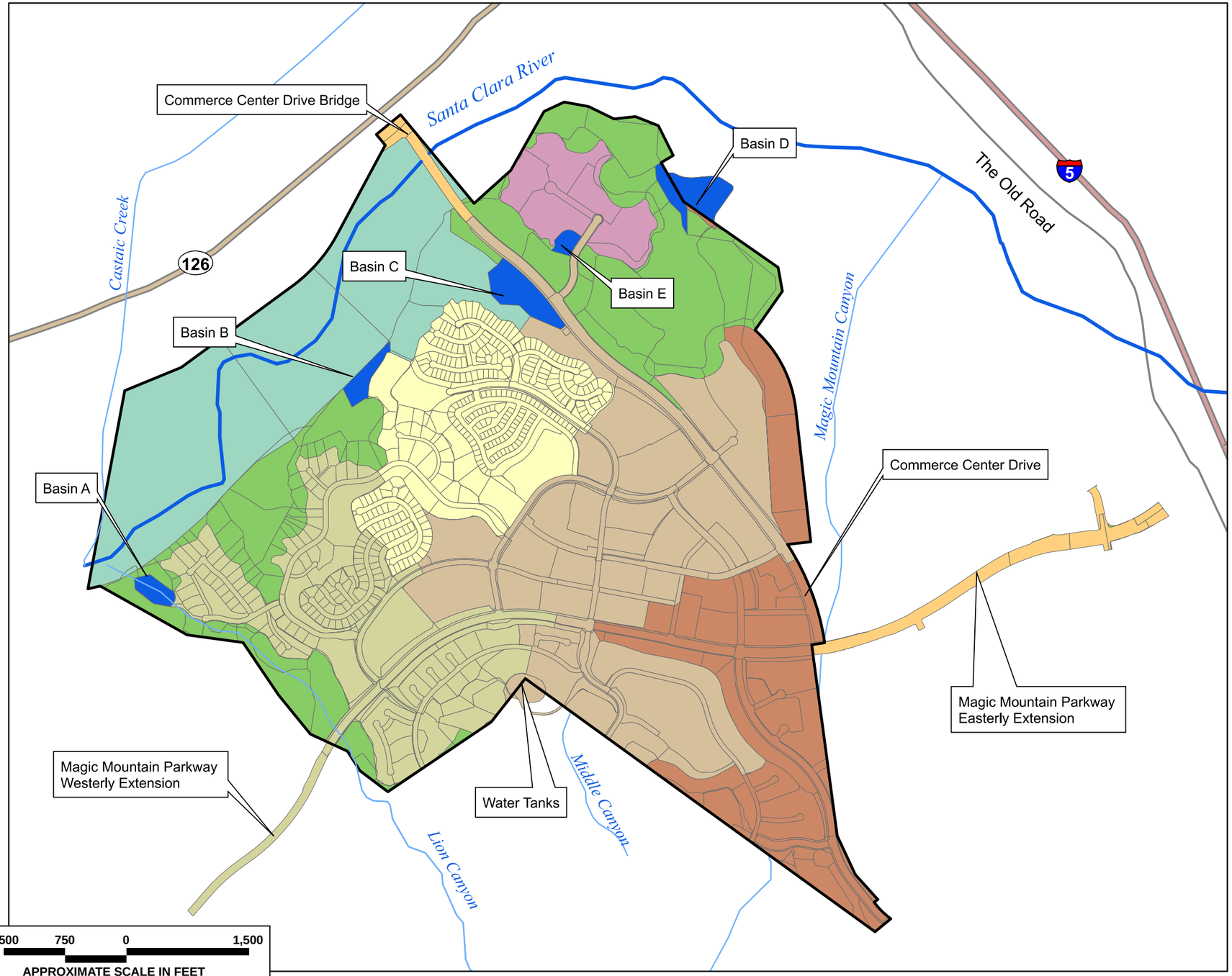
Drainage Area	Area (acres)	LID~~Treatment~~ BMP(s)
A	171	Regional Infiltration Facility~~Extended Detention Basin~~ A, Parcel-based LID BMPs~~some Bioretention (in Commercial~~ and Single ~~/or Multi~~ Family HSCs in tributary area~~Residential Areas)~~
B	140~~145~~	Regional Infiltration~~Extended Detention~~ Basin B, Parcel-based LID BMPs~~some Bioretention (in Commercial~~ and Single ~~/or Multi~~ Family HSCs in tributary area~~Residential Areas)~~
C	294~~303~~	Regional Bioinfiltration Basin C, Parcel-based LID BMPs in tributary area~~Extended Detention Basin C, some Bioretention (in Commercial and/or Multi-Family Residential Areas)~~
D[1]	173~~164~~	Regional Biofiltration Basin D, Parcel-based LID BMPs in tributary area~~Extended Detention Basin D, some Bioretention (in Commercial and/or Multi-Family Residential Areas)~~
E~~O~~	40	Regional Biofiltration Basin E, Parcel-based LID BMPs in tributary area~~Extended Detention Basin O, some Bioretention and catch basin inserts (in Commercial Areas)~~
Commerce Center Drive and Bridge	6	~~Cartridge~~ Media Filtration (LID~~treatment~~ BMP for the bridge would be provided by the SR126 interchange project)
Total	**824~~829~~**	

Source: Geosyntec, 2010, 2011.
[1] *Does not include off-site natural areas that are tributary to modeled PDFs~~the water quality basins~~. Includes all open space within the project bounds that drain to the modeled PDFs~~water quality basins.~~*

Table 4.22-16
Off-Site Project Component Drainage Areas and LID and Treatment Control BMPs

Drainage Area	Area (acres)	Treatment BMP(s)
Magic Mountain Parkway extension to The Old Road	19.3	Media Filtration
Water Tank plus access road	2.1	Parcel-based LID BMPs with overflow and treated discharge to Regional Bioinfiltration Facility C~~Dry Extended Detention Basin C~~
Utility Corridor	110	Parcel-based LID BMPs/HSCs~~Vegetated Swale or Bioretention~~
Edison Substation	3.0	Parcel-based LID BMPs/HSCs~~Vegetated Swale or Bioretention~~
Basin D and Associated Drainage Improvements	6.1	Regional Biofiltration Facility D~~Dry Extended Detention Basin D~~
Total	**140.5~~2~~**	

Source: Geosyntec, 2010, 2011.



Legend

- Mission Village Boundary
- Water Quality Basins

Drains to:

- Basin A
- Basin B
- Basin C
- Basin D
- Basin E
- Media Filter
- Natural/Off-site
- River Corridor

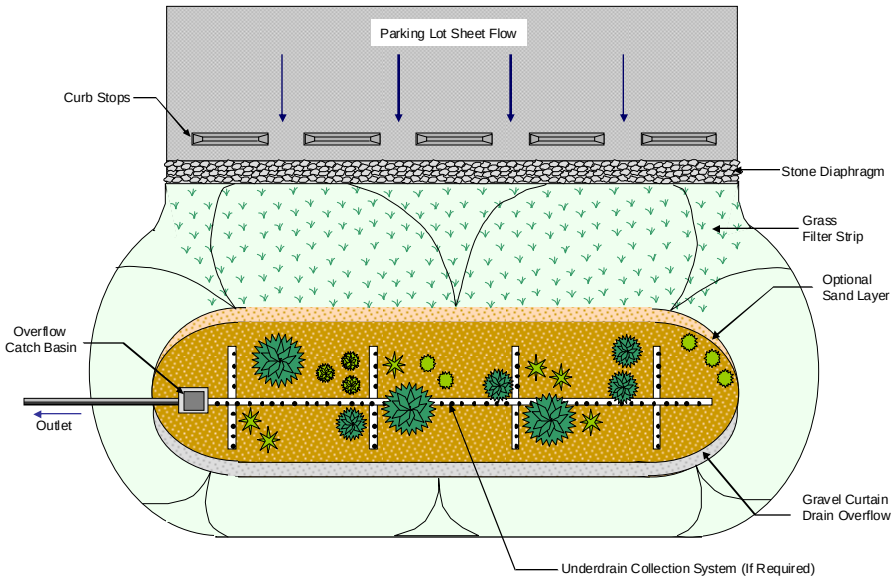
SOURCE: GeoSyntec - March 2010

Revised FIGURE **4.22-3**

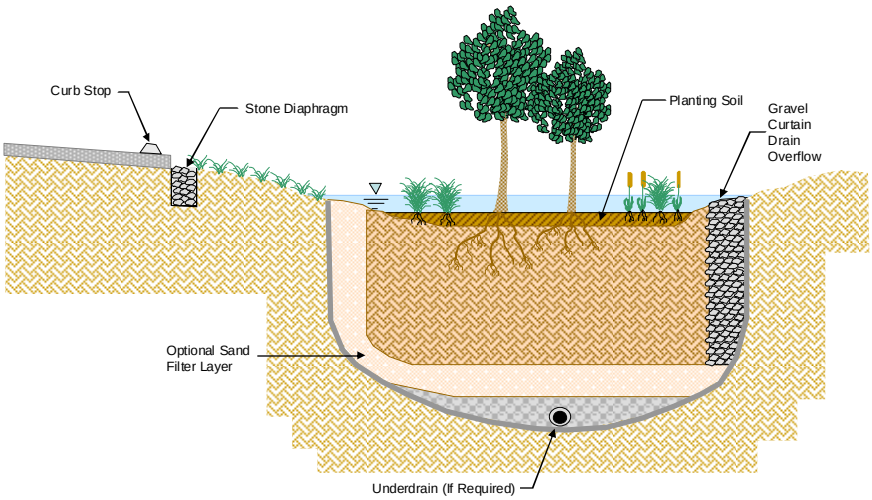
Project Design Features

32-99•05/11

Plan View



Profile



SOURCE: GeoSyntec - 2007, Impact Sciences, Inc. – March 2007

Revised FIGURE **4.22-4**

Examples of Parcel-based Infiltration, Bioinfiltration, and Biofiltration BMPs

~~Figure 4.22-4 Conceptual Illustration of Vegetated Swale~~

~~Figure 4.22-5 Conceptual Illustration of a Dry Extended Detention Basin~~

The hydromodification control measures are summarized below.

- **~~Low Impact/~~Site Design and LID BMPs.** ~~Low Impact/s~~Site design and LID BMP PDFs that help to reduce the increase in runoff volume include the clustering of development into village areas, leaving large amounts of undeveloped open space within the Specific Plan subregion (of which Mission Village is a part); routing of stormwater runoff to vegetated areas and/or vegetated BMPs; use of native or non-native/non-invasive plants in landscaped areas; and the use of efficient irrigation systems in common area landscaped areas.

- **Volume Reduction BMPs.** The project's LID BMP ~~treatment control~~ PDFs would also serve as hydromodification source control BMPs. Parcel-based~~ Vegetated swales, bioretention areas,~~ and Regional LID BMPs would~~extended detention basins can~~ provide volume reduction ranging from incidental volume reduction in biofiltration BMPs (via evaporation and ~~on the order of 20 to 30 percent through~~ infiltration) up to full volume reduction of captured water in infiltration BMPs where soil and hydrogeologic conditions permit~~ and evaporation~~. In addition these facilities would also receive and eliminate dry weather flows.

- **Geomorphically Based Channel Design.** The hydromodification management approach for the Santa Clara River would also incorporate "geomorphically referenced" channel design as described in SCCWRP Technical Report 450 (SCCWRP, 2005a). The goal of this approach is to preserve the natural stream channel function to the maximum extent practicable while limiting instability in stream channel morphology. This approach would also be used to restore Lion Canyon to enhance habitat-related beneficial uses (see Appendix F (Basis of Design, Lion Canyon) of **Appendix 4.22**).

The engineered structural elements that would be implemented where needed for the Santa Clara River stability include energy dissipation and geomorphically referenced bank stabilization.

- **Energy Dissipation.** Energy dissipation at storm drain outfalls provides erosion protection in areas where discharges have the potential to cause localized stream erosion. Erosion protection would be provided at all storm drain outlets to the Santa Clara River.

- **Bank Stabilization.** The project would include buried soil cement along the Santa Clara River adjacent to and downstream of the project site. In total, approximately 2,900 linear feet of bank stabilization would be constructed as part of the project. This would include approximately 1,700 linear feet on the south bank fronting the tract map site with an additional 300 linear feet at Lion Canyon and 1,200 linear feet downstream of the tract map location on the north bank, east of the WRP.

Most of the proposed bank protection would primarily consist of buried soil cement to provide scour and freeboard flood control protection. Soil cement is a modern flood control technique used to protect against erosion while maintaining natural vegetation and soft banks. Soil cement would be buried below the existing banks of the Santa Clara River. Disturbed areas would then be re-vegetated with native plant species, maintaining the natural habitat presently found along the River.

Approximately 16,000 linear feet of Turf Reinforcement Mat (TRM) or similar bank stability protection would be provided along the southern edge of the utility corridor. TRMs are designed to reinforce

vegetation at the root and stem allowing vegetation to be used as erosion control in areas where flow conditions exceed the ability of natural vegetation to remain rooted. This includes applications with high slopes or stream banks where grouted riprap and concrete channels are aesthetically undesirable.

In summary, the Mission Village PDFs for water quality and hydrologic impacts have been created to address the Mission Village LID Performance Standard~~SUSMP requirements~~ and include site design, source control, LID~~treatment control~~, and hydromodification control BMPs.

7. PROJECT IMPACTS

The analysis of potential impacts to water quality associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

Based on the guidance offered by the *California Environmental Quality Act (CEQA) Guidelines*, applicable water quality standards, and potential project impacts, the following thresholds of significance are utilized:

(1) Surface Water Quality

Thresholds of significance for water quality impacts have been developed based on a review of the MS4 Permit, Construction General Permit, Dewatering General Permit, applicable receiving water quality standards, and the *State CEQA Guidelines*, Appendix G. Significant adverse water quality impacts are presumed to occur if the proposed project would:

(a) create sizeable additional sources of polluted runoff that would be discharged to receiving waters, which would result in exceedances of receiving water quality or substantially degrade water quality in receiving waters;

(b) create sizeable additional sources of polluted runoff that would violate any water quality standards or waste discharge requirements for surface water runoff; or

(c) create sizeable additional sources of polluted construction site runoff (including polluted discharges associated with construction activities such as materials delivery, staging or storage, vehicle or equipment fueling, vehicle or equipment maintenance, waste handling, or hazardous materials handling or storage) that would violate any water quality standards or waste discharge requirements for surface water runoff or groundwater discharge.

This section analyzes whether sizeable additional sources of polluted runoff may result from the project based on the results of water quality modeling, qualitative assessments, and comparison with discharge requirements that take into account water quality controls or BMPs that are considered PDFs. Any

deviation from or failure to comply with discharge requirements is considered a potentially significant adverse water quality effect. Further, increases in pollutant concentrations or loads in runoff resulting from the development of the project site are considered an indication of a potentially significant adverse water quality impact. If loads and concentrations resulting from development are predicted to stay the same or to be reduced when compared with existing conditions, it is concluded that the project would not cause a significant adverse impact to the ambient water quality of the receiving waters for that pollutant.

If pollutant loads or concentrations are expected to increase, then, for both the post-development and construction phases, potential impacts are assessed by evaluating compliance of the project, including PDFs, with applicable regulatory requirements of the MS4 Permit, including SQMP and SUSMP requirements, the LID Performance Standard, the Construction General Permit, and the General Dewatering Permit. Further, post-development increases in pollutant loads and concentrations are evaluated by comparing the magnitude of the increase to relevant benchmarks, including receiving water TMDLs and receiving water quality objectives from the Basin Plan and CTR.

(2) Hydromodification

Thresholds of significance for evaluating hydrologic impacts and conditions of concern have been developed based on a review of the MS4 Permit and the *State CEQA Guidelines*, Appendix G. Significant adverse impacts to natural drainage systems created by altered hydrologic conditions of concern are presumed to occur if the proposed project would:

- Substantially alter the existing drainage pattern of a natural drainage, stream, or river causing substantial erosion, siltation, or channel instability in a manner that substantially adversely affects beneficial uses; or

- Substantially increase the rates, velocities, frequencies, duration, and/or seasonality of flows causing channel instability and harming sensitive habitats or species in natural drainages in a manner that substantially adversely affects beneficial uses.

(3) Groundwater

Thresholds of significance for evaluating the hydrologic and water quality impacts of the project on groundwater have been developed based on *State CEQA Guidelines* Appendix G. Significant adverse impacts to groundwater are presumed to occur if the proposed project would:

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge so as to cause a net deficit in aquifer volume or a lowering of the local groundwater table; or

- Through changes in surface water runoff quality and quantity (including project LID BMP~~treatment~~ PDFs), and changes in groundwater recharge, result in a violation of any groundwater quality standards or waste discharge requirements or otherwise substantially degrade water quality.

Groundwater quality benchmarks were compared with post-development runoff water quality to establish the likelihood that runoff would result in a degradation of groundwater quality. The hydrologic effects of the project on groundwater were examined by comparison of historical and present levels of the underlying aquifer to determine the impact of development on aquifer volume.

b. Methodology for Evaluating Post Development and Surface Water Quality Effects

(1) Computer Modeling

A water quality model was used to estimate pollutant loads and concentrations in project stormwater runoff for certain pollutants of concern for pre-development conditions and post-development conditions with PDFs for the tentative map portion of the project. The water quality model is one of the few models that accounts for observed variability in stormwater hydrology and water quality. This is accomplished by characterizing the probability distribution of observed rainfall event depths, the probability distribution of event mean concentrations and the probability distribution of the number of storm events per year. These distributions are then sampled randomly using a "Monte Carlo Approach" to develop estimates of mean annual loads and concentrations. A detailed description of the water quality model is presented in **Appendix 4.22.** The following summarizes major features of the water quality model:

- **Rainfall Data**: The water quality model estimates the volume of runoff from storm events. The storm events were determined from 40 years (1969–2008) of hourly rainfall data measured at the National Climatic Data Center (NCDC) Newhall rain gage that incorporates a wide range of storm events. The rainfall analysis that is incorporated in the water quality model requires rainfall measurements at 1-hour intervals and a long period of record that is at least 20 to 30 years in length.

- **Land Use Runoff Water Quality**: The water quality model estimates the concentration of pollutants in runoff from storm events based on existing and proposed land uses. The pollutant concentrations for various land uses, in the form of Event Mean Concentrations (EMCs), were estimated from data collected in Los Angeles County. The Los Angeles County database was chosen for use in the model because (1) it is an extensive database that is quite comprehensive; (2) it contains monitoring data from land use specific drainage areas; and (3) the data is representative of the semi-arid conditions in Southern California.

- **Pollutant Load:** The pollutant load associated with each storm is estimated as the product of the storm event runoff times the EMC. For each year in the simulation, the individual storm event loads are summed to estimate the annual load. The mean annual load is then the average of all the annual loads.

- ~~**PDFs Modeled:** The modeling only considers the structural treatment PDFs (e.g., biofiltration, media filters, and dry extended detention basin) and does not take into account low impact/site design and source control PDFs (e.g., street sweeping and catch basin inserts) that also would improve water quality. In this respect, the modeling results are conservative and tend to overestimate pollutant loads and concentrations.~~

- **Treatment Effectiveness:** The water quality model estimates mean pollutant concentrations and loads in stormwater following treatment. The amount of stormwater runoff that is captured by the LID~~treatment~~ BMPs was calculated for each storm event, taking into consideration the intensity of rainfall, duration of the storm, and duration between storm events. The amount of stormwater runoff that is reduced by the LID BMP (i.e., captured and does not discharge) was calculated for each storm event taking into consideration the intensity of rainfall, the duration of the storm, the geometric design of the LID BMP, the infiltration rate of underlying soils, and the monthly normal evaporation rates. The USEPA Stormwater Management Model Version 4.4h (SWMM4.4) was used to perform these calculations. The mean effluent water quality for LID~~treatment~~ BMPs (water captured and discharged) was based on the International Stormwater BMP Database~~.~~ (ASCE, 2001. User's Guide National Stormwater Best Management Practices (BMP) Database Version 1.2. Prepared by Urban Water Resources Research Council of ASCE and Wright Water Engineers, Inc., Urban Drainage and Flood Control District, URS Greine Woodward Clyde, in cooperation with Office of Water U.S. EPA, Washington, DC. March 2001/U.S. EPA, 2003.). The version of the International Stormwater BMP Database used for the analysis was based on the most recent studies available in January 2011.~~. Ecological Soil Screening Level for Aluminum. EPA OSWER directive 9285.7-60, November 2003. County of Los Angeles Low Impact Development Standards Manual, January 2009)~~ The International Stormwater BMP Database was used because it is a robust, peer reviewed database that contains a wide range of BMP effectiveness studies that are reflective of diverse land uses.~~ An analysis of the monitored inflow and outflow data contained in the International Stormwater BMP Database showed a volume reduction on the order of 38 percent for biofilters and 30 percent for extended detention basins. (Strecker, E. et al., 2004. Analyses of the Expanded EPA/ASCE International BMP Database and Potential Implications for BMP Design, World Water and Envt. Cong. Proc. (June 27-July 1, 2004).) Based on this analysis, a conservative estimate of 25 percent of the inflow to the vegetated swales and bioretention areas, and 20 percent of the inflow to extended detention basins was assumed to infiltrate and/or evapotranspire in the water quality model. These assumptions regarding volumetric losses also were used to assess the quantity of dry weather flows that would be captured in the treatment BMPs.~~ (See Section 7.8.2 of the Water Quality Technical Report in EIR **Appendix 4.22**.)

  BMP effectiveness studies in the International Stormwater BMP database infrequently monitor aluminum; therefore, insufficient effluent data were available to model the removal effectiveness of LID~~treatment control~~ BMPs for this water quality constituent. The total aluminum content of a water sample would be directly related to the concentrations of the suspended particulate matter. The aluminum content of the suspended solids is likely to directly reflect the composition of the source materials (e.g., the catchment soils). Therefore, it would be expected and is assumed that total aluminum concentrations and loads would be reduced proportionally to removal of suspended solids by project BMPs. In order to estimate the reduction in total aluminum load and concentration (dissolved aluminum was assumed to pass through BMPs without removal), TSS removal was used as a surrogate.

- **Bypass Flows:** The water quality model takes into account conditions when LID BMPs are~~the treatment facility is~~ full and flows are bypassed.

- **Representativeness to Local Conditions**: The water quality model utilizes runoff water quality data obtained from tributary areas that have a predominant land use, and as measured prior to discharge into a receiving water body. Currently such data are available from stormwater programs in Los Angeles County, San Diego County, and Ventura County, although the amount of data available

from San Diego County and Ventura County is small in comparison with the Los Angeles County database. Such data is often referred to as "end-of-pipe" data to distinguish it from data obtained in urban streams, for example.

- **Infiltration:** Existing conditions infiltration parameters for the watershed surfaces were assumed based on soil hydrologic group, soil texture class, and the Natural Resources Conversation Service (NRCS) Soil Survey of the project area. The majority of the site would be impacted by cut and fill operations; therefore, post-development soil compaction impacts were modeled for post-development open and landscaped areas assuming a 25 percent reduction in saturated hydraulic conductivity, or infiltration rate, from the pre-developed to post-developed condition. Impervious surfaces were modeled assuming no infiltration. Sub-surface infiltration rates in areas where parcel-based and regional LID BMPs would be located were estimated based on inspection of soils and geologic maps relative to the infiltration rates that would be expected in regional facility locations and fill areas (RT Frankian and Associates, Personal Communication, January 2011).

(a) Pollutants of Concern

(1) Pollutants Modeled

The appropriate form of data used to address water quality are flow composite storm event samples, which are a measure of the average water quality during the event. To obtain such data usually requires automatic samplers that collect data at a frequency that is proportionate to flow rate. The pollutants of concern for which there are sufficient flow composite sampling data in the Los Angeles County database are:

- Total Suspended Solids (sediment)
- Total Phosphorus
- Nitrate-Nitrogen, Nitrite-Nitrogen, Ammonia-Nitrogen
- Total Aluminum
- Dissolved Copper
- Total Lead
- Dissolved Zinc
- Chloride

(2) Qualitative Impact Analysis

The other pollutants of concern, such as pathogens, hydrocarbons, pesticides, and trash and debris, are not amenable to this type of sampling either because of short holding times (e.g., pathogens), difficulties in obtaining a representative sample (e.g., hydrocarbons) or low detection levels (e.g., pesticides).These

pollutants were addressed qualitatively using literature information and best professional judgment due to the lack of statistically reliable monitoring data for these pollutants. These pollutants include:

- Turbidity
- Pathogens (Bacteria, Viruses and Protozoa)
- Hydrocarbons (Oil and Grease, Polycyclic Aromatic Hydrocarbons)
- Pesticides
- Trash and Debris
- Methylene Blue Activated Substances (MBAS)
- Cyanide

Human pathogens are usually not directly measured in stormwater monitoring programs because of the difficulty and expense involved; rather, indicator bacteria such as fecal coliform or certain strains of *E. coli* are measured. Because maximum holding times for bacterial samples are necessarily short, most stormwater programs do not collect flow-weighted composite samples that potentially could produce more reliable statistical estimates of concentrations. Fecal coliform or *E. coli* are typically measured with grab samples, making it difficult to develop reliable EMCs. Total coliform and fecal bacteria (fecal coliform, fecal streptococcus and fecal enterococcus) were detected in stormwater samples tested in Los Angeles County at highly variable densities (or most probable number [MPN]) ranging between several hundred to several million cells per 100 ml. (LACDPW, 2000. Los Angeles County 1994–2000 Integrated Receiving Water Impacts Report.)

Hydrocarbons are difficult to measure because of laboratory interference effects and sample collection issues (hydrocarbons tend to coat sample bottles). Hydrocarbons are typically measured with single grab samples, making it difficult to develop reliable EMCs.

Pesticides in urban runoff are often at concentrations that are below detection limits for most commercial laboratories and, therefore, there is limited statistically reliable data available on pesticides in urban runoff. Pesticides were not detected in Los Angeles County monitoring data for land use-based samples, except for diazinon and glyphosate, which were detected in less than 15 percent and 7 percent of samples, respectively. (LACDPW, 2000. Los Angeles County 1994–2000 Integrated Receiving Water Impacts Report.)

Turbidity, trash and debris, MBAS, and cyanide are not typically included in routine urban stormwater monitoring programs, and turbidity typically is not included in post-construction treatment control BMP

effectiveness studies. Several studies conducted in the Los Angeles River basin have attempted to quantify trash generated from discrete areas, but the data represent relatively small areas or relatively short periods, or both. MBAS was included in the land use-based monitoring data, but not enough data is available for modeling purposes. Cyanide was not included in the Los Angeles County land use-based monitoring program.

Also addressed qualitatively are potential water quality impacts from runoff and dewatering discharges during construction, potential water quality impacts due to pollutant bioaccumulation, and dry weather runoff water quality impacts.

(3) LID Performance Standard Retention Volume Conformance Analysis

The Project LID Performance Standard establishes minimum requirements for stormwater retention. An analysis was performed to demonstrate that the proposed LID BMP PDFs would provide retention volume equivalent to or greater than the Project LID Performance Standard retention volume. The following stepwise process was used to show conformance with the LID Performance Standard Retention Volume.

Step 1: Calculate LID Performance Standard

The retention volume required to meet the Project LID Performance Standard was calculated as described below.

- Tabulate non-jurisdictional project area (includes vesting tentative tract map and associated off-site project areas, minus the River Corridor).
- Calculate project total impervious area. This calculation was based on proposed land uses and average impervious rates for these land uses.
- Calculate project allowable impervious area. This was calculated as five percent of the total project area as described in the Project LID Performance Standard.
- Calculate the remaining impervious area as the difference between the total impervious area and the allowable impervious area
- Calculate runoff from the remaining impervious area for the first 0.75 inches of precipitation per the method described in the Ventura County Technical Guidance Manual (TGM):
  - V (ac-ft) = Remaining Impervious Area (ac) × 0.75 inches × 0.95 runoff coefficient × (1ft/12 inches units conversion)
- The resulting retention storage volume is the LID Performance Standard retention volume that would apply to the Project. This performance standard is expressed in acre-feet.

Step 2: Calculate Retention Volume in Land Use BMPs (On site)

The retention volume provided in parcel-based LID BMPs was calculated based the application of the Project LID Performance Standard (**Figure 4.22-2, Project LID Performance Standard**) to the Project land uses and infiltration constraints.

- Categorize institutional, commercial, multi-family residential, recreation, and park land use parcels by the infiltration constraint category and calculate the area of each category of parcel-based LID BMPs. This analysis was conducted using spatial datasets characterizing infiltration feasibility factors, including depth to groundwater, natural, undisturbed soil infiltration rate, net depth of proposed cut and fill, and geotechnical hazards. These datasets were overlain to characterize project areas based on the following criteria:
  - *Category 1 - Infiltration Feasible* – depth to seasonally high groundwater greater than 10 feet; net depth of fill less than 10 feet; natural, undisturbed infiltration rate greater than 0.5 inches per hour; and no identified geotechnical hazards related to infiltration of stormwater.
  - *Category 2 - Infiltration Partially Feasible* – depth to seasonally high groundwater greater than 10 feet and no identified geotechnical hazards related to infiltration of stormwater (any depth of fill or natural, undisturbed infiltration rate)
  - *Category 3 - Infiltration Infeasible* –depth to seasonally high groundwater less than 10 feet; geotechnical hazard identified that would preclude infiltration
- Calculate the retention volume per BMP area provided in parcel-based LID BMPs and sum the retention volume provided in all parcel-based LID BMPs.
  - *Category 1 - Infiltration Feasible – Infiltration BMPs*: Sum all volume provided in BMPs below the overflow elevation.
  - *Category 2 - Infiltration Partially Feasible - Bioinfiltration BMPs*: Sum all volume provided below underdrains and retained in soil pores.
  - Category 3 - Infiltration Infeasible – Biofiltration BMPs: Sum all volume retained in soil pores.
- Calculate acreage of single family detached land uses and calculate retention volume associated with infiltration and evapotranspiration by Single Family HSCs:
  - Estimate area of rooftops, patios, and walkways based on typical lot dimensions and setbacks.
  - Calculate volume of runoff from roofs, patios, and walkways for the first 0.75 inches of rainfall and tabulate this volume as retention storage.

Step 3: Calculate Retention Volume in Regional Infiltration/Biofiltration Facilities

Calculate the total storage volume provided in regional infiltration/ biofiltration facilities below the lowest discharge point. All retention volume provided in regional infiltration/bioinfiltration facilities was added together.

- Retention volume in Regional Infiltration Facilities A and B would include all volume below the facility overflow elevation.
- Retention volume in Regional Bioinfiltration Facility C would include volume in a layer of rock below the facility underdrains and volume retained in the pore space of biofiltration media.
- Retention volume in Regional Biofiltration Facilities D and E would include volume retained in the pore space of biofiltration media.

Step 4: Compare Total Retention Volume Provided to LID Performance Standard

The total retention volume provided in parcel-based BMPs and regional LID BMPs (regional infiltration/biofiltration facilities) from Steps 2 and 3, respectively, was compared to the Project LID Performance Standard retention volume computed in Step 1. The Project is considered to meet the Project LID Performance Standard if the total retention storage volume provided is equal to or greater than the Project LID Performance Standard retention volume.

~~*(3) LID Equivalency Analysis*~~

~~Los Angeles County's LID Standards Manual outlines stormwater runoff quantity and quality control development principles, technologies, and design standards for achieving the LID Standards of the Los Angeles County LID Ordinance. An analysis was performed to demonstrate that the LID and treatment control PDFs that would provide equivalent or greater volume reductions to that which would be achieved by BMPs designed per the specific requirements of the Los Angeles County LID Manual.~~

~~Infiltration may not be possible if the following criteria apply:~~

- ~~Locations where seasonal high groundwater is within 10 feet of the surface.~~
- ~~Within 100 feet of a groundwater well used for drinking water.~~
- ~~Brownfield development sites or other locations where pollutant mobilization is a documented concern.~~
- ~~Locations with potential geotechnical hazards as outlined in a report prepared and stamped by a licensed geotechnical engineer.~~
- ~~Locations with natural, undisturbed soil infiltration rates of less than 0.5 inch per hour that do not support infiltration based BMPs.~~

- ~~Locations where infiltration could cause adverse impacts to biological resources.~~
- ~~Development projects in which the use of infiltration BMPs would conflict with local, State or Federal ordinances or building codes.~~
- ~~Locations where infiltration would cause health and safety concerns.~~

~~The Project is required to use reclaimed water for irrigation of landscaping. Therefore, storage and reuse are considered infeasible for the Project.~~

~~To demonstrate equivalency, a two tiered analysis was conducted. The first tier of analysis divided the Project area into analysis regions using spatial data processing of the proposed developed condition and the infiltration infeasibility criteria listed above. The second tier calculated the LID Manual volumetric mitigation requirements for these areas (i.e., the volumetric capture efficiency and volume reduction that would be achieved by well designed BMPs per the specific requirements of the LID Manual), calculating the volumetric performance of Project BMPs, and comparing these values. A brief description of the analysis steps and inputs are included below.~~

~~Tier One Analysis Methodology~~

~~The tier one analysis utilizes spatial datasets and Geographic Information System (GIS) processing to divide the Project into analysis regions based on infiltration infeasibility criteria. Inputs into the tier one analysis included:~~

- ~~Proposed Condition Land Use: Undeveloped areas do not require LID BMPs.~~
- ~~Spatial datasets representing feasibility of infiltration: Spatial datasets representing areas where infiltration is limited by one of the identified screening factors were merged and dissolved. Negative spaces in this merge represent areas where infiltration is potentially feasible within the Project area.~~

~~The intersection of proposed land use conditions and areas potentially feasible for infiltration was used to divide the project into three categories: (1) Open Space, (2) Developed Areas Potential Feasible for Infiltration, and (3) Developed Areas Potentially Infeasible for Infiltration.~~

~~Tier Two Analysis Methodology~~

~~The Tier Two analysis established a performance standard for the Project based on LID Manual requirements, and compared the predicted performance of the Project PDFs to this performance standard. The LID Manual performance standard was established based on the estimated long term performance of LID BMPs designed per the LID Manual requirements, considering the feasibility criteria contained in the~~

~~manual. The performance of Project PDFs is estimated based on the water quality modeling. Key components of the Tier Two analysis include:~~

- ~~ΔV Calculation: The volumetric sizing criteria associated with the LID Ordinance is the excess volume (ΔV). The ΔV was calculated in a manner approximately equivalent to the Los Angeles County Hydrology Manual Tc Calculator method by computing the difference in runoff volume in the existing and proposed conditions of the Project for the water quality design storm depth (0.75 inch). Calculations were completed separately for areas where infiltration is potentially feasible and areas where infiltration is potentially infeasible. Calculation methods are described in greater detail in Appendix B.~~

- ~~Unit performance of BMPs designed per LID Manual Requirements: An estimation of the volumetric performance of BMPs designed per LID Manual requirements was made as an element of the LID performance standard. Volumetric performance is a function of:~~

  - ~~The average annual capture efficiency of the BMP (i.e., the fraction of average annual runoff that is captured and not immediately bypassed by the BMP), and~~

  - ~~The average annual fraction of the captured volume that is retained (or lost) in the BMP due to infiltration, evapotranspiration, or direct use.~~

~~Capture efficiency was calculated based on a performance analysis of a hypothetical BMP designed to LID Manual requirements (i.e., sized to capture the ΔV, explained above) for a hypothetical catchment using over 40 years of historic hourly precipitation records. The resulting capture efficiency was estimated to be approximately 48 percent. For infiltration BMPs, captured water is expected to be fully retained up to the design storm event, therefore the total average annual reduction of runoff volume would be equal to the capture efficiency (48 percent).~~

~~In areas where infiltration is infeasible, vegetated treatment BMPs may still achieve incidental volume reductions through soil soaking and drying processes (i.e., evapotranspiration) and slower infiltration (unless facilities have an impermeable liner). An analysis of the International BMP Database (Strecker et al., 2004) found that detention basins and biofilters (swale and filter strips) achieved average volume reductions of 30 to 38 percent of captured volume, respectively. This analysis likely included studies of BMPs underlain by highly infiltrative soils and/or specifically designed for infiltration. For areas of the project where infiltration is not feasible, it is likely that incidental volume reduction achieved by vegetated BMPs would be significantly less than indicated by the Strecker et al. (2004) study. Therefore, for areas of the project where infiltration is not feasible it was assumed that 20 percent of the volume captured in vegetated BMPs in areas would be retained. The remaining 80 percent of captured volume was assumed to be treated and released.~~

1. ~~*Applying Unit Volumetric Performance to Spatial Screening to Compute LID Manual Requirements:* Average annual runoff volumes from developed land uses were calculated based on methods approximately equivalent to the Los Angeles County Hydrology Manual T_c Calculator. These volumes were~~

~~calculated separately for areas where infiltration is potentially feasible and areas where infiltration is potentially infeasible. For areas where infiltration is potentially feasible, the performance standard for volume reduction is equal to 48 percent of the computed average annual runoff volume. For areas where infiltration is potentially infeasible, the performance standard for volume reduction is equal to 9.6 percent (20 percent of 48 percent) of the computed average annual runoff volume. The sum of these two volume reductions forms the LID performance standard for volume reduction. In addition, the LID performance standard includes capture and treatment in a vegetated BMP (including retention) of at least 48 percent of the average annual runoff volume.~~

- ~~*Performance of PDFs:* Using the water quality modeling approach described in section 6.1 and Appendix B, total project runoff volumes were estimated for the developed condition with PDFs and without PDFs. The difference between the runoff volume generated from the developed condition without PDFs and the volume generated from the developed condition with PDFs represents the volume reduction achieved by the project. This volume reduction is compared to the LID Manual performance standard to determine LID equivalency.~~

c. Impact Analysis

(1) Construction-Related Impacts

The analysis of potential impact of construction activities, construction materials, and non-stormwater runoff on water quality during the construction phase is focused primarily on sediment (TSS and turbidity) and certain non-sediment related pollutants. Construction-related activities that expose soils to potential mobilization by rainfall/runoff and wind are primarily responsible for sediment releases. Such activities include removal of vegetation from the site, grading of the site and trenching for infrastructure improvements. Environmental factors that affect erosion include topographic, soil and rainfall characteristics. Non sediment-related pollutants that are also of concern during construction caused by construction materials and non-stormwater flows include waste construction materials (e.g., paint, stucco, etc); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants are also of concern during construction.

Construction impacts due to project development, including the borrow source activities and in-stream construction elements, would be minimized through compliance with the Construction General Permit. This permit requires the discharger to perform a risk assessment for the proposed development (with differing requirements based upon the determined level) and to prepare and implement an SWPPP, which must include erosion and sediment control BMPs that would meet or exceed measures required by the determined risk level of the Construction General Permit, as well as BMPs that control the other potential construction-related pollutants. A Construction Site Monitoring Program that identifies monitoring and sampling requirements during construction is a required component of the SWPPP. Preliminary analysis indicates that the project would most likely be categorized as a Risk Level 2. BMPs required by the Construction General Permit would be incorporated assuming this level of risk; if final

design analysis indicates that the project would fall under Risk Level 3, the additional Level 3 permit requirements would be implemented as necessary.

Erosion control BMPs are designed to prevent erosion, whereas sediment controls are designed to trap sediment once it has been mobilized. Waste and construction material control BMPs generally call for management of construction-related materials, such as cement, stucco, paint, hydrocarbons, and similar materials, to avoid discharges of runoff containing these materials.

A Mission Village SWPPP would be developed as required by, and in compliance with, the Construction General Permit and the County of Los Angeles Standard Conditions. Moreover, the SWPPP would include BMPs that meet or exceed the measures recommended to control construction-related pollutants.

The General Permit requires the SWPPP to include a menu of BMPs to be selected and implemented based on the phase of construction and the weather conditions to effectively control erosion and pollutants to the BAT/BCT. The following types of BMPs from the Stormwater Best Management Practice Handbook - Construction (CASQA 2003) would be implemented during construction (CASQA Handbook BMP numbers are indicated in parenthesis):

- **Erosion Control (EC-3 through EC-7 and WE-1):**
  - Physical stabilization through hydraulic mulch, soil binders, straw mulch, bonded fiber matrices, and erosion control blankets (i.e., rolled erosion control products).
  - Limiting the area and duration of exposure of disturbed soils.
  - Soil roughening of graded areas (through track walking, scarifying, sheepsfoot rolling, or imprinting) to slow runoff, enhance infiltration, and reduce erosion.
  - Vegetation stabilization through temporary seeding to establish interim vegetation.
  - Wind erosion (dust) control through the application of water or other dust palliatives as necessary to prevent and alleviate dust nuisance.
- **Sediment Control:**
  - Perimeter protection to prevent discharges through silt fences, fiber rolls, gravel bag berms, sand bag barriers, and straw bale barriers (SE-1, 5, 6, 8 and 9).
  - Storm drain inlet protection (SE-10).
  - Resource (environmentally sensitive area) protection through silt fences, fiber rolls, gravel bag berms, sand bag barriers, and straw bale barriers (SE-1, 5, 6, 8, and 9).
  - Sediment capture and drainage control through sediment traps, storm drain inlet protection, and sediment basins (SE-3, 10, and 2).

- Velocity reduction through check dams, sediment basins, and outlet protection/velocity dissipation devices (SE-2, 4, and 10).

- Reduction in off-site sediment tracking through stabilized construction entrance/exit, construction road stabilization, and entrance/exit tire wash (TE-1, 2, and 3).

- Slope interruption at permit-prescribed intervals (fiber rolls, gravel bag berms, sand bag berms, compost socks, biofilter bags).

- **Waste and Materials Management:**

  - Management of the following types of materials, products, and wastes: solid, liquid, sanitary, concrete, hazardous, and equipment-related wastes (MW-1, 2, and 4 through 10 and NS-8 through 10). Management measures include covered storage and 4 through 10 secondary containment for material storage areas, secondary containment for portable toilets, covered dumpsters, dedicated and NS-8 through 10 lined concrete washout/waste areas, proper application of chemicals, and proper disposal of all manners of wastes.

  - Protection of soil landscaping and construction material stockpiles through covers, the application of water or soil binders, and perimeter control measures (MW-3).

  - A spill response and prevention program would be incorporated as part of the SWPPP and spill response materials would be available and conspicuously located at all times on site.

- **Non-Stormwater Management:**

  - BMPs or good housekeeping practices to reduce or limit pollutants at their source before they are exposed to stormwater, including such measures as: water conservation practices, vehicle and equipment cleaning and fueling practices (NS-1 through 16).

  - If construction dewatering or discharges from other specific construction activities such as water line testing, and sprinkler system testing are required, comply with the requirements of the Los Angeles RWQCB's General Waste Discharge Requirements (WDRs) under Order No. R4-2008-0032 (NPDES No. CAG994004) governing construction-related dewatering discharges.

- **Training and Education:**

  - Inclusion of General Permit defined "Qualified SWPPP Developers" (QSD) and "Qualified SWPPP Practitioners" (QSP). QSDs and QSPs shall have required certifications and shall attend State Board sponsored training.

  - Training of individuals responsible for SWPPP preparation, implementation, and permit compliance, including contractors and subcontractors.

  - Signage (bilingual, if appropriate) to address SWPPP-related issues (such as site clean up policies, BMP protection, washout locations, etc).

- **Inspections, Maintenance, Monitoring and Sampling:**
  - Performing routine site inspections and inspections before, during (for storm events >0.5 inch), and after storm events.
  - Preparing and implementing Rain Event Action Plans (REAPs) prior to any storm event with 50% probability of producing 0.5 inch of rainfall, including performing required preparatory procedures and site inspections.
  - Implementing maintenance and repairs of BMPs as indicated by routine and storm-event inspections and REAP.
  - Implementation of the Construction Site Monitoring Plan for non-visible pollutants, if a leak or spill is detected.
  - These sampling of discharge points for turbidity and pH, at minimum, three times per qualifying storm event and recording and retention of results.

These construction site management BMPs would be implemented for the project during the dry season and wet season as follows:

Dry Season Construction Phase BMPs:

a. Wind erosion BMPs (dust control).

b. Soil roughening of graded areas (track walking, scarifying, sheepsfoot rolling, or imprinting).

c. Sediment control BMPs at the down gradient site perimeter and all operational storm drain inlets internal to the planning area.

d. Off-site tracking BMPs.

e. Appropriate waste management and materials pollution BMPs.

f. Appropriate non-storm water BMPs to prevent or reduce the contamination of stormwater by construction activities and materials.

g. A "weather triggered" action plan to deploy standby erosion and sediment control BMPs to protect exposed portions of the site within 48 hours of a predicted storm event.

h. Sufficient standby BMP materials to implement the above action plan.

i. Deployment of post-construction erosion control BMPs as soon as practicable.

Wet Season Construction Phase BMPs:

In addition to the dry season BMPs noted above:

a. Limiting the area and duration of exposure of disturbed soil areas. This may be accomplished by retention of natural vegetation in areas not scheduled for immediate grading, phasing the grading, and stabilizing disturbed areas quickly.

b. Implementation of an effective combination of erosion and sediment control measures on all disturbed areas.

c. Sufficient standby BMP materials to implement the above weather triggered action plan.

The Construction General Permit does not recognize a wet season by dates; therefore, the wet season requirements would be implemented year round if there is a storm event predicted.

The proposed project would reduce or prevent erosion and sediment transport and transport of other potential pollutants from the project site during the construction phase through implementation of BMPs meeting BAT/BCT standards in order to prevent or minimize environmental impacts and to ensure that discharges during the construction phase of the project would not cause or contribute to any exceedance of water quality standards in the receiving waters. These BMPs would assure effective control of not only sediment discharge, but also of pollutants associated with sediments, such as (but not limited to) nutrients, heavy metals, and certain pesticides, including legacy pesticides. In addition, compliance with BAT/BCT requires that BMPs used to control construction water quality are updated over time as new water quality control technologies are developed and become available for use. Thus, erosion and sediment impacts of the project are considered less than significant.

Hydrocarbons in site runoff could result from construction equipment/vehicle fueling or spills. However, pursuant to the Construction General Permit, the Construction SWPPP would include BMPs that address proper handling of petroleum products on the construction site, such as proper petroleum product storage and spill response practices, and those BMPs must effectively prevent the release of hydrocarbons to runoff per BAT/BCT standards. PAH that are absorbed to sediment during the construction phase would be effectively controlled via the erosion and sediment control BMPs. For these reasons, construction-related impacts related to hydrocarbons on water quality are considered less than significant.

Finally, construction on the project site may require dewatering and non-stormwater related discharges. For example, dewatering may be needed if water has been standing on site and needs to be removed for construction, vector control, or other reasons. Further, dewatering and non-stormwater related discharges may be necessary if groundwater is encountered during grading, or to allow discharges associated with testing of water lines, sprinkler systems, and other facilities.

In general, the Construction General Permit authorizes construction dewatering activities and other construction-related non-stormwater discharges as long as they (a) comply with Section A.9 of the General Permit; (b) do not cause or contribute to a violation of any water quality standards; (c) do not violate any other provisions of the General Permit; (d) do not require a non-stormwater permit as issued by some RWQCBs; and (e) are not prohibited by a Basin Plan provision. Such discharges would occur in compliance with the Los Angeles RWQCB's General Waste Discharge Requirements (WDRs), under Order No. R4-2003-0111, NPDES No. CAG994004, governing construction-related dewatering discharges within the project development areas. Typical BMPs for construction dewatering include infiltration of clean groundwater; on-site treatment using suitable treatment technologies; on site or transport off site for sanitary sewer discharge with local sewer district approval; or use of a sedimentation bag for small volumes of localized dewatering.

Full compliance with applicable local, state and federal water quality standards and waste discharge requirements of the Construction General Permit and Dewatering General Permit by the applicant would assure that potential impacts from construction runoff and dewatering discharges would not be significant. On this basis, the impact of construction-related runoff from the project is considered less than significant.

(2) Post Development Operational Impacts to Surface Waters

(a) MS4 Permit Requirements for New Development as Defined in the SUSMP

Table 4.22-17, SUSMP Requirements and Corresponding Project Design Features, analyzes compliance of the project, including proposed site design, source control, LID, treatment control, and hydromodification control BMPs, with applicable post-development waste discharge requirements of the MS4 Permit, including SUSMP requirements.

Table 4.22-17
SUSMP Requirements and Corresponding Project Design Features

SUSMP Requirement	Criteria/Description	Corresponding Mission Village PDFs
1. Runoff Flow Control	• Control post-development peak stormwater runoff discharge rates, velocities and duration in Natural Drainage Systems to prevent accelerated downstream erosion and to protect habitat-related beneficial uses. • Post-development peak storm water runoff discharge rates shall not exceed the estimated pre-development rate for developments where the increased peak storm water discharge rate will result in increased potential for downstream erosion. • Post-development runoff from the 50-year capital storm shall not exceed the predevelopment peak flow rate, burned and bulked, from the 50-year capital storm.	• Hydromodification source controls include minimizing impervious surfaces through clustering development and using parcel-based LID BMPs, regional LID BMPs, and Single Family HSCs~~bioretention, extended detention~~ (see Figure 4.22-2)~~), and other vegetated treatment control BMPs~~ to disconnect impervious surfaces and reduce runoff volumes through evapotranspiration and infiltration. • 50-year capital storm peak flow rate analysis is contained in the "Mission Village Tentative Tract Map 61105 Drainage Concept," prepared by Psomas (Psomas, 2009) (see **Appendix 4.2**), and analysis of flood impacts on the Santa Clara River is contained in the "Flood Technical Report" prepared by Pacific Advanced Civil Engineering, Inc. for the Mission Village project (PACE, 2007) (see **Appendix 4.21**).

SUSMP Requirement	Criteria/Description	Corresponding Mission Village PDFs
2. Conserve Natural Areas	• Concentrate or cluster development on portions of a site while leaving the remaining land in a natural undisturbed condition. • Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection. • Maximize trees and other vegetation at each site, planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants. • Promote natural vegetation by using parking lot islands and other landscaped areas. • Preserve riparian areas and wetlands.	• The NRSP clusters development into villages, including Mission Village. Approximately 70% (8,335 acres) of the NRSP subregion would remain undeveloped. • Approximately 685~~627~~ acres of the 1,261.8 acre Mission Village project area would remain as natural river corridor, open space, or parks. • Native and non-native/non-invasive vegetation would be utilized within the development. • The final project stormwater system would include the use of the parcel-based LID~~vegetated treatment~~ BMPs, including, but not limited to, infiltration, bioinfiltration, and biofiltration BMPs ~~bioretention (~~placed in common area landscaping in commercial, ~~and~~ multi-family residential, institutional, recreational, and park areas, roadway median strips, and parking lot islands (where applicable) and regional infiltration/ biofiltration facilities incorporating natural vegetation~~dry extended detention basins~~. • Riparian buffers would be preserved along the Santa Clara River corridor and Lion Canyon by clustering development upland and away from the River and tributary canyon. • Lion Canyon would be stabilized and restored by the project. The restoration would utilize boulder step-pool structures, biotechnical stabilization, soil cement, turf reinforcement mat (TRM) and limited grading to enhance and restore the Lion Canyon drainage. The Lion Canyon restoration would also include plantings of upland and riparian vegetation to enhance the habitat-related beneficial uses.

SUSMP Requirement	Criteria/Description	Corresponding Mission Village PDFs
3. Minimize Stormwater Pollutants of Concern	• Minimize, to the maximum extent practicable, the introduction of pollutants of concern that may result in significant impacts generated from site runoff of directly connected impervious areas (DCIA) to the stormwater conveyance system as approved by the building official.	• LID~~Treatment control~~ BMPs would be selected to address the pollutants of concern for the Project~~project~~. These LID~~treatment~~ BMPs include infiltration, bioinfiltration~~detention basins, vegetated swales, bioretention~~, and biofiltration BMPs implemented at the parcel-scale,~~catch basin~~ media filters~~filtration~~ units implemented in right-of-ways, USEPA Green Streets practices implemented in right-of-ways, as feasible, and regional infiltration/ biofiltration facilities. These BMPs are designed to minimize introduction of pollutants to the Maximum Extent Practicable (MEP). • The project would include numerous source controls, including education programs, animal waste bag stations, street sweeping and catch basin cleaning, an Integrated Pest Management (IPM) Program for common area landscaping in commercial areas and multi-family residential areas, use of native and/or non-invasive, climate appropriate vegetation, use of smart irrigation control, and installation of a car wash pad in multi-family residential areas. • An education program would be implemented that includes both the education of residents and commercial businesses regarding water quality issues. Topics would include services that could affect water quality, such as carpet cleaners and others that may not properly dispose of cleaning wastes; community car washes; and residential car washing. The education program would emphasize animal waste management, such as the importance of cleaning up after pets and not feeding pigeons, seagulls, ducks, and geese. • Vegetated LID~~treatment control~~ BMPs would allow for infiltration of treated stormwater.

SUSMP Requirement	Criteria/Description	Corresponding Mission Village PDFs
4. Protect Slopes and Channels	Project plans must include BMPs consistent with local codes and ordinances and the SUSMP requirements to decrease the potential of slopes and/or channels from eroding and impacting stormwater runoff: • Convey runoff safely from the tops of slopes and stabilize disturbed slopes. • Utilize natural drainage systems to the maximum extent practicable. • Control or reduce or eliminate flow to natural drainage systems to the maximum extent practicable. • Stabilize permanent channel crossings. • Vegetate slopes with native or drought tolerant vegetation. • Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion with the approval of all agencies with jurisdiction, e.g., the U.S. Army Corps of Engineers (USACE) and the California Department of Fish and Game (CDFG).	• Natural slopes and native vegetation on slopes adjacent to the SCR and Lion Canyon would be preserved and/or restored and enhanced. Native and/or non-native/non-invasive vegetation would be used in all plant palettes placed on manufactured/restored slopes. • PDFs, including parcel-based BMPs, regional LID BMPs, and Single Family HSCs, and USEPA Green Streets practices~~bioretention areas and water quality basins~~ (hydrologic source controls), would reduce flows to natural channels through infiltration and evapotranspiration. • The banks of the Santa Clara River at portions of this site would be stabilized primarily using buried bank stabilization. After the implementation of these measures and other flow control and volume reduction PDFs, the Santa Clara River would be capable of handling the expected flow regime with little or no erosion. • All outlet points to the Santa Clara River would include energy dissipaters per the Newhall Ranch Resource Development and Management Plan. • In-stream stabilization techniques would be employed in Lion Canyon to protect habitat-related beneficial uses, per the Newhall Ranch Resource Development and Management Plan.
5. Provide Storm Drain System Stenciling and Signage	• All storm drain inlets and catch basins within the project area must be stenciled with prohibitive language and/or graphical icons to discourage illegal dumping. • Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area. • Legibility of stencils and signs must be maintained.	• All storm drain inlets and water quality inlets would be stenciled or labeled. • Signs would be posted in areas where dumping could occur. • The LACDPW and/or The Homeowners Association or LADPW would maintain stencils and signs.
6. Properly Design Outdoor Material Storage Areas	• Where proposed project plans include outdoor areas for storage of materials that may contribute pollutants to the storm water conveyance system measures to mitigate impacts must be included.	• Pesticides, fertilizers, paints, and other hazardous materials used for maintenance of common areas, parks, commercial areas, and multifamily residential common areas would be kept in enclosed storage areas.

SUSMP Requirement	Criteria/Description	Corresponding Mission Village PDFs
7. Properly Design Trash Storage Areas	All trash containers must meet the following structural or treatment control BMP requirements: • Trash container areas must have drainage from adjoining roofs and pavement diverter around the areas. • Trash container areas must be screened or walled to prevent off-site transport of trash.	• All outdoor trash storage areas would be covered and isolated from stormwater runoff.
8. Provide Proof of Ongoing BMP Maintenance	• Applicant required to provide verification of maintenance provisions through such means as may be appropriate, including, but not limited to legal agreements, covenants, and/or Conditional Use Permits.	• The Homeowners Associations or commercial/business owners would be responsible for operation and maintenance of parcel~~site~~-based BMPs and Single Family HSCs (such as bioretention placed in common area landscaping and downspouts disconnected to percolation trenches~~in multi-family residential areas and commercial areas~~). • Los Angeles County Department of Public Works would be responsible for maintenance of USEPA Green Streets practices installed in public right-of-ways~~village level~~ and ~~sub~~-regional LID BMPs.
9. Design Standards for Structural or Treatment Control BMPs	• Post-construction Structural or Treatment Control BMPs shall be designed to mitigate (infiltrate or treat) stormwater runoff using either volumetric treatment control BMPs or flow-based treatment control BMPs sized per listed criteria.	• LID BMPs~~• Stormwater treatment facilities~~ would be designed to meet or exceed the sizing standards in the Los Angeles County ~~SUSMP requirements~~LID Manual. • Volume-based treatment control BMPs for the project would be designed to capture 80 percent or more of the annual runoff volume per Criteria 2 of the MS4 Permit. • Flow-based treatment control BMPs would be sized using Criteria 3, which would provide 80 percent capture of annual runoff volume per criteria of the MS4 Permit. • The size of the facilities would be finalized during the design stage by the project engineer with the final hydrology study, which would be prepared and approved to ensure consistency with this analysis prior to issuance of a final grading permit. • Types of LID and treatment control BMPs that would be employed include parcel-based BMPs, regional LID BMPs, and Single Family HSCs, USEPA Green Streets practices,~~vegetated swales, bioretention, dry extended detention basins, cartridge~~ media filtration, and a combination thereof.

SUSMP Requirement	Criteria/Description	Corresponding Mission Village PDFs
10B.1. Properly Design Loading/Unloading Dock Areas (100,000 ft² Commercial Developments)	• Cover loading dock areas or design drainage to minimize run-on and runoff of stormwater. • Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.	• Loading dock areas would be covered or designed to preclude run-on and runoff. • Direct connections to storm drains from depressed loading docks (truck wells) would be prohibited. • Below grade loading docks for fresh food items would drain through a Treatment Control BMP applicable to the use, such as a catch basin insert. • Loading docks would be kept in a clean and orderly condition through weekly sweeping and litter control, at a minimum, and immediate cleanup of spills and broken containers without the use of water.
10B.2. Properly Design Repair/Maintenance Bays (100,000 ft² Commercial Developments)	• Repair/maintenance bays must be indoors or designed in such a way that does not allow stormwater run-on or contact with stormwater runoff. • Design a repair/maintenance bay drainage system to capture all wash water, leaks, and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.	• Commercial areas would not have repair/maintenance bays or the bays would comply with design requirements.
10B.3. Properly Design Vehicle/Equipment Wash Areas (100,000 ft² Commercial Developments)	• Self-contained and/or covered, equipped with a clarifier, or other pretreatment facility, and properly connected to a sanitary sewer.	• Areas for washing/steam cleaning of vehicles would be self-contained or covered with a roof or overhang; would be equipped with wash racks and with the prior approval of the sewering agency; would be equipped with a clarifier or other pretreatment facility; and would be properly connected to a sanitary sewer.
10.C. Properly Design Equipment/Accessory Wash Areas (Restaurants)	• Self-contained, equipped with a grease trap, and properly connected to a sanitary sewer. • If the wash area is to be located outdoors, it must be covered, paved, have secondary containment, and be connected to the sanitary sewer.	• Food preparation areas shall have either contained areas or sinks, each with sanitary sewer connections for disposal of wash waters containing kitchen and food wastes. • If located outside, the containment areas or sinks shall also be structurally covered to prevent entry of storm water. Adequate signs shall be provided and appropriately placed stating the prohibition of discharging washwater to the storm drain system.

SUSMP Requirement	Criteria/Description	Corresponding Mission Village PDFs
10.D. Properly design fueling area (Retail Gasoline Outlets)	• The fuel dispensing area must be covered with an overhanging roof structure or canopy. The cover's minimum dimensions must be equal to or greater than the area within the grade break. The cover must not drain onto the fuel dispensing area and the downspouts must be routed to prevent drainage across the fueling area. • The fuel dispensing area must be paved with Portland cement concrete (or equivalent smooth impervious surface). The use of asphalt concrete shall be prohibited. • The fuel dispensing areas must have a 2% to 4% slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of urban runoff. • At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.	• Retail gasoline outlets would comply with design requirements.
10.E.1. Properly design fueling area (Automotive Repair Shops)	• See requirement 10.D. above.	• Automotive repair shop fueling areas would comply with design requirements.
10.E.2. Properly design repair/maintenance bays (Automotive Repair Shops)	• See requirement 10.B.2 above.	• Automotive repair shop repair/maintenance bays would comply with design requirements.
10.E.3. Properly design vehicle/equipment wash areas (Automotive Repair Shops)	• Self-contained and/or covered, equipped with a clarifier, or other pretreatment facility, and properly connected to a sanitary sewer or to a permitted disposal facility.	• Automotive repair shop vehicle/equipment wash areas would comply with design requirements.
10.E.4. Properly design loading/unloading dock areas (Automotive Repair Shops)	• See requirement 10.B.1.	• Automotive repair shop loading/unloading dock areas would comply with design requirements.

SUSMP Requirement	Criteria/Description	Corresponding Mission Village PDFs
10.F.1. Properly Design Parking Area (Parking Lots)	• Reduce impervious land coverage of parking areas. • Infiltrate runoff before it reaches the storm drain system. • Treat runoff before it reaches storm drain system.	• Commercial~~, and~~ multi-family, institutional, recreational, and park parking lots would incorporate parcel-based LID BMPs~~bioretention facilities~~ located in islands to promote filtration and infiltration of runoff. • Stormwater runoff from parking lots would be directed to LID~~treatment control~~ BMPs, including infiltration, bioinfiltration, and biofiltration BMPs installed at the parcel scale and regional scales~~swales, water quality basins~~, and/or ~~bioretention areas, and/or catch basin~~ media filters in compliance with the Project LID Performance Standard~~SUSMP requirements~~.
10.F.2. Properly Design to Limit Oil Contamination and Perform Maintenance (Parking Lots)	• Treat to remove oil and petroleum hydrocarbons at parking lots that are heavily used. • Ensure adequate operation and maintenance of treatment systems particularly sludge and oil removal.	• See above. • Treatment of runoff in LID BMPs~~detention basins, bioretention areas, or bioswales and catch basin inserts~~ would be used to address oil and petroleum hydrocarbons from high-use parking lots. • The Homeowners Associations or Business Owners would be responsible for operation and maintenance of LID~~treatment control~~ BMPs that serve private parking lots.
13. Limitation of Use of Infiltration BMPs	• Infiltration is limited based on design of BMP, pollutant characteristics, land use, soil conditions, and traffic. • Appropriate conditions (groundwater >10 feet from grade) must exist to utilize infiltration to treat and reduce stormwater runoff for the project.	• Per the LARWQCB Clarification Letter (LARWQCB, 2006), generally, the common pollutants in stormwater are filtered or adsorbed by soil, and unlike hydrophobic solvents and salts, do not cause groundwater contamination. In any case, infiltration of 1-2 inches of rainfall in semi-arid areas like Southern California where there is a high rate of evapotranspiration, presents minimal risks. • ~~The proposed treatment control BMPs are not considered infiltration BMPs; they allow for infiltration of fully treated runoff only.~~

Source: Geosyntec, 2010, 2011.

[1] *This requirement is from Part 4, Section D.1 of the MS4 Permit.*

(b) LID Requirements

LID Performance Standard Retention Volume Conformance Analysis

The results of the LID Performance Standard retention volume conformance analysis demonstrate that the project exceeds the Project LID Performance Standard retention volume requirements (**Table 4.22-18, LID Performance Standard Conformance Analysis Calculations**).

Table 4.22-18
LID Performance Standard Conformance Calculations

Step 1: Calculate LID Performance Standard [1]	
Project Area, ac	1083
Project Impervious Area, ac	451
Allowable Effective Impervious Area,% of project	5%
Allowable Effective Impervious Area, ac	54
Remaining Impervious Area, ac	396
Runoff from Remaining Impervious Acre for 0.75 inch" Storm, ac-ft	23.5

Step 2: Calculate Retention Volume in Parcel-based BMPs

Land Use Treatment Categories	**Area, acres**	**Impervious Area, acres**	**BMP Area, acres**	**BMP Ret Depth, inches**	**BMP Retention Volume, ac-ft**
Category 1	12.1	5.9	0.2	18.3	0.4
Category 2	313.3	223.0	8.9	9.0	6.7
Category 3	41.7	35.0	1.4	1.8	0.2
Single Family HSCs	54.8	27.4	27.4	0.75	1.7
Parcel-based Total, ac-ft	-	-	-	-	9.0

Step 3: Calculate Retention Volume in Regional Infiltration/Biofiltration Facilities

Regional Infiltration/ Biofiltration Facilities	**Total Basin Volume, ac-ft**	**BMP Retention Volume[2], ac-ft**
Infiltration Facility A	8.3	8.3
Infiltration Facility B	6.5	6.5
Bioinfiltration Facility C	23.2	2.0
Biofiltration Facility D	11.8	0.1
Biofiltration Facility E	4.0	0.1
Regional Facility Total, ac-ft	-	16.9

Step 4: Compare Total Retention Volume to LID Performance Standard Retention Volume

Total Volume Reduction achieved, ac-ft	25.9
LID Performance Standard Retention Volume, ac-ft	23.5
Surplus Retention Volume Provided, ac-ft	2.4

1 —Includes on-site plus off-site improvements, minus River Corridor
2 - Volume below lowest surface discharge, ac-ft

~~(b) Low Impact Development Equivalency Analysis~~County LID Manual Requirements

Volume reductions provided by the Project's LID BMPs exceed the County LID Manual volume reduction requirements. ~~The results of the LID equivalency analysis demonstrate that the project exceeds the LID Manual volume reduction requirements (**Table 4.22-18, LID Equivalency Calculations**). Figures 7-1 and Figure 7-2 illustrate the results of the Tier One infiltration screening using information provided by the Project geotechnical engineers R.T. Frankian and Associates (RTFA, 2010; see Appendix C).~~

~~Volume reduction estimates reported for the purpose of LID equivalency analysis are based on a detailed representation of Project LID BMPswater quality basins that accountsattempts to account for theadditional volume reduction processes anticipated to be provided in these BMPs, including infiltration and soil soaking and drying and the potential installation of gravel drainage layers and amended soil layers in the bottoms of water quality basins.~~

~~Based on the~~ A simple comparison of the volumetric retention requirements associated with the Project's LID Performance Standard and the County LID Manual's ~~and volumetric performance achieved by Project Design Features~~standard~~,~~ shows that the Project would achieve~~s~~ volume reductions exceeding ~~the intent of~~those required by the ~~Los Angeles~~ County LID Manual. ~~Because~~ The project's LID~~treatment control~~ BMPs are designed to~~-~~ fully retain the volume of stormwater runoff produced from a 0.75 inch storm event~~capture and treat 80 percent of average annual runoff, the requirement to capture and treat at least 48 percent of average annual runoff volume is also met~~. The LID Manual requires that the excess volume (defined as the post-developed runoff volume minus the pre-developed runoff volume for the 0.75 inch storm event) be retained.

The Project LID Performance Standard allows impervious area up to 5 percent of the project area to be treated in media filters or equivalent where it is not feasible or practicable to implement infiltration, bioinfiltration, or biofiltration BMPs. The County LID Manual requires BMPs to be selected to infiltrate where feasible, but recognizes feasibility constraints that would limit infiltration. The result is that conformance with the Project LID Performance standard results in selection of BMPs that meet the BMP selection criteria of the County LID Manual and results in BMP sizes that are slightly larger than would be required to meet the sizing criteria of the County LID Manual.

~~Table 4.22-18~~
~~LID Equivalency Calculations~~

~~Feasibility Category~~	~~Open Space[1]~~	~~Infiltration Feasible~~	~~Infiltration Infeasible[2]~~	~~Total~~
~~Total Area, ac~~	~~622~~	~~67~~	~~606~~	~~1,295[3]~~
~~Composite Imperviousness[4]~~	~~1%~~	~~66%~~	~~67%~~	-
~~Average Annual Runoff Volume[5], ac-ft~~		~~64~~	~~575~~	-
~~Average Annual Capture Efficiency of BMPs Designed per LID Manual[6]~~		~~48%~~	~~48%~~	-
~~Average Annual Volume Reduction of Captured Water in Vegetated BMPs[7]~~		~~100%~~	~~20%~~	-
~~LID Manual Performance Standard Volume Reduction, ac-ft/yr~~		~~31~~	~~55~~	~~86~~
~~Achieved Average Annual Volume Reduction[8], ac-ft/yr~~		-	-	~~97~~
~~Surplus Average Annual Volume Reduction[9], ac-ft/yr~~				~~11~~

~~[1] *Includes water quality facilitiesbasins along with other open space (does not include parks)*~~
~~[2] *Per infeasibility criteria.*~~
~~[3] *Total Area represents on and off-site areas within the Project Impact boundary (i.e., 1262 ac on site, 33 off site)*~~
~~[4] *Composite imperviousness based on distribution of developed land uses within each analysis area.*~~
~~[5] *Calculated per rational method using the average annual rainfall at the Project site.*~~
~~[6] *Capture efficiency estimated through continuous simulation modeling of 40 years of precipitation, runoff and routing for a hypothetical volume-based BMP sized per the LID manual.*~~
~~[7] *Volume reduction in vegetated treat and release BMPs based on Strecker et al., 2004.*~~
~~[8] *Achieved Volume Reduction determined from WQ Model outputs.*~~
~~[9] *Positive Surplus Volume Reduction indicates exceedance of LID Manual-based performance standard.*~~

(c) Post Development Modeled Surface Water Pollutants of Concern

Table 4.22-19, Predicted Average Annual Stormwater Runoff Volumes, shows the predicted changes in stormwater runoff mean annual volumes. As shown, mean annual runoff volumes are expected to increase ~~substantially~~ with development. The increase is the result of imperviousness associated with development of the site, as well as by the decrease in infiltration capacity of existing site soils associated with the compaction of site soils during construction. Project PDFs include site design, source control, and LID~~treatment control~~ BMPs in compliance with the SUSMP requirements and the LID Performance Standard. Most of the ~~low impact~~/site design PDFs, especially the minimization of impervious area and the conservation of approximately 655~~598~~ acres of open space areas within the project, reduce the proposed development's increases in stormwater runoff volume. The LID~~treatment control~~ BMPs provide substantial~~some~~ runoff volume reduction via infiltration and ET and, therefore, provide hydromodification source control, as well as treatment of~~control. Based on BMP monitoring data in the International Stormwater BMP Database, a 38 percent reduction in~~ stormwater. LID BMPs are designed to

infiltrate or evapotranspire the -runoff fromvolume was conservatively assumed to occur in the 0.75 inch LID storm event, where feasible, in compliance with the LID Performance Standard.vegetated swales and bioretention PDFs.[22]

Table 4.22-19
Predicted Average Annual Stormwater Runoff Volumes

Site Conditions	Average Annual Stormwater Runoff Volume (acre-ft)
Existing	153154
Developed without PDFs	671
Developed with PDFs	408634
Change	255480

Source: Geosyntec, 2011 2010.

Total Suspended Solids. Table 4.22-20, Predicted Average Annual TSS Concentration and Load, shows the predicted average annual TSS concentration and loads. Conversion from agriculture and open space to urban land-uses (with LIDtreatment) would reduce the average TSS concentration and loads in stormwater runoff from the project site.

Table 4.22-20
Predicted Average Annual TSS Concentration and Load

Site Conditions	Average Annual TSS Concentration (mg/L)	Average Annual TSS Load (tons/yr)
Existing	238233	5049
Developed with PDFs	2834	1832
Change	-210198	-3218

Source: Geosyntec, 2011 2010.

The predicted average annual TSS concentration in stormwater runoff from the total modeled area with PDFs is compared to water quality criteria and the range of observed concentrations in the Santa Clara River in **Table 4.22-21, Comparison of Predicted TSS Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5**. Predicted TSS load and concentration declines

[22] Actual database information suggests that project treatment/hydromodification source control BMPs may provide greater than 30 percent average annual runoff volume reduction, but for purposes of this analysis, only a 20 to 25 percent volume reduction is anticipated.

with development and is at the low end of the range of observed concentrations in Santa Clara River Reach 5. Based on the comprehensive site design, source control, and LID BMP~~treatment control~~ strategy, the predicted decrease in TSS anticipated after development, and the comparison with available in-stream data and Basin Plan benchmark objectives, the TSS in stormwater runoff from the project would not cause a nuisance or adversely affect beneficial uses in the receiving waters and, thus, would not represent a significant impact to water quality.

Table 4.22-21
Comparison of Predicted TSS Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5

Predicted Average Annual TSS Concentration (mg/L)	Los Angeles Basin Plan Water Quality Objectives	California Toxics Rule Criteria	Range of Observed[1] Concentrations in Santa Clara River Reach 5 (mg/L)
28~~34~~	Water shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses	N/A	32–51,200

Source: Geosyntec, 2010, 2011.
[1] *Range of concentrations observed in the Santa Clara River during wet weather.*
N/A = not applicable

Phosphorus. Table 4.22-22, Predicted Average Annual Total Phosphorus Concentration and Annual Load, shows the predicted average TP concentration and annual loads. The information presented in this table indicates that TP concentration and load are predicted to decrease post-development.~~; however, TP loads are predicted to increase.~~ The decrease in TP concentration and load can be attributed to higher EMCs observed in monitoring data from agricultural and open space land uses compared with urban land uses and the removal of TP via treatment processes in LID BMPs. ~~. The increase in TP load is due to the increase in runoff volume predicted post-development.~~

Table 4.22-22
Predicted Average Annual Total Phosphorus Concentration and Annual Load

Site Conditions	Average Annual TP Concentration (mg/L)	Average Annual TP Load (lbs/yr)
Existing	0.47	196~~198~~
Developed with PDFs	0.16~~18~~	189~~316~~
Change	-0.31~~29~~	-7~~118~~

Source: Geosyntec, 2011~~2010~~.

There are no numeric objectives for TP in the Los Angeles Basin Plan. A narrative objective for biostimulatory substances in the Los Angeles Basin Plan states: "waters shall not contain biostimulatory substances in concentrations that promote algal growth to the extent that such growth causes nuisance or adversely affects beneficial uses." The low predicted TP concentrations in project stormwater discharges would not promote (i.e., increase) algae growth, and therefore, comply with the narrative objective for biostimulatory substances in the Los Angeles County Basin Plan. As shown in **Table 4.22-23, Comparison of Predicted Total Phosphorus Concentration with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5**, the predicted total phosphorus concentration is below~~at~~ the low end of the range of observed concentrations in Santa Clara River Reach 5. Based on the comprehensive ~~low impact/~~site design, source control, and LID, and treatment control BMP strategy and the comparison with available in-stream monitoring data and Basin Plan benchmark objectives, potential impacts associated with total phosphorus are predicted to be less than significant.

Table 4.22-23
Comparison of Predicted Total Phosphorus Concentration with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5

Predicted Average Annual Total Phosphorus Concentration (mg/L)	Los Angeles Basin Plan Water Quality Objectives	California Toxics Rule Criteria	Range of Observed[1] Concentrations in Santa Clara River Reaches 7E (mg/L)
0.16~~18~~	Waters shall not contain biostimulatory substances in concentrations that promote algal growth to the extent that such growth causes nuisance or adversely affects beneficial uses	N/A	0.18–1.8

Source: Geosyntec, 2010, 2011.
[1] Range of concentrations observed in the Santa Clara River during wet weather
N/A = not applicable

Nitrate-Nitrogen + Nitrite Nitrogen and Ammonia. The predicted average nitrate-nitrogen plus nitrite-nitrogen and ammonia concentrations and annual loads are summarized in **Table 4.22-24, Predicted Average Annual Nitrate-N + Nitrite-N Concentration and Load** and **Table 4.22-25, Predicted Average Annual Ammonia-N Concentration and Load**, respectively. As shown, nitrate-N plus nitrite-N and ammonia concentrations are predicted to decrease as a result of the project. In addition, nitrate-N plus nitrite-N loads are predicted to ~~This~~ decrease as a result of the project. These decreases can be attributed to higher EMCs observed in monitoring data from agricultural and open space land uses (the existing condition for the site) compared with urban land uses (representative of post-development conditions)~~). Ammonia concentrations are predicted to decrease as a result of the project. This decrease may be attributed to higher EMCs observed in monitoring data from some existing land uses compared to developed land uses~~ and low observed nitrate plus nitrite and ammonia concentrations in effluent from LID BMPs. Ammonia ~~extended detention basins. Nitrate plus nitrite and ammonia~~ loads are predicted to increase somewhat as a result of the project. This can be attributed to the ~~significant~~ increase in runoff volume predicted for the post-development scenario.

Table 4.22-24
Predicted Average Annual Nitrate-N + Nitrite-N Concentration and Load

Site Conditions	Average Annual NO3-N+NO2-N Concentration (mg/L)	Average Annual NO3-N+NO2-N Load (lbs/yr)
Existing	1.5	647
Developed with PDFs	~~1.~~0.5	603~~1,730~~
Change	-1.0~~.5~~	-44~~1,083~~

Source: Geosyntec, 2011~~2010~~.

Table 4.22-25
Predicted Average Annual Ammonia-N Concentration and Load

Site Conditions	Average Annual NH3 Concentration (mg/L)	Average Annual NH3 Load (lbs/yr)
Existing	0.46	177~~179~~
Developed with PDFs	0.16~~30~~	203~~535~~
Change	-0.30~~16~~	26~~357~~

Source: Geosyntec, 2011~~2010~~.

Predicted nitrogen compound concentrations are compared to Basin Plan objectives and observed concentrations in **Table 4.22-26, Comparison of Predicted Nitrogen Compound Concentrations with**

Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5. Average annual stormwater concentration of ammonia is predicted to be considerably less than the waste load allocation for Santa Clara River Reach 5 and the Basin Plan objective, and within the low end of the range of observed concentrations. Likewise, the average annual stormwater concentration of nitrate-N plus nitrite-N is predicted to be considerably less than the TMDL wasteload allocation or the Basin Plan water quality objective, and within the range of observed concentrations for this reach of the Santa Clara River.

Table 4.22-26
Comparison of Predicted Nitrogen Compound Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5

Nutrient	Predicted Average Annual Concentration (mg/L)	Los Angeles Basin Plan Water Quality Objectives[1] (mg/L)	TMDL Waste Load Allocation for Santa Clara River Reach 5 (mg/L)	Range of Observed[2] Concentrations in Santa Clara River Reach 5 (mg/L)
Nitrate-N + Nitrite-N	~~1.~~0.5	5.0	6.8[3]	0.2–4.0
Ammonia-N	0.16~~30~~	2.0[4]	1.75[5]	0.02–1.4

Source: Geosyntec, 2010, 2011.

[1] *There are no CTR criteria for nitrogen compounds. The biostimulatory substances water quality objective is included because excessive nutrients can contribute to excessive aquatic growth.*

[2] *Range of concentrations observed in the Santa Clara River during wet weather.*

[3] *30-day average concentration.*

[4] *4-day average concentration, ELS present, 90th percentile pH and temperature pairing observed at USGS Monitoring Station 11108500.*

[5] *30-day average in Reach 5 below Valencia.*

Nitrate plus nitrite and ammonia-nitrogen concentrations in post-development runoff from the utility corridor and the power substation are likely to decrease or remain the same compared to open space and agricultural runoff concentrations, although loads are likely to increase somewhat due to the increase in runoff volume. The use of LID BMPs~~bioretention and/or vegetated swales for treatment control~~ would minimize any potential increases in post-development runoff nitrate plus nitrite or ammonia-nitrogen loads. Concentrations would be expected to be similar to the concentrations from the project reported in Tables 4.22-24, 4.22-25, and 4.22-26~~ The average nitrate plus nitrite concentration in runoff treated in biofilters reported in the International Stormwater BMP database is 0.92 mg/L and the average ammonia-nitrogen concentration is 0.06 mg/L~~, which are considerably less than the TMDL wasteload allocations and Basin Plan water quality objectives, and are within the range of observed concentrations for Santa Clara River Reach 5.

Based on the comprehensive ~~low impact/~~site design, ~~the~~ source control, LID and treatment control BMP strategy; anticipated reductions in nitrate- plus nitrite-N and ammonia-N concentrations and anticipated reductions in nitrate- plus nitrite-N loads; and the comparison with available in-stream monitoring data

and benchmark Basin Plan objectives and waste load allocations, potential impacts associated with nitrogen compounds are predicted to be less than significant.

Metals. Projected loads and concentrations for the trace metals copper, lead, zinc, and ~~total~~ aluminum are presented in **Table 4.22-27** through **Table 4.22-30.** Except for lead and aluminum~~ and lead~~, the projections are for the dissolved form of the metal, as it is the dissolved form to which the CTR criteria applies. Due to consistently low concentrations of dissolved lead in the available stormwater runoff data, it was not possible to develop reliable EMC parameters for most land uses for modeling the dissolved fraction of lead. This constituent was therefore modeled as the total recoverable metal. Copper, lead, and zinc are the most prevalent metals typically found in urban runoff. Other trace metals, such as cadmium, chromium, and mercury, are typically not detected in urban runoff or are detected at very low levels. (LACDPW, 2000. Los Angeles County 1994–2000 Integrated Receiving Water Impacts Report.)

The data indicates that post-development dissolved zinc, and total lead~~trace metal~~ loads are predicted to decrease~~increase~~ compared to pre-development conditions; while post-development~~concentrations of~~ dissolved copper and total aluminum loads are predicted to increase slightly. The post-development concentrations or dissolved copper,~~, and~~ total aluminum, total lead, and dissolved zinc concentrations are predicted to decrease. These results can be explained by the difference in EMC values observed in representative monitoring data from the pre-developed agriculture, oil and gas extraction, and open space condition and the post-developed urban condition and the low trace metal effluent concentrations observed in LID BMPs. Increases in dissolved copper and total aluminum loads can be attributed to the increase in runoff volume predicted for the post-development scenario~~. Runoff volumes would increase with development while land use changes would decrease metals concentrations in runoff for most proposed land uses~~.

Project PDFs include ~~low impact/~~site design, source control, LID and treatment control BMPs, in compliance with the SUSMP requirements and the LID Performance Standard. Specific~~ low impact/site design~~ PDFs that would be implemented to minimize increases in trace metals include directing drainage from impervious areas to LID BMPs such as bioretention areas and the selection of building material for roof gutters and downspouts that do not include copper or zinc. Source control PDFs that target metals include education for property owners, BMP maintenance, and street sweeping private streets and parking lots. The LID~~treatment control~~ BMPs would also reduce trace metals in the runoff from the proposed development.~~ Only the effects of the LID BMPtreatment control PDFs are reflected in the model results; effects of site design and treatment control BMPs are not modeled~~.

Table 4.22-27
Predicted Average Annual Dissolved Copper Concentration and Load

Site Conditions	Average Annual Dis. Cu Concentration (µg/L)	Average Annual Dis. Cu Load (lbs/yr)
Existing	10	4
Developed with PDFs	6~~11~~	7~~19~~
Change	-4~~1~~	3~~15~~

Source: Geosyntec, 2011~~2007~~.

Table 4.22-28
Predicted Average Total Lead Concentration and Annual Load

Site Conditions	Average Annual Total Pb Concentration (µg/L)	Average Annual Total Pb Load (lbs/yr)
Existing	12	5
Developed with PDFs	3~~5~~	4~~10~~
Change	-9~~7~~	-1~~5~~

Source: Geosyntec, 2011~~2010~~.

Table 4.22-29
Predicted Average Annual Dissolved Zinc Concentration and Load

Site Conditions	Average Annual Dis. Zn Concentration (µg/L)	Average Annual Dis. Zn Load (lbs/yr)
Existing	282	104~~105~~
Developed with PDFs	41~~82~~	49~~141~~
Change	-241~~200~~	-55~~37~~

Source: Geosyntec, 2011~~2010~~.

Table 4.22-30
Predicted Average Annual Total Aluminum Concentration and Load

Site Conditions	Average Annual Total Aluminum Concentration (µg/L)	Average Annual Total Aluminum Load (lbs/yr)
Existing	1,430~~427~~	567~~568~~
Developed with PDFs	~~739~~328~~647~~	~~795~~353~~1,122~~
Change	~~-691~~1,102~~780~~	~~-228~~224~~555~~

Source: Geosyntec, 2011~~2010~~.

A narrative objective for toxic substances in the Basin Plan states: "all waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life."

The CTR criteria are the applicable water quality objectives for protection of aquatic life. The CTR criteria are expressed for acute and chronic (4-day average) conditions; however, only acute conditions were considered to be applicable for stormwater discharges because the duration of stormwater discharge is consistently less than 4 days. The CTR criteria are calculated on the basis of the hardness of the receiving waters. Lower hardness concentrations result in lower, more stringent CTR criteria. The minimum hardness value (250 mg/L as $CaCO_3$) observed in the Santa Clara River at the USGS Station 11108500 during wet weather was used as a conservative estimate; the mean observed hardness value was 660 mg/L as $CaCO_3$.

Comparison of the predicted runoff metal concentrations and the acute CTR criteria for dissolved copper, total lead, and dissolved zinc and the NAWQC criterion for aluminum are shown in **Table 4.22-31**, along with the range of observed concentrations in Santa Clara River Reach 5. The comparison of the post-developed with PDFs condition to the benchmark CTR and NAWQC values shows that all of the trace metal concentrations are below the benchmark water quality criteria. While dissolved zinc concentrations are predicted to be higher than the concentration observed in the Santa Clara River, dissolved copper, total lead, and aluminum concentrations are predicted to be within the range of observed values. Despite the predicted dissolved zinc concentrations being greater than the range of observed concentrations, project runoff is not expected to affect the concentration of dissolved zinc in the Santa Clara River, as the load of dissolved zinc is predicted to decrease with the proposed project while runoff volumes are predicted to increase. This would tend to result in a reduction of in-stream dissolved zinc concentration as a result of the Project. ~~project area represents a very small portion of the overall watershed.~~

For aluminum, the NAWQC acute criterion (750 µg/L for a pH range of 6.5 to 9.0) was used as a benchmark, as the CTR does not include aluminum. Although the NAWQC criterion is in the form of acid soluble aluminum (U.S. EPA, 1988), the available monitoring data are for either dissolved aluminum or total aluminum. (U.S. EPA, 1988. Ambient Water Quality Criteria for Aluminum – 1988. EPA 440/ 5-86-008. August 1988). Acid soluble aluminum, which is operationally defined as the aluminum that passes through a 0.45 µm membrane filter after the sample has been acidified to a pH between 1.5 and 2.0 with nitric acid, represents the forms of aluminum toxic to aquatic life or that can be readily converted to toxic forms under natural conditions. The acid soluble measurement does not measure forms of aluminum, such as aluminum that is occluded in minerals, clays, and or is strongly sorbed to particulate matter, that are not toxic and are not likely to become toxic under natural conditions. Acid soluble aluminum data is not available because this form of aluminum is not typically measured. Nevertheless, total aluminum has been used in this analysis and compared with the NAWQC in order to be conservative. With this conservatism, the average total aluminum concentration is still less than the NAWQC acute criterion, and is within the low end of the range of observed concentrations in the Santa Clara River.

Table 4.22-31
Comparison of Predicted Trace Metal Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5

Metal	Predicted Average Annual Concentration (µg/L)	California Toxics Rule Criteria[1] (µg/L)	Range of Observed[2] Concentrations in Santa Clara River Reach 5 (µg/L)
Dissolved Copper (µg/L)	6~~11~~	32	3.3–22.6
Total Lead (µg/L)	3~~5~~	260	1.1–95
Dissolved Zinc (µg/L)	41~~82~~	250	3.0–37
Total Aluminum	~~739~~328~~647~~	~~750~~N/A	131–19,650

Source: Geosyntec, 2010, 2011.

[1] *Hardness = 250 mg/L, based on minimum observed value at USGS Station 11108500. A lead criterion is for total recoverable lead. ~~NAWQC~~There is no CTR criteria for aluminum ~~criteria for pH 6.5–9.0~~.*

[2] *Range of concentrations observed in the Santa Clara River during wet weather.*

Based on the comprehensive ~~low impact/~~site design, ~~the~~ source control, LID and treatment control BMP strategy, and the comparison with the in-stream water quality monitoring data and benchmark water quality criteria and the available information regarding aluminum toxicology, the project would not have significant impacts resulting from trace metals.

Chloride. Table 4.22-32, Predicted Average Annual Chloride Concentration and Load, shows the predicted average annual chloride concentration and load. The annual average chloride concentration is predicted to slightly increase when compared to the existing conditions. Average annual chloride load is expected to increase as a result of the ~~significant~~ increase in total annual runoff volume predicted for the project.

Table 4.22-32
Predicted Average Annual Chloride Concentration and Load

Site Conditions	Average Annual Cl Concentration (mg/L)	Average Annual Cl Load (lbs/yr)
Existing	12	2
Developed with PDFs	23~~21~~	13~~17~~
Change	11~~8~~	11~~15~~

Source: Geosyntec, 2011~~2010~~.

The predicted chloride concentration in post-development project runoff is compared to the Los Angeles Basin Plan water quality objective and the range of observed concentrations in Santa Clara River Reach 5 in **Table 4.22-33, Comparison of Predicted Chloride Concentrations with Water Quality Objective, TMDL, and Observed Concentrations in Santa Clara River Reach 5**. This data indicates that the predicted average annual chloride concentration in stormwater runoff from the project area is within the low range of observed concentrations for this pollutant and is well below the Santa Clara River Reach 5 Basin Plan water quality objective and the TMDL site-specific objective for Santa Clara River Reach 5 (150 mg/L).

Chloride concentrations in post-development runoff from the off-site improvements, including the utility corridor and the power substation, are likely to decrease or remain the same in comparison to runoff from open space and agricultural areas, although chloride loads are likely to increase somewhat due to increased runoff volumes. Similarly to the modeled areas, the average annual chloride concentration in stormwater runoff from the utility corridor and power substation are likely to be at the low end of the range of observed concentrations for chloride and well below the Santa Clara River Reach 5 Basin Plan water quality objective and the TMDL wasteload allocation for Santa Clara River Reach 5.

Wastewater generated by the Mission Village project would initially be treated by the Valencia WRP, and ultimately, by the Newhall Ranch WRP, with a small portion continuing to be treated at the Valencia plant. Both the Newhall Ranch WRP and Valencia WRP must comply with NPDES wastewater discharge permits that contain chloride effluent limitations that are protective of water quality and beneficial uses in

the Santa Clara River and will not result in the impairment of surface or groundwater quality. Additionally, a TMDL implementation plan has been developed that incorporates chloride source reduction actions and chloride load reduction through advanced treatment (i.e., reverse osmosis) of the Valencia WRP effluent, and conditional Site Specific Objectives (SSOs), which mitigate the effect of chloride accumulation in surface and groundwater. Therefore, the project's chloride contribution to treated wastewater discharges would not pose a significant impact to water quality or beneficial uses.

Based on the comprehensive ~~low impact/~~site design, source control, LID, and treatment control BMP strategy, the predicted decrease in chloride concentration, and the comparison with benchmark receiving water criteria, the project would not have significant water quality impacts resulting from chloride.

Table 4.22-33
Comparison of Predicted Chloride Concentrations with Water Quality Objective, TMDL, and Observed Concentrations in Santa Clara River Reach 5

Pollutant	Predicted Average Annual Concentration (mg/L)	Santa Clara River Reach 5 TMDL Waste Load Allocation and Basin Plan Water Quality Objective[1] (mg/L)	Range of Observed[2] Concentrations in Santa Clara River Reach 5 (mg/L)
Chloride	23~~21~~	100	2.6–290[3]

Source: Geosyntec, 2010, 2011.
[1] *There are no CTR criteria for chloride. This is the Basin Plan objective for Santa Clara River Reach 5.*
[1] *Range of concentrations observed in the Santa Clara River during wet weather).*
[3] *This value was observed in 1965.*

(d) Post Development Surface Water Pollutants Addressed Without Modeling

Turbidity. Turbidity is a measure of suspended matter that interferes with the passage of light through the water or in which visual depth is restricted. (Sawyer *et al.*, 1994. Chemistry for Environmental Engineering, Fourth Edition. Clair Sawyer, Perry McCarty, and Gene Parkin. McGraw-Hill, Inc., 1994.) Turbidity may be caused by a wide variety of suspended materials, which range in size from colloidal to coarse dispersions, depending upon the degree of turbulence. In lakes or other waters existing under relatively quiescent conditions, most of the turbidity would be due to colloidal and extremely fine dispersions. In rivers under flood conditions, most of the turbidity would be due to relatively coarse dispersions. Erosion of clay and silt soils may contribute to in-stream turbidity. Organic materials reaching rivers serve as food for bacteria, and the resulting bacterial growth and other microorganisms that feed upon the bacteria produce additional turbidity. Nutrients in runoff may stimulate the growth of algae, which also contributes to turbidity.

Discharges of turbid runoff are primarily of concern during the construction phase of development. The Construction SWPPP must contain sediment and erosion control BMPs pursuant to the Construction General Permit, and those BMPs must effectively control erosion and discharge of sediment, along with other pollutants, per the BAT/BCT standards. Additionally, fertilizer control, non-visible pollutant monitoring, and trash control BMPs in the SWPPP would combine to help control turbidity during the construction phase. (See **subsection 4.22.7.c,** above.)

In the post-development condition, placement of impervious surfaces would serve to stabilize soils and to reduce the amount of erosion that may occur from the project area during storm events, and would therefore decrease turbidity in the runoff from the project area. Project PDFs, including source controls (such as common area landscape management and common area litter control) and LID~~treatment control~~ BMPs in compliance with the SUSMP requirements and the LID Performance Standard, would prevent or reduce the release of organic materials and nutrients (which might contribute to algal blooms) to receiving waters. As shown earlier in this section, post-development nutrients in runoff are not expected to cause significant water quality impacts. Based on implementation of the project PDFs and the construction-related controls, runoff discharges from the project would not cause increases in turbidity; therefore, the water quality impacts of the project on turbidity are considered less than significant.

Pesticides. Pesticides can be of concern where past farming practices involved the application of persistent organochlorine pesticides. Legacy pesticides Chlordane, Dieldrin, DDT, and Toxaphene are of particular concern, as TMDLs have been established for some of these pesticides in the Santa Clara River estuary, approximately 40 miles downstream of the project and Reach 5. Historical pesticides should no longer be discharged in the watershed except in association with erosion of sediments to which these pollutants may have adhered in the past. Site development involves remedial grading which would stabilize soils and prevent their transport from the project site, actually reducing the potential for discharge of sediments to which historical pesticides may have adsorbed in pre-development conditions.

In the post-developed condition, pesticides would be applied to common landscaped areas and residential lawns and gardens. Pesticides that have been commonly found in urban streams include the organophosphate pesticides chlorpyrifos and diazinon. (Katznelson, R. and T. Mumley, 1997. Diazinon in Surface Waters in the San Francisco Bay Area: Occurrence and Potential Impact. Prepared for California State Water Resources Control Board, and Alameda County Clean Water Program.) However, only 0 to 13 percent of the samples in the Los Angeles County database had detectable levels of diazinon (depending on the land use), while chlorpyrifos was below detection limits for all land uses in all samples taken between 1994 and 2000. (Los Angeles County Department of Public Works, 2000. Los Angeles County 1994-2000 Integrated Receiving Water Impacts Report.) Other pesticides presented in the database were seldom measured above detection limits. Furthermore, these data represent flows from

areas without treatment controls, unlike the proposed project, which does incorporate LID and treatment control BMP PDFs.

Diazinon and chlorpyrifos are two pesticides of concern due to their potential toxicity in receiving waters. The U.S. EPA has banned all indoor uses of diazinon in 2002 and stopped all sales for all outdoor non-agricultural use in 2003 (U.S. EPA, June, 2002)[23]. (U.S. EPA, 2002. Total Maximum Daily Loads for Toxic Pollutants – San Diego Creek and Newport Bay, California, June 14, 2002.) With no agricultural uses planned for the proposed project, diazinon would not be used at the proposed project site. The U.S. EPA also has phased out most indoor and outdoor residential uses of chlorpyrifos and has stopped all non-residential uses where children may be exposed. Use of chlorpyrifos in the proposed project area is not expected, with the possible exception of emergency fire ant eradications (until such time as reasonable alternative products are available and only with appropriate application practices, in accordance with the landscape pesticide management program).

Diazinon had long been one of the most commonly used pesticides on the market (San Francisco Bay Regional Water Quality Control Board [SFBRWQCB], 2005) before its use was phased out. Although the U.S. EPA's actions eliminated most urban diazinon uses by the end of 2004, phasing out diazinon likely has increased post-2004 reliance on alternative pesticides and encouraged new pesticides to enter the marketplace.

The SFBRWQRB commissioned a study, Insecticide Market Trends and Potential Water Quality Implications, to evaluate pesticide use trends as they relate to water quality. In 2003, on the basis of current and projected pesticide use and possible water quality risks, the report considered the pesticide alternatives of potential concern for water quality to be pyrethrums; parathyroid's (bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, and permethrin); carbaryl; malathion; and imidacloprid

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23 Changes to the use of chlorpyrifos include reductions in the residue tolerances for agricultural use, phase out of nearly all indoor and outdoor residential uses, and prohibition of non-residential uses where children may be exposed. In Orange County, residential use accounts for around 90% of total chlorpyrifos. (U.S. EPA, 2002a. Total Maximum Daily Loads for Toxic Pollutants – San Diego Creek and Newport Bay, California, June 14, 2002.) Retail sales of chlorpyrifos were stopped by December 31, 2001, and structural (*e.g.* construction) uses were phased out by December 31, 2005. Some continued uses are allowed; for example, public health use for fire ant eradication and mosquito control is permitted by professionals.
Permissible uses of diazinon also will be restricted. All indoor uses are prohibited (as of 12/2002) and retailers were required to end sales for indoor use on December, 2002. All outdoor non-agricultural uses were phased out by December 31, 2004. Therefore, it is likely that the U.S. EPA will eliminate most of the use of diazinon within the Specific Plan area. The use of diazinon for many agricultural crops has been eliminated, while some use of this chemical will continue to be permitted for some agricultural activities. (U.S. EPA, 2001. Organophosphate Pesticide; Availability of Revised Risk Assessments. Federal Register: January 31, 2001 (Volume 66, Number 21), Page 8400-8401.)

(SFBRWQCB, 2003). A more recent study also identified lambda cyhalothrin (a pyrethroid) and fipronil among pesticides of interest (SFEP, 2005).

The water quality risks posed by a pesticide relate to the quantity of the pesticide used, its breakdown rate or degradable rate, its runoff characteristics, and its relative toxicity in water and sediment. As urban diazinon applications are phased out, the use of some alternatives may inadvertently pose new water quality risks. Given what is known about alternative pesticide use trends, pyrethroids may be the alternatives that pose the greatest concerns for water quality. Although pyrethroids tend to be toxic to Ceriodaphnia dubia test organisms at concentrations in water comparable to diazinon, pyrethroids do not dissolve well in water but instead adhere well to surfaces, including particles in the environment. At equilibrium, pyrethroid concentrations in sediment are reported to be about 3,000 times greater than dissolved concentrations in water. Thus, BMPs targeting reductions and removal of sediment loads would be effective to reduce and remove pyrethroids as well.

Source control measures such as education programs for owners, occupants, and employees in the proper application, storage, and disposal of pesticides are the most promising strategies for controlling the pesticides that would be used post-development. Structural treatment controls are less practical because of the variety of pesticides and wide range of chemical properties that affect their ability to treat these compounds. However, most pesticides, including historical pesticides that may be present at the site, are relatively insoluble in water and therefore tend to adsorb to the surfaces of sediment, which would be settled or filtered out of the water column in the LID BMP~~ water quality treatment~~ PDFs. In addition, biofiltration media contains sorption sites that would promote the removal of pesticides. Thus, treatment in the LID BMPs~~bioretention, vegetated swales, and extended detention basin~~ should achieve some removal of pesticides from stormwater as TSS is reduced and stormwater water is biofiltered.

For common area landscaping in commercial areas, multi-family residential areas and parks, an IPM Program would be incorporated. The goal of an IPM is to keep pest levels at or below threshold levels, reducing risk and damage from pest presence, while eliminating the risk from the pest control methods used. IPM programs achieve these goals through the use of low risk management options by emphasizing use of natural biological methods and the appropriate use of selective pesticides. IPM programs also incorporate environmental consideration by implementing procedures that minimize intrusion and alteration of biodiversity in ecosystems.

While pesticides are subject to degradation, they vary in how long they maintain their ability to eradicate pests. Some break down almost immediately into nontoxic byproducts, while others can remain active for longer periods of time. While pesticides that degrade rapidly are less likely to adversely affect non-targeted organisms, in some instances it may be more advantageous to apply longer-lasting pesticides if it

results in fewer applications or smaller amounts of pesticide use. As part of the IPM program, careful consideration would be made as to the appropriate type of pesticides for use on the project site. While pesticide use is likely to occur due to maintenance of landscaped areas, particularly in the residential portions of the development, careful selection, storage, and application of these chemicals for use in common areas would help prevent adverse water quality impacts from occurring. Additionally, as discussed above, removal of sediments in the PDFs would also remove sediment-adsorbed pesticides.

Based on the incorporation of ~~low impact/~~site design, ~~and~~ the source control, and LID~~treatment control~~ BMPs pursuant to SUSMP requirements and the LID Performance Standard, potential post-development impacts associated with pesticides are expected to be less than significant.

Pathogens. Pathogens are viruses, bacteria, and protozoa that can cause gastrointestinal and other illnesses in humans through body contact exposure. Identifying pathogens in water is difficult as the number of pathogens is fairly small, requiring sampling and filtering of large volumes of water to obtain a reliable result. Traditionally, regulators have used fecal indicator bacteria (FIB), such as total and fecal coliform, enterococci, and *E. coli*, as indirect measures of the presence of pathogens and by association, human illness risk. Early epidemiological studies (i.e., studies that investigate human illness occurrence versus environmental factors such as water quality) that linked swimming-associated gastrointestinal symptoms to *E. coli* or enterococci in swimming waters for sewage-dominated receiving waters led to the development of the current recreational water quality criteria (EPA, 1986). In contrast to receiving waters subject to sanitary discharges, only a few epidemiological studies have evaluated the health effects of exposure to water bodies subject to discharges from storm drains and these studies focused on the effects of dry weather urban flows on recreational exposure (e.g., Haile et al, 1999 and Colford et al, 2005).

Santa Clara River Bacteria TMDL

The LARWQCB approved a Basin Plan amendment on July 8, 2010, to incorporate a TMDL for Indicator Bacteria for the Santa Clara River Estuary and Reaches 3, 5, 6, and 7 of the Santa Clara River (Resolution #R10-006). The TMDL provides allowable exceedance day-based WLAs for MS4 dischargers for *E. coli* in Reaches 3, 5, 6, and 7, and for Fecal coliform, Enterococcus, and Total Coliform in the Santa Clara River Estuary. These WLAs are anticipated to be incorporated into the Los Angeles County MS4 Permit once the interim and final WLAs become effective, at which point they will become an enforceable permit provision.

The TMDL WLAs applicable to Reach 5 of the Santa Clara River are listed in **Table 4.22-3**. The Indicator Bacteria TMDL MS4 WLAs are applied in the form of allowable exceedance days. The TMDL implementation schedule deadlines applicable to Reach 5 are summarized in **Table 4.22-34**.

The Regional Board indicated in the TMDL implementation schedule that the Regional Board will reconsider the TMDL if, prior to four years after the effective date of the TMDL, one of the following occurs:

(1) Monitoring or any voluntary local reference system studies justify a revision, or

(2) U.S. EPA publishes revised recommended bacteria criteria (expected in December 2012), or

(3) The Regional Board adopts a separate Basin Plan amendment, suspending recreational uses in the Santa Clara River during high flows.

Table 4.22-34
Indicator Bacteria TMDL Implementation Schedule and Tasks

Deadline	Task
1 year after effective date of TMDL	Jurisdictions and agencies responsible for the MS4 WLAs must submit an in-stream bacteria water quality monitoring plan for the SCR watershed. The monitoring plan must be approved by the Executive Officer.
6 months after monitoring plan approval by Executive Officer	Monitoring of SCR Watershed must begin.
3 years after effective date of TMDL	Jurisdictions and agencies must submit a draft Implementation Plan outlining how to achieve compliance with the WLAs.
4 years after effective date of TMDL	Interim MS4 WLAs apply.
6 months after receipt of Regional Board comments on draft Implementation Plan	Jurisdictions and agencies must submit a final Implementation Plan and begin additional outfall monitoring.
11 years after effective date of TMDL	SCR Reaches 3, 5, 6, and 7 must achieve compliance with final WLAs for geometric mean objectives and allowable exceedance days for single sample objectives for dry weather.
17 years after effective date of TMDL	SCR Reaches 3, 5, 6, and 7 must achieve compliance with final WLAs for geometric mean objectives and allowable exceedance days for single sample objectives for wet weather.

There are various confounding factors that affect the reliability of FIB as pathogen indicators. One primary factor is that there are numerous natural or non-anthropogenic (or "zoonotic") sources of FIB in developed watersheds and their receiving water bodies, including birds and other wildlife, soils, and plant matter. Anthropogenic sources may include domesticated animals and pets, poorly functioning septic systems, sewer system overflows or spills, cross-connections between sewer and storm drains, and the utilization of outdoor areas or storm drains for human waste disposal by people without access to indoor sanitary facilities. All of these sources can contribute to the concentrations of FIB, but not all the sources may pose a comparable human health risk (EPA, 2009).

A second confounding factor is that FIB can multiply in the field if the substrate, temperature, moisture, and nutrient conditions are suitable (MEC, 2004). This is one potential reason that FIB concentrations do

not always correlate with pathogens. For example, in a field study conducted by Schroeder et al., pathogens (in the form of viruses, bacteria, or protozoa) were found to occur in 12 of 97 soil samples taken, but the samples that contained pathogens did not correlate with the samples containing concentrations of FIB. (Schroeder et al. 2002. Management of Pathogens Associated with Storm Drain Discharge, Center for Environmental and Water Resources Engineering, Dept. of Civil and Environmental Engineering, University of California, Davis prepared for Division of Environmental Analysis, California Department of Transportation, May). Numerous other researchers have reported that bacteria presence and even regrowth was observed in various substrates such as beach sands, wrack line (accumulation of kelp in the inter-tidal area of beaches), inter/sub-tidal sediments, and material deposited in storm drains (MEC, 2004). FIB monitoring in the Santa Ana River indicate that the ubiquity of sources and potential regrowth far exceed the human sources of fecal bacteria generated by the entire population in the watershed (Surbeck et al, 2008). Regrowth of bacteria downstream of a package treatment plant utilizing ultraviolet (UV) radiation to disinfect dry weather flows in Aliso Creek was considered a prime factor in the rapid rebound of FIB concentrations downstream of the plant (Andersen, 2005). Recent research also implicates storm drain biofilms as another urban source of FIB to receiving waters (Roberts and Kolb, 2009; Skinner et al, 2010)

A third confounding factor is that the persistence of FIB may differ from those of various pathogenic viruses, bacteria, protozoa. Viruses, for instance, are small, low in number, and difficult to inactivate, while protozoa may form protective cysts that are resistant to destruction and render them dormant but capable of reactivating in the future. Therefore, while some indicator bacteria may die off in the water column due to ultraviolet disinfection or other unfavorable environmental conditions (including predation and antagonism), pathogens occasionally may persist longer (Haile et. al., 1999). So while the previously two described factors may result in indicator bacteria resulting in false positive indications of public health risk, there may also be instances when indicator bacteria result in false negative indications.

Given the concern about the adequacy of the current recreational water quality criteria, the U.S. EPA is undergoing a comprehensive evaluation and revision of their current FIB-based recreational water quality criteria, with completion scheduled for December 2012. To help initiate this effort, U.S. EPA gathered 43 experts to identify research priorities needed to refine the existing criteria and transition to new methods (U.S. EPA, 2007b). The experts identified seven topics for research, including "scientifically defensible for applications in a wide variety of geographical locations and water types" and "protective of individuals exposed to recreational waters impacted by all sorts of pathogen sources including animal feces, stormwater, and sewage" (Boehm et al, 2009).

In a similar effort focused on inland waters, the Water Environment Research Federation (WERF) convened an expert panel to recommend a research program that would also support U.S. EPA's

intended revision of the water quality criteria (WERF, 2009). These various research efforts are ongoing and the U.S. EPA will consider all submitted data as part of their recreational water quality criteria revision process.

Until recently, few epidemiological studies have tested the health effects of exposure to the receiving waters of direct and recent stormwater runoff, and these studies have found it difficult to link illness with stormwater sources. For instance, the Mission Bay epidemiological study (Colford et al., 2005) found that "only skin rash and diarrhea were consistently elevated in swimmers versus non swimmers, the risk of illness was uncorrelated with levels of traditional water quality indicators, and state water quality thresholds were not predictive of swimming-related illnesses." Various other researchers, as part of U.S. EPA's pathogen research program, are now conducting epidemiological studies nationwide at fresh and salt water beaches that receive wastewater and/or stormwater discharges. In southern California, the SCCWRP has been conducting a multi-year study of public health risks at marine beaches, with a final report that is scheduled for late 2011. Until these various studies are completed, however, there is no reliable documentation of the health effects caused by exposure to stormwater based on epidemiological studies.

Dry weather, non-storm stream flows from undeveloped watersheds tend to have lower concentrations of FIB than dry weather urban flows, although water quality standard exceedances still occur. For instance, a recent study by SCCWRP which monitored 15 unimpaired natural Southern California streams weekly during dry weather for a year showed that about 18 percent of the samples exceeded daily and monthly bacterial indicator thresholds, although concentrations from these unimpaired streams were one to two orders of magnitude lower than levels found in developed watersheds (Tiefenthaler, et al., 2009). The study reported an average of the geometric means for *E. coli* in dry weather flows in each stream of 41 MPN/100 mL. In comparison, the Basin Plan objective Santa Clara River Bacteria TMDL numeric target is 235 MPN/100 mL for any single sample and 126 MPN/100 mL for the geometric mean *E. coli* density shall not exceed 126 MPN/100 mL. The Santa Clara River bacteria TMDL WLAs are based on this and other SCCWRP reference stream and reference beach datasets, in acknowledgement of natural sources.

During wet weather, stormwater runoff can mobilize indicator bacteria from a number of watershed and in-stream sources, and, therefore, indicator bacteria concentrations tend to increase. For example, median stormwater runoff monitoring results for the open space land use category, as summarized by Stein et. al. (2007), include *E. coli* concentrations of about 5,400 MPN/100 mL from the 2001–2005 Los Angeles River Watershed Wet Weather Study, and 7,200 MPN/100 mL from the National Stormwater Quality Database (Pitt et al., 2003). Similarly, median open space land use stormwater runoff monitoring results *include E. coli* concentrations of 5,400 MPN/100 mL from the Stein et al. (2007) study based on two flow-weighted average results, and 500 MPN/100 mL for fecal coliform from a 1994–2000 Los Angeles County (2000)

study based on 21 grab samples. The Santa Clara River Bacteria TMDL has incorporated allowable exceedance days to account for the fact that recreational criteria, strictly applied, are frequently exceeded even at natural, undeveloped streams and beaches. The interim and final allowable exceedance days for Reach 5 of the Santa Clara River for wet and dry weather are listed in **Table 4.22-3**.

Land use type and condition also affect runoff concentrations, and most studies show higher FIB concentrations in urban runoff than in open space runoff. Runoff from residential land uses from the Los Angeles River Watershed Wet Weather Study had a median *E. coli* concentration of about 6,300 MPN/100 mL and about 8,300 MPN/100 mL from the National Stormwater Quality Database (Stein et. al, 2007). The median value of four flow-weighted average results from the Stein et. al. (2007) study was about 6,100 MPN/100mL for *E. coli* for the low density residential land use site. These data represent urban areas that in general do not have source and treatment controls, and therefore are not indicative of runoff from the proposed project.

Runoff from agricultural watersheds involving horticulture and row cropping is known to similarly contain relatively high concentrations of FIB. Data from a stormwater drain serving an agricultural watershed with predominantly row crops in Ventura County showed median fecal coliform levels (approximately 7,000 MPN/100 mL) similar to that found for general urban runoff. Agricultural land and open space areas likely share some of the same wildlife sources, but livestock may be present as well. These data indicate that wildlife, livestock, plants, and/or soils can be a very important source of pathogens and/or FIB such as fecal coliform.

The primary sources of pathogen indicators from Mission Village would likely be sediment, pet wastes, wildlife, and regrowth in the storm drain itself. Other sources of pathogens and pathogen indicators, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices.

The levels of bacteria in runoff from the proposed project would be reduced by source controls and treatment controls. The most effective means of controlling specific bacteria sources, such as pet wastes and other animal wastes is through source control, specifically education of pet owners, education regarding feeding of waterfowl near water bodies, and providing products and disposal containers that encourage and facilitate cleaning up after pets, and storm drain cleaning practices.

Although, there are limited data on the effectiveness of different types of stormwater treatment to manage pathogen indicators, treatment processes that help reduce pathogen indicators include sunlight (ultraviolet light) degradation, sedimentation, and filtration.

Bioretention, a LID stormwater treatment BMP which provides filtration through amended soils, is an example of an effective BMP for addressing FIB The City of Austin, Texas conducted a number of studies on the effectiveness of sedimentation/filtration treatment systems for treating stormwater runoff. Most of the structures were designed to treat 0.5 inch of runoff. Data from four sand filters indicated a range of removals from 37 percent to 83 percent for fecal coliform, and 25 percent to 81 percent for fecal streptococci. Research on the use of filtration to remove bacteria also has been conducted in Florida by the Southwest Florida Water Management District. Significant reductions in total and fecal coliform bacteria and the other indicators were observed between inflow and outflow samples for sand filtration. Percent reductions were measured using flow-weighted sampling techniques. Total coliform bacteria removals were less than 70 percent, and fecal coliform bacteria reduction varied from 65 percent to 100 percent.

Similarly, where soil conditions are conducive to infiltration, LID practices and stormwater treatment facilities that allow for infiltration can reduce runoff volume and treat FIB by infiltration, which in turn reduces FIB loads. In a literature summary, the U.S. EPA reported typical pathogen removal for infiltration basins and trenches as 65 to 100 percent. (U.S. EPA, 1993. Office of Water. Guidance to Specify Management Measures for Sources of Nonpoint Pollution in Coastal Waters. EPA-840-B-920002. Washington, DC.) These types of BMPs are specified for incorporation into the Project where feasible to meet the LID design standards specified in Section 5 of this report, which are based on achieving equivalent pollutant control and hydrologic control as specified by the Project LID Performance Standard, the LID Ordinance and Manual, and in the MS4 Permit/SUSMP Manual requirements for treatment of volume or flow of stormwater.

In summary, stormwater discharges from the project could potentially exceed the REC-1 Basin Plan standard for FIB; therefore, impacts from FIB may be significant prior to mitigation. However, the FIB concentrations in runoff from the project would be reduced through the implementation of source and LID BMP ~~treatment control~~ PDFs. The project would incorporate a number of source controls specific to managing FIB, including education of pet owners, education regarding feeding of waterfowl near water bodies, and providing products and disposal containers that encourage and facilitate cleaning up after pets. The project would not include septic systems and the sewer system would be designed to current standards, which minimizes the potential for leaks. The proposed project development, consistent with the MS4 Permit requirements, includes a comprehensive set of ~~source, low impact/~~site design, source control, LID, and treatment control BMPs selected to manage pollutants of concern, including pathogen indicators. Furthermore, the project will comply with all future MS4 Permit provisions incorporating the TMDL wasteload allocations and implementation plan. With these BMPs, the project would not result in substantial changes in pathogen or FIB concentrations in receiving waters, causing a violation of the water quality standards or waste discharge requirements or otherwise substantially degrade water quality in

the receiving waters. Water quality impacts related to pathogens would be reduced to a level less than significant.

Hydrocarbons. Various forms of hydrocarbons (oil and grease) are common constituents associated with urban runoff; however, these constituents are difficult to measure. Typically, measurements are taken by grab samples, making it difficult to develop reliable EMCs for modeling. Based on this consideration, hydrocarbons were not modeled, but instead are addressed qualitatively.

Hydrocarbons are a broad class of compounds, most of which are non-toxic. Hydrocarbons are hydrophobic (low solubility in water), have the potential to volatilize, and most forms are biodegradable. A subset of hydrocarbons, PAHs can be toxic depending on the concentration levels, exposure history, and sensitivity of the receptor organisms. Of particular concern are those PAH compounds associated with transportation-related sources.

Although the concentration of hydrocarbons in runoff is expected to increase slightly under post-development project conditions, due to the increase in roadways, driveways, parking areas and vehicle use, the project PDFs are expected to prevent appreciable increases in hydrocarbon concentrations from leaving the project site. Source control PDFs that address petroleum hydrocarbons include educational materials on used oil programs; carpooling and public transportation alternatives to driving; BMP maintenance; and street sweeping private streets. Additionally, the ~~parking lot low impact/site design, source controls, LID~~treatment BMPs and vegetation and soils within the LID BMP~~treatment control PDF~~s would adsorb the low levels of emulsified oils in stormwater runoff, preventing discharge of hydrocarbons and visible film in the discharge or the coating of objects in the receiving water.

The majority of PAHs in stormwater adsorb to the organic carbon fraction of particulates in the runoff, including soot carbon generated from vehicle exhaust. For example, a stormwater runoff study found that the dissolved-phase PAHs represented less than 11 percent of the total concentration of PAHs. (Marsalek, J., Watt, W.E., Anderson, B.C., and Jaskot, C., 1997. "Physical and Chemical Characteristics of Sediments from a Stormwater Management Pond." Water Quality Research Journal of Canada, 32(1), 89-100.) Consequently, the LID BMP~~extended detention basins, bioretention areas, and vegetated swales proposed as PDF~~s, which are designed to treat pollutants through settling, filtration, and infiltration, would be effective in treating PAHs.

Los Angeles County conducted PAH analyses on 27 stormwater samples from a variety of land uses in the period 1994-2000. (Los Angeles County Department of Public Works, 2000. Los Angeles County 1994-2000 Integrated Receiving Water Impacts Report.) For those land uses where sufficient samples were taken and were above detection levels to estimate statistics, the mean concentrations of individual PAH compounds ranged from 0.04 to 0.83 μg/L. The reported means were less than acute toxicity criteria

available from the literature (Suter and Tsao, 1996). Moreover, the Los Angeles County data do not account for any treatment, whereas the treatment in the project's PDFs would result in some reduction in hydrocarbon concentrations, inclusive of PAHs. This makes it very unlikely that impacts would occur to the receiving water due to hydrocarbon loads or concentrations. On this basis, the effect of the project on petroleum hydrocarbon levels in the receiving waters post-development is considered less than significant.

Trash and Debris. Urban development tends to generate significant amounts of trash and debris. Trash refers to any human-derived materials including paper, plastics, metals, glass, and cloth. Debris is defined as any organic material transported by stormwater, including leaves, twigs, and grass clippings (DLWC, 1996). Debris can be associated with the natural condition. Trash and debris can be characterized as material retained on a 5-mm mesh screen. It contributes to the degradation of receiving waters by imposing an oxygen demand, attracting pests, disturbing physical habitats, clogging storm drains and conveyance culverts, and mobilizing nutrients, pathogens, metals and other pollutants that may be attached to the surface.

Urbanization could significantly increase trash and debris loads if left unchecked. However, the project PDFs, including source control ~~and~~ LID, and treatment control BMPs, would minimize the adverse impacts of trash and debris. Source controls such as street sweeping, public education, fines for littering and storm drain stenciling can be effective in reducing the amount of trash and debris that is available for mobilization during wet and dry weather events. Common area litter control would include a litter patrol, covered trash receptacles, emptying of trash receptacles in a timely fashion and noting trash violations by tenants/homeowners or businesses and reporting the violations to the owner/HOA for investigation. Catch basin inserts would be provided for commercial parking lots. The project's PDFs would remove or prevent the release of floating materials, including solids, liquids, foam, or scum, from runoff discharges and would prevent impacts on dissolved oxygen in the receiving water due to decomposing debris. Based on these considerations, trash and debris is not expected to significantly impact the receiving waters of the project.

Methylene Blue Activated Substances (MBAS). MBAS, which is related to the presence of detergents in runoff, may be incidentally associated with urban development due to commercial and/or residential vehicle washing or other outdoor washing activities. Surfactants disturb the surface tension, which affects insects and can affect gills in aquatic life.

The presence of soap in runoff from the project would be controlled through source control PDFs, including a public education program on residential and charity car washing, and the provision of a car wash pad connected to sanitary sewer in the multi-family residential areas. Other sources of MBAS, such

as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices. Therefore, MBAS are not expected to significantly impact the receiving waters of the proposed project.

Cyanide. The information on cyanide levels in urban stormwater is relatively sparse. The incidence of detection of cyanide in urban stormwater is relatively low, except in some special cases. In the Nationwide Urban Runoff Project (NURP), cyanide was detected in runoff from four cities out of a total of 15 cities that participated in the monitoring program (U.S. EPA 1983). Overall, cyanide was detected in 23 percent of the urban runoff samples collected (16 out of a total of 71 samples), at concentrations ranging from 2 to 33 μg/L (Cole et al. 1984). Of the 71 samples, only 3 percent (i.e., 2) exceeded the freshwater acute guideline of 22 μg/L (U.S. EPA 1983). The predominant sources of cyanides found in urban runoff samples were reported to be products of gasoline combustion and anti-caking ingredients in road salts used in colder climates (Cole et al. 1984), which is not an issue associated with the Project.

The detectable concentrations observed in the Santa Clara River at the mass emission station S29 (average of 10 μg/L) may be in part due to untreated urban stormwater runoff from the City of Santa Clarita. Another potential source is cyanide from burnt catchments. For example, cyanide concentrations in runoff obtained from an area that had been burned in a wildfire that occurred in Tennessee and North Carolina averaged 49 μg/L. (Barber, T.R., Lutes, C.C., Doorn, M.R.J., Fuchsman, P.C., Timmenga, H.J., and R.L. Crouch, 2003. Aquatic Ecological Risks Due to Cyanide Releases from Biomass Burning. Chemosphere 50:33, 343-348, January 2003.) Higher cyanide concentrations were reported in runoff from a wildfire that occurred in New Mexico, with an average value of 80 μg/L.

In addition to the expected relatively low level of cyanide in untreated stormwater, cyanide in runoff from the project would be readily removed by biological uptake, degradation by microorganisms, and by volatilization in the LID BMP~~ PDF~~s.~~treatment PDFs, especially the dry extended detention basins.~~ Therefore cyanide is not expected to significantly impact the receiving waters of the project.

(e) Summary for Pollutants of Concern

Runoff volumes~~ and pollutant loads for most modeled constituents (with the exception of TSS loads)~~ are predicted to increase for the post-development condition, primarily as a result of increased imperviousness and reduced soil infiltration capacity (a result of construction-related compaction). Pollutant loads of ammonia-N, dissolved copper, and chloride are predicted to increase somewhat, while pollutant loads of TSS, total phosphorus, nitrate-N plus~~t~~ nitrite-N, dissolved zinc, total lead, and total aluminum are predicted to decrease~~s~~. Concentrations of chloride~~ Concentrations of chloride, ammonia, and dissolved copper~~ are predicted to increase, while concentrations of all other modeled constituents are predicted to decrease under proposed conditions when compared to existing conditions. Furthermore,

modeled pollutant concentrations in runoff from developed areas with PDFs are predicted to be below all benchmark water quality objectives and criteria and TMDL wasteload allocations for the Santa Clara River and are addressed by a comprehensive ~~low impact/~~site design, source control, ~~and~~ LID, and treatment control strategy, and compliance with MS4 Permit, Construction General Permit, ~~and~~ General De-Watering Permit, and LID Performance Standard requirements.

Concentrations of hydrocarbons are expected to increase, while concentrations of pathogens, pesticides and trash and debris may or may not increase under proposed conditions when compared to existing conditions. However, none of the qualitatively assessed constituents would significantly impact receiving waters due to the implementation of the project PDFs in compliance with the SUSMP requirements and the LID Performance Standard.

The project site design, source control, LID, treatment control, and hydromodification control BMPs planned as PDFs meet or exceed the requirements of the MS4 Permit, including SUSMP requirements, and also satisfy the LID Performance Standard. Therefore, potential impacts from the project on receiving water quality are expected to be less than significant.

(3) Post-Development Operational Impacts to Groundwater

Discharge from the project's developed areas to groundwater would occur in three ways: (1) through general infiltration of irrigation water; (2) through ~~incidental~~ infiltration of urban runoff in the proposed LID BMP~~treatment control~~ PDFs after treatment; and (3) through infiltration of urban runoff, after treatment in the project PDFs, into the groundwater under the Santa Clara River, which is the primary recharge zone for groundwater in the Santa Clarita Valley. Groundwater quality would be fully protected through implementation of the project's ~~low impact/~~site design, source control, LID, and treatment control BMP PDFs prior to discharge of project runoff to groundwater.

The pollutant of concern with respect to groundwater is nitrate-N plus nitrite-N. The Basin Plan groundwater quality objective for nitrate-nitrogen plus nitrite-nitrogen is 10 mg/L, which is more stringent than the objective for nitrate-nitrogen alone (10 mg/L) and for nitrite-nitrogen alone (1 mg/L). The predicted nitrate-nitrogen plus nitrite-nitrogen concentration in runoff after treatment in the project PDFs is 0.5~~7~~ mg/L, which is well below the groundwater quality objective. Therefore, infiltration of post-development stormwater runoff would not cause significant adverse groundwater quality impacts.

Wastewater generated by the Mission Village project would be treated in the Newhall Ranch WRP. Treatment at the Newhall Ranch WRP would consist of screening, activated sludge secondary treatment with membrane bioreactors, nitrification/denitrification, ultraviolet disinfection, and partial reverse osmosis. Discharges from the Newhall Ranch WRP treatment facility are permitted by a NPDES Permit

and WDRs issued by the RWQCB in October 2007 (LARWQCB, 2007). Treated effluent from the Newhall Ranch WRP would be used to supply distribution of recycled water throughout the Specific Plan area for irrigation of landscaping and other approved uses. The WRP permit contains effluent limitations that would control the amount of conventional, non-conventional, and toxic pollutants discharged to the receiving waters. These effluent limits are a combination of technology-based limits (per 40 CFR section 122.44(a)) and water quality-based limits (per 40 CFR section 122.44(d)). The effluent limitation contained in the Newhall Ranch WRP permit for nitrate-N plus nitrite-N is 5 mg/L, and the limitation for nitrite-N is 0.9 mg/L (average monthly). As the Basin Plan groundwater quality objective for nitrate-nitrogen plus nitrite-nitrogen is 10 mg/L or 1 mg/L for nitrite-nitrogen, the Newhall Ranch WRP irrigation water supply that would serve Mission Village would be well below the groundwater quality objectives. On this basis, infiltration of irrigation water would not cause significant adverse groundwater quality impacts.

For a discussion of impacts associated with perchlorate-contaminated groundwater, please see this EIR, **Section 4.8**, **Water Service**.

(4) Post-Development Operational Impacts Associated with Pollutant Bioaccumulation

Certain pollutants have the potential to accumulate in ponded water, and/or in treatment BMP vegetation and soils, potentially increasing the risk of exposure to wildlife and the food chain. Factors that could affect the extent of potential bioaccumulation include the following:

- The bioavailability of the pollutant;
- Conditions in the soils (e.g., pH, acid-volatile sulfide concentration, organic content) that affect the form and bioavailability of the pollutant;
- The efficiency by which pollutants in the soils enter the plant community, the storage of these pollutants in plant tissues that are edible, and the utilization of the plants as a food source by animals;
- The type of habitats, organisms attracted to these habitats and their feeding habits; and
- BMP system design and maintenance.

The primary pollutants of concern with regard to bioaccumulation are mercury and selenium. However, as indicated by the water quality monitoring conducted by Los Angeles County at the Santa Clara River mass emission station S29 (LACDPW, 2005), selenium and mercury are not naturally present at levels of concern in this watershed. Since these pollutants would not be introduced by the project, bioaccumulation of selenium and mercury is not expected.

The potential for bioaccumulation impacts from the proposed parcel-based and regional LID BMPs~~bioretention and vegetated swale, and extended detention basin facilities~~ would be minimal. Since the site is largely impervious, very little coarse solids and associated pollutants would likely be generated. The vegetation and soil media in the facilities would trap sediments and pollutants in the soils, which contain bacteria that metabolize and transform trace metals, therefore reducing the potential for these pollutants to enter the food chain. The facilities do not provide open water areas and are not likely to attract waterfowl.

Bioaccumulation of pollutants in the Santa Clara River is not of concern due to the low concentrations of pollutants, below the benchmark Basin Plan objectives and CTR criteria predicted in the treated runoff. Also, sediments in the Santa Clara River are transported downstream in the wet season by storm flows and, therefore, do not accumulate.

On this basis, the potential for bioaccumulation and adverse effects on waterfowl and other species would be less than significant.

(5) Post-~~-~~Development Operational Impacts Associated with Dry Weather Flows

~~While there are no specific requirements in the MS4 Permit and the SUSMP requirements to treat dry weather discharges from the project area, p~~Pollutants in dry weather flows also could be of concern because dry weather flow conditions occur throughout a large majority of the year, and because some of the TMDLs in downstream reaches of the Santa Clara River are applicable for dry weather conditions (e.g., nutrients and chloride).

Dry weather flows are typically low in sediment because the flows are relatively low, and coarse suspended sediment tends to settle out or is filtered out by vegetation. As a consequence, pollutants that tend to be associated with suspended solids (e.g., phosphorus, some bacteria, some trace metals and some pesticides) are typically found in very low concentrations in dry weather flows. The focus of the following discussion is therefore on constituents that tend to be dissolved, e.g., nitrate and trace metals, or constituents that are so small as to be effectively transported (e.g., pathogens and oil and grease).

In order to minimize the potential generation and transport of dissolved constituents, landscaping in public and common areas would utilize drought tolerant vegetation that requires little watering and chemical application. Landscape watering in common areas, commercial areas, multi-family residential areas, and parks would use efficient irrigation technology with evapotranspiration sensors to minimize excess watering.

In addition, educational programs and distribution of materials (source controls) would emphasize appropriate car washing locations (at commercial car washing facilities or the car pad in the multi-family residential areas) and techniques (minimizing usage of soap and water), encourage low impact landscaping and appropriate watering techniques, appropriate swimming pool dechlorination and discharge procedures, and discourage driveway and sidewalk washing. Illegal dumping would be discouraged by stenciling storm drain inlets and posting signs that illustrate the connection between the storm drain system and the receiving waters and natural systems downstream.

The parcel-based and regional LID BMPs~~The bioretention areas, vegetated swales, and the extended detention basins~~ would provide treatment for and infiltrate dry weather flows and small storm events. Water cleansing is a natural function of vegetation and biologically-active media, offering a range of treatment mechanisms. Sedimentation of particulates is the major removal mechanism. However, the performance is enhanced as plant materials allow pollutants to come in contact with vegetation and soils containing bacteria that metabolize and transform pollutants, especially nutrients and trace metals. Plants also take up nutrients in their root system. Some pathogens would be removed through ultraviolet light degradation. Any oil and grease would be effectively adsorbed by the vegetation and soil within the low flow wetland vegetation. Dry weather flows and small storm flows would infiltrate into the bottom of the facility~~basin~~ after receiving treatment in the low flow wetland vegetation.

The LID BMP~~treatment control PDF~~s would infiltrate or evapotranspire all expected dry weather runoff from the project. It is expected that no dry weather discharge would occur to the Santa Clara River from the project. Based on source control PDFs reducing the amount of dry weather runoff and LID BMP~~treatment control PDF~~s capturing and treating the dry weather runoff that does occur, the impact from dry weather flows is considered less than significant.

(6) Post Development Operational Impacts Associated with Hydromodification

Development typically increases impervious surfaces on formerly undeveloped (or less developed) landscapes, reducing the capture and infiltration of rainfall. The result is that, as a watershed develops, a larger percentage of rainfall becomes runoff during any given storm. In addition, runoff reaches the stream channel more efficiently due to the development of storm drain systems, so that, if no controls are implemented, the peak discharge rates for rainfall events and floods are higher for an equivalent event than they were prior to development. Further, the introduction of irrigation and other dry weather flows can change the seasonality of runoff reaching natural receiving waters. These changes, in turn, affect the stability and habitat of natural drainages, including the physical and biological character of these drainages. This process is termed "hydromodification" (SCCWRP, 2005).

All flows from those areas of the project that would be developed with impervious surface with potential for altering drainage patterns would be discharged directly to the Santa Clara River. There would be no post-development stormwater flows delivered to Lion Canyon from the project. Therefore, this analysis addresses the potential for hydromodification impacts to the Santa Clara River as a result of the proposed project.

The physical alteration of natural drainages, such as bank protection, energy dissipaters, and bridge abutments, are not impacts created by changes in runoff volume, duration, or flow associated with development. Instead, these types of alterations are physical alterations to the streambed and bank, with associated effects on stream habitat and species. These types of effects are analyzed in **Section 4.3, Biota**, and **Section 4.21, Floodplain Modification**, of this EIR.

(a) Wet Weather Flows

The project proposes development that would create impervious surface within approximately 33~~50~~ percent, or 420~~635~~ acres of the 1,261.8-acre total study area. The size of the project in comparison to both the 1,618 square mile total watershed area and the expected total impervious area in the watershed in the existing condition and at buildout is small. It is estimated, based on the land use data provided by LACDPW, that the proposed project would comprise 1.1 percent of the total impervious area in the watershed encompassing the project location at ultimate buildout for the watershed.

A series of progressive hydromodification control measures would be used throughout the project site to prevent and control hydromodification impacts to the Santa Clara River:

- Avoid, to the extent possible, the need to mitigate for hydromodification impacts by preserving natural hydrologic conditions and protecting sensitive hydrologic features, sediment sources, and sensitive habitats.
- Minimize the effects of development through site design practices (e.g., reducing connected impervious surfaces and provided river buffer areas) and implementation of stormwater volume-reducing BMPs (project-based hydromodification source control).
- Mitigate hydromodification impacts in-stream using geomorphically based channel design measures (e.g., buried soil cement bank stabilization).

Project-based Hydrologic Source Control. Disconnecting impervious areas from the drainage network and adjacent impervious areas is a key approach to protecting channel stability. Several hydrologic source controls would be included in the project that would limit impervious area and disconnect imperviousness:

Low Impact/Site Design. Low impact/site design PDFs would help to reduce the increase in runoff volume. These PDFs include the clustering of Specific Plan development into village areas, including the Mission Village, the preservation of 70 percent of the Specific Plan area in open space, and 627 acres (50 percent) of the project in natural river channel, open space, and parks; use of native and/or non-native/non-invasive and drought tolerant plants in landscaped areas; and the use of efficient irrigation systems in common area landscaped areas. These measures would help to protect the stability of the Santa Clara River, and avoid and minimize direct impacts to the River.

LID BMPs~~Treatment Controls~~. The project's LID~~treatment control~~ BMPs would also serve as hydromodification source control BMPs. Parcel-based~~Vegetated swales, bioretention areas,~~ and regional LID BMPs would~~extended detention basins can~~ provide volume reduction ranging from incidental volume reduction in biofiltration BMPs (via evaporation and ~~on the order of 20 to 30 percent through~~ infiltration) up to full volume reduction of captured water in infiltration BMPs where soil and hydrogeologic conditions permit~~ and evaporation~~. Collectively these vegetated LID BMP~~treatment~~ facilities are expected to provide significant reduction in wet weather runoff. In addition, these facilities would also receive and eliminate dry weather flows.

The increase in impervious surface within the project area is predicted to increase the average annual stormwater runoff volume from the project area by approximately 255~~444~~ acre-feet per year, after accounting for the estimated volume reductions in the proposed LID BMP~~treatment control PDF~~s. Using conservative values for volume reduction, the LID BMP~~treatment control PDF~~s are estimated to reduce the increase in average annual stormwater runoff volume by approximately 263~~97~~ acre-feet per year, which is a 39~~14~~ percent reduction of the predicted average post-development stormwater runoff volume without the LID BMP~~treatment control PDF~~s.

Geomorphically Referenced Channel Design. The hydromodification management approach for the Santa Clara River would incorporate "geomorphically referenced river engineering" as described in SCCWRP Technical Report 450 (SCCWRP, 2005a). The goal of this approach is to preserve the appearance of the natural stream channel function to the maximum extent practicable, while maintaining stability in stream channel morphology. The project's development footprint would allow for the greatest freedom possible for "natural stream channel" activity. This includes establishing buffer zones and maintaining setbacks to allow for channel movement and adjustment to changes in energy associated with runoff. The engineered structural elements that would be implemented where needed for the Santa Clara River include energy dissipation and bank stabilization.

Energy Dissipation. Energy dissipation at storm drain outfalls provides erosion protection in areas where discharges have the potential to cause localized stream erosion. Erosion protection would be provided at all storm drain outlets to the Santa Clara River.

Bank Stabilization. The project would include buried soil cement along the Santa Clara River adjacent to and downstream of the project site. In total, approximately 2,900 linear feet of bank stabilization would be constructed as part of the project where necessary to protect against flooding and erosion pursuant to Federal Emergency Management Administration (FEMA) and LACDPW requirements. In total, approximately 1,700 linear feet on the south bank fronting the project site and 1,200 linear feet downstream of the project on the north bank, east of the WRP (PACE, 2007). The alignment was selected so that bank protection along the river would generally be excavated from non-jurisdictional upland areas adjacent to the river. Installing bank protection in non-jurisdictional areas reduces and/or avoids impacts to the river and has the potential to create new riverbed areas, allows for channel movement and adjustment to changes in energy associated with runoff, and increases riparian habitat.

Turf Reinforcement Mat (TRM) or similar bank stability protection would be provided by installing approximately 16,000 linear feet of TRMs along the southern edge of the utility corridor downstream or west of the tract map site. TRMs are designed to reinforce vegetation at the root and stem allowing vegetation to be used as erosion control in areas where flow conditions exceed the ability of natural vegetation to remain rooted. This includes applications with high slopes or stream banks where grouted riprap and concrete channels are aesthetically undesirable.

In summary, although project runoff volumes, flow rates, and durations would increase, potential impacts of hydromodification (i.e., the potential to cause erosion, siltation, or channel instability) would be minimized by the project PDFs. The project's site design PDFs, and volume reductions in treatment controls PDFs would minimize increases in runoff volume from the development area, the preferred method for controlling hydromodification impacts from new development. (SCCWRP, 2005a. Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams. Technical Report 450. April 2005.)

Potential in-stream impacts of increased volumes, rates, and flow durations would be managed and mitigated with energy dissipaters at the discharge points to the Santa Clara River and the River banks would be protected with vegetated buried bank stabilization primarily in non-jurisdictional upland areas adjacent to the river. This type of stabilization technique is the preferred approach for bank stabilization. (SCCWRP, 2005a. Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams. Technical Report 450. April 2005.)

For these reasons, the wet weather hydromodification impacts of the project on the Santa Clara River would be less than significant.

(b) Dry Weather Runoff

Source control and LID BMP PDFs will prevent the discharge of dry weather urban runoff from the Project. These PDFs include:

- The use of native and/or non-invasive, climate appropriate vegetation and smart irrigation controls.
- The use of the parcel-based LID BMPs, including, but not limited to, infiltration, bioinfiltration, and biofiltration BMPs placed in common area landscaping in commercial, multi-family residential, institutional, recreational, and park areas, roadway median strips, and parking lot islands (where applicable) and regional infiltration/biofiltration facilities incorporating natural vegetation.

~~In order to quantitatively address dry weather impacts, a dry weather water balance was performed. The quantity of dry weather flows from urban sources is variable and not easily quantified. Information available from the Irvine Ranch Water District suggests an average dry weather flow from urban areas of 2.9×10^{-4} cfs per urbanized acre (Irvine Ranch Water District [IRWD], 2003). Dry weather flow estimates in Santa Monica, used to design a dry weather flow recycling facility, indicate a range of dry weather flows between 8.3×10^{-5} to 1.8×10^{-4} cfs per urbanized acre (Antich et al., 2003).~~

~~For purposes of conservatively estimating the impacts of dry weather flows, a dry weather discharge of 3.0×10^{-4} cfs per urbanized acre was used in this report. **Table 4.22-35, Predicted Dry Weather Water Balance**, presents a monthly dry weather flow balance for the proposed project. Water quality basins were assumed to infiltrate at only 0.15 in/hr. Infiltration volume was calculated as the BMP bottom area times the infiltration rate. Evapotranspiration rates were conservatively assumed to be 75 percent of reference rates from CIMIS Zone 14, in which the project is located. Finally, it was assumed that open space in the project area would result in no dry weather runoff.~~

It is predicted that all dry weather flows would be infiltrated or removed by evapotranspiration in the LID BMP~~treatment control PDF~~s, which also provide hydrologic source control. As a result, no change in seasonality of flows is anticipated to result from development.

Based on comprehensive site planning, source control, and LID BMP ~~treatment control~~ strategy~~ and the above water balance analysis~~, the potential for dry weather flows to result in hydromodification or associated habitat or water quality impacts is considered less than significant~~, as shown in **Table 4.22-34**~~.

~~Table 4.22-35~~
~~Predicted Dry Weather Water Balance~~

~~Month~~	~~Dry Weather Flow (acre-feet)[1]~~	~~ETo (acre-feet)[2]~~	~~Infiltration (acre-feet)[3]~~	~~Outflow (acre-feet)~~
~~January~~	~~18.4~~	~~0.8~~	~~17.6~~	~~0.0~~
~~February~~	~~16.6~~	~~1.2~~	~~15.5~~	~~0.0~~
~~March~~	~~18.4~~	~~1.9~~	~~16.5~~	~~0.0~~
~~April~~	~~17.8~~	~~2.7~~	~~15.2~~	~~0.0~~
~~May~~	~~18.4~~	~~3.6~~	~~14.9~~	~~0.0~~
~~June~~	~~17.8~~	~~4.1~~	~~13.8~~	~~0.0~~
~~July~~	~~18.4~~	~~4.5~~	~~13.9~~	~~0.0~~
~~August~~	~~18.4~~	~~4.0~~	~~14.4~~	~~0.0~~
~~September~~	~~17.8~~	~~3.0~~	~~14.9~~	~~0.0~~
~~October~~	~~18.4~~	~~2.1~~	~~16.3~~	~~0.0~~
~~November~~	~~17.8~~	~~1.1~~	~~16.7~~	~~0.0~~
~~December~~	~~18.4~~	~~0.8~~	~~17.6~~	~~0.0~~

~~*Source: Geosyntec, 2010.*~~
~~[1] *Based on dry weather flow of 0.0003 cfs/acre from a range of researched values.*~~
~~[2] *60% of Reference ETo from CIMIS Zone 14.*~~
~~[3] *Equal to dry weather runoff up to maximum of 0.1 in/hr for bioretention and 0.150515 in/hr for water quality facilitysbasins.*~~

(7) Groundwater Recharge

In a groundwater basin, the effect of urbanization on recharge to underlying groundwater is dependent on land uses, water uses, vegetative cover, and geologic conditions. Groundwater recharge from undeveloped lands occurs from precipitation alone, whereas areas that are developed for agricultural or urban land uses receive both precipitation and irrigation of vegetative cover. In an urban area, groundwater recharge occurs directly beneath irrigated lands and in drainages whose bottoms are not paved or cemented. A memorandum prepared by CH2MHill entitled, "*Effect of Urbanization on Aquifer Recharge in the Santa Clarita Valley*" discusses the general effects of urbanization on groundwater recharge and the specific effects in the Santa Clarita Valley (see **Appendix 4.3**).

Currently, the site is partially irrigated agricultural land. As a result, in the existing condition, recharge occurs within the project site from irrigation and precipitation. On one hand, development of the site would introduce impervious surface over approximately 33~~48~~ percent of the project site, which would reduce recharge~~.~~ In addition, development of agricultural lands would eliminate irrigation as a source of recharge. On the other hand, ~~although most treated water would be reused, development of~~ the project~~site~~ would increase runoff volume over the watershed surface due to the introduction of

impervious surfaces and would concentrate runoff volume in areas where infiltration would be more effective for groundwater recharge. Regional LID BMPs would infiltrate water in alluvial areas adjacent~~discharged after treatment~~ to the Santa Clara River, or would discharge treated water to the Santa Clara River., whose channel is predominantly natural and consists of vegetation and coarse-grained sediments (rather than concrete). The porous nature of the sands and gravels forming the streambed would allow for significant infiltration to occur to the underlying groundwater. Also, the project would introduce landscaping, irrigation, and parcel-based LID BMP PDFs designed to infiltrate runoff. These project features would increase groundwater recharge from the project. On balance, it is unlikely that the project would result in a significant change in groundwater recharge in the project vicinity. Based on the above discussion, the project's impact on groundwater recharge is considered less than significant.

Please see **Section 4.8**, **Water Service**, of this EIR for further information regarding the groundwater basin and recharge.

8. PROJECT MITIGATION MEASURES

Although the proposed project may result in potential impacts absent mitigation, the County already has imposed mitigation measures required to be implemented as part of the approved Newhall Ranch Specific Plan. These mitigation measures, as they relate to water quality, are found in the previously certified Specific Plan Program EIR and the adopted Mitigation Monitoring Plan (May 27, 2003). The project applicant has committed to implementing the applicable mitigation measures from the Specific Plan to ensure that future development of the project site would not adversely impact adjacent properties.

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

The mitigation measures set forth below were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 27, 2003). All of the mitigation measures are applicable to the Mission Village project due to its geographic location and nature of the proposed improvements. The applicable mitigation measures would be implemented to mitigate the potentially significant impacts associated with the proposed project. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.2-1 All on- and off-site flood control improvements necessary to serve the NRSP are to be constructed to the satisfaction of the County of Los Angeles Department of Public Works Flood Control Division.

SP 4.2-2 All necessary permits or letters of exemption from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the

Regional Water Quality Control Board for Specific Plan-related development are to be obtained prior to construction of drainage improvements. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in [NRSP Program EIR] Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement).

SP 4.2-3 All necessary streambed agreement(s) are to be obtained from the California Department of Fish and Game wherever grading activities alter the flow of streams under CDFG jurisdiction. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in [NRSP Program EIR] Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement).

SP 4.2-4 Conditional Letters of Map Revision (CLOMR) relative to adjustments to the 100-year FIA flood plain are to be obtained by the applicant after the proposed drainage facilities are constructed.

SP 4.2-5 Prior to the approval and recordation of each subdivision map, a Hydrology Plan, Drainage Plan, and Grading Plan (including an Erosion Control Plan if required) for each subdivision must be prepared by the applicant of the subdivision map to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after site development. These plans shall be prepared to the satisfaction of the County of Los Angeles Department of Public Works.

SP 4.2-6 Install permanent erosion control measures, such as desilting and debris basins, drainage swales, slope drains, storm drain inlet/outlet protection, and sediment traps in order to prevent sediment and debris from the upper reaches of the drainage areas which occur on the Newhall Ranch site from entering storm drainage improvements. These erosion control measures shall be installed to the satisfaction of the County of Los Angeles Department of Public Works.

SP 4.2-7 The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the County of Los Angeles Department of Public Works. These requirements currently include preparation of an Urban Storm Water Mitigation Plan (USWMP) containing design features and BMPs appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of an SWPPP containing design features and BMPs appropriate and applicable to the subdivision. The County of Los Angeles Department of Public Works shall monitor compliance with those NPDES requirements.

SP 4.2-8 The applicant for any subdivision map permitting construction shall comply with all appropriate requirements of the County of Los Angeles Standard Urban Stormwater Mitigation Plan (SUSMP) requirements, and comply with the State Water Resources Control Board (SWRCB) issued General Permit for Construction Activity Storm Water (SWRCB Order 99-08-DWQ), as it may be amended from time to time or replaced by other applicable stormwater permits.

b. Additional Mitigation Measures Proposed by this EIR

In addition to the mitigation measures adopted in connection with the Specific Plan, identified above, the following project-specific mitigation measures are proposed to ensure that water quality impacts are less than significant. These measures are preceded by "MV," which stands for Mission Village.

MV 4.22-1 Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to LACDPW, for review and approval, drainage plans showing the incorporation into the project of those water quality and hydrologic control project design features (i.e., the post-development water quality and hydrologic control BMPs)(the "PDFs") identified in this **Section 4.22**, which PDFs shall be designed to meet the standards set forth in this **Section 4.22**, including the sizing, capacity, and volume reduction performance standards set forth herein, as summarized in Table 4.22-17.

MV 4.22-2 Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to planning staff for review a Landscape and Integrated Pest Management Plan, identified in this **Section 4.22**, which shall be designed to meet the standards set forth as follows.

A Landscape and Integrated Pest Management Plan shall be developed and implemented for common area landscaping within the Mission Village project that addresses integrated pest management (IPM) and pesticide and fertilizer application guidelines. IPM is a strategy that focuses on long-term prevention or suppression of pest problems (i.e., insects, diseases and weeds) through a combination of techniques including: using pest-resistant plants; biological controls; cultural practices; habitat modification; and the judicious use of pesticides according to treatment thresholds, when monitoring indicates pesticides are needed because pest populations exceed established thresholds. The Landscape and Integrated Pest Management Plan will address the following components:

1. Pest identification.

2. Practices to prevent pest incidence and reduce pest buildup.

3. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed.

4. Establishment of action thresholds that trigger control actions.

5. Pest control methods - cultural, mechanical, environmental, biological, and appropriate pesticides.

6. Pesticide management - safety (e.g., Material Safety Data Sheets, precautionary statements, protective equipment); regulatory requirements; spill mitigation; groundwater and surface water protection measures associated with pesticide use; and pesticide applicator certifications, licenses, and training (i.e., all pesticide applicators must be certified by the California Department of Pesticide Regulation).

7. Fertilizer management - soil assessment, fertilizer types, application methods, and storage and handling.

9. CUMULATIVE IMPACTS

a. Surface Water Quality

This section defines the geographic area of potential impact for the cumulative impacts analysis, and evaluates impacts from probable future projects together with the incremental effects of the proposed project to determine effects on water quality and hydromodification within this geographic area. The model results presented below are used in addition to consideration of the other projects reflected in adopted plans and projections for areas tributary to Santa Clara River Reach 5 to get a better overall assessment of cumulative water quality effects on the Santa Clara River.

The geographic area for evaluating cumulative impacts includes the unincorporated area of Los Angeles County west of The Old Road to the Ventura County line. This geographic area includes the Newhall Ranch subregion, the Entrada subregion, the Legacy Village subregion, and the Valencia Commerce Center, as well as existing development in the Six Flags Magic Mountain area and the existing Valencia WRP (see **Figure 4.22-1**).

The proposed Entrada project site is located directly east of the Specific Plan area and west of I-5. Entrada is bounded by the Santa Clara River to the east and north, the Mission Village project within the Specific Plan area to the west, and the Westridge project to the south. The existing Six Flags Magic Mountain Theme Park is located adjacent to the Specific Plan and Entrada, but is not included in the project site. The Entrada project proposes development of single- and multi-family residential units, commercial/retail uses, and a hotel on 813 acres. The project also includes private recreational facilities and various trail and road improvements.

The proposed Legacy Village project is located south of the Specific Plan area, bordering the Mission Village and Homestead projects, and north of Stevenson Ranch. The 1,750-acre Legacy project proposes construction of residential areas and commercial space. Over 1,000 acres of open space will be incorporated into the Legacy Village project, including 50 acres of parks and trails. The above noted sites can be found on **Figure 1.0-3, Project Boundary/Environmental Setting**.

The remaining unbuilt portions of the Valencia Commerce Center are located approximately 0.5 mile upstream of the confluence of Castaic Creek and the Santa Clara River. Approximately 4 million square feet of building floor area will be developed over the next 5 to 10 years. Additionally, bank stabilization improvements to Castaic Creek and Hasley Creek would be constructed in conjunction with these remaining phases of the Commerce Center.

Urban runoff from the Specific Plan, Entrada, Legacy Village, and the Valencia Commerce Center project areas would discharge to the Santa Clara River after treatment. Each of the projects would utilize LID BMPs, single-family HSCs~~vegetated swales, bioretention areas~~, and USEPA Green Streets, as applicable, to comply with the LID Performance Standard ~~s/or dry extended detention basins,~~ as well as a full suite of site design and source control BMPs, to address pollutants of concern in stormwater runoff and dry weather discharges from the proposed projects. Urban runoff from the Magic Mountain Theme Park and the Valencia WRP currently drains to the Santa Clara River and would continue to do so in proposed conditions without any anticipated change to stormwater management controls.

The combined effect on modeled pollutant loads and concentrations of the Specific Plan, Entrada, Legacy Village, and the Valencia Commerce Center proposed projects and the existing Magic Mountain Theme Park and Valencia WRP are summarized in **Tables 4.22-35** and **4.22-36,** below, respectively. (Note that only stormwater impacts from runoff from the Valencia WRP site are included in modeled loads and concentrations; wastewater discharges are not included.) As shown in **Table 4.22-36, Predicted Average Annual Combined Runoff Volume and Pollutant Loads for the NRSP, Legacy Village, Entrada, and Valencia Commerce Center Projects**, when considered cumulatively, runoff volumes and loads of ~~TKN~~ammonia, ~~total nitrogen, total phosphorus, most metals~~dissolved copper, and chloride are predicted to increase, while pollutant loads are expected to decrease for TSS, ~~and~~ nitrate-N + nitrite-N, total nitrogen, total phosphorus, total lead, dissolved zinc, and total aluminum. Pollutant concentrations from the combined projects are predicted to decrease for all modeled parameters (**Table 4.22-37**). Increases in pollutant loadings are not anticipated to be significant based on the fact that predicted pollutant concentrations are well below benchmark water quality standards and TMDL wasteload allocations and are primarily within the range of observed concentrations in Santa Clara River Reach 5 (**Table 4.22-38**).

Table 4.22-36
Predicted Average Annual Combined Runoff Volume and Pollutant Loads for the NRSP, Legacy Village, Entrada, and Valencia Commerce Center Projects

Modeled Parameter	Units	Development Condition		Change
		Existing	Developed w/ PDFs	
Volume	acre-ft/yr	1,500	3,400	1,900
Total Suspended Solids	tons/yr	650	340	-310
Nitrate-N + Nitrite-N	tons/yr	8.0	3.1	-4.9
Ammonia-N	tons/yr	0.9	1	0.1
Total Nitrogen	tons/yr	12.5	9.5	-3.0
Total Phosphorus	tons/yr	2.8	0.9	-1.9
Total Aluminum	tons/yr	3.2	2.7	-0.5
Dissolved Copper	lbs/yr	32	55	23
Total Lead	lbs/yr	42	40	-2

Modeled Parameter	Units	Development Condition		Change
		Existing	Developed w/ PDFs	
Dissolved Zinc	lbs/yr	400	390	-10
Chloride	tons/yr	43	88	45

Source: Geosyntec, 2011.

As discussed above, the anticipated quality of effluent expected from the Mission Village would not contribute concentrations of pollutants of concern that would be expected to cause or contribute to a violation of the water quality standards in the project's receiving waters. Therefore, the project's incremental effects on surface water quality are not expected to be significant.

The Mission Village project's surface runoff water quality, after PDFs, both during construction and post-development, is predicted to comply with adopted regulatory requirements that are designed by the RWQCB to assure that regional development does not adversely affect water quality, including the Project LID Performance Standard, MS4 Permit and SUSMP requirements; Construction General Permit requirements; General Dewatering Permit requirements; and benchmark Basin Plan water quality objectives, CTR criteria, and TMDLs. Any future urban development occurring in the Santa Clara River watershed also must comply with ~~these~~ the MS4 Permit, SUSMP and County LID Manual requirements. By extrapolating the results of the direct and cumulative impact analysis modeling it can be predicted that analysis of other proposed development combined with existing conditions would have similar water quality results. Therefore, cumulative impacts on surface water quality of receiving waters from the project and future urban development in the Santa Clara River Watershed are addressed through compliance with the MS4 Permit and SUSMP requirements; Construction General Permit requirements; General Dewatering Permit requirements; and benchmark Basin Plan water quality objectives, CTR criteria, and TMDLs, which are intended to be protective of beneficial uses of the receiving waters. Based on compliance with these requirements designed to protect beneficial uses, cumulative water quality impacts would be mitigated to a level that is less than significant.

Table 4.22-37
Predicted Average Annual Combined Pollutant Concentrations for the Newhall Ranch Specific Plan, Legacy Village, Entrada, and Valencia Commerce Center Projects

Modeled Parameter	Units	Development Condition		Change
		Existing	Developed w/ PDFs	
Total Suspended Solids	mg/L	330	70	-260
Nitrate-N + Nitrite-N	mg/L	4.0	0.7	-3.3
Ammonia Nitrogen	mg/L	0.5	0.2	-0.3
Total Nitrogen	mg/L	6	2	-4

Total Phosphorus	mg/L	1.4	0.2	-1.2
Total Aluminum	ug/L	1580	590	-990
Dissolved Copper	ug/L	8	6	-2
Total Lead	ug/L	10	4	-6
Dissolved Zinc	ug/L	100	40	-60
Chloride	mg/L	22	19	-3

Source: Geosyntec, 2011.

Table 4.22-38
Comparison of Predicted Pollutant Concentrations for the Newhall Ranch Specific Plan, Entrada, Legacy Village, and Commerce Center Projects with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 5

Modeled Parameter	Units	Predicted Average Annual Concentration	TMDL/ LA Basin Plan Water Quality Objectives	California Toxics Rule Criteria[1]	Wasteload Allocations for MS4 Discharges into the Santa Clara River Reach 5	Range of Observed[2] Concentrations in Santa Clara River Reach 5
Total Suspended Solids	mg/L	70	Water shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.	NA	NA	32–51,200
Nitrate-N + Nitrite-N	mg/L	0.7	5	NA	6.8[3]	0.2–4.0
Ammonia-N	mg/L	0.2	2.0[4]	NA	1.75[4]	0.02–1.4
Total Nitrogen	mg/L	2	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.	NA	NA	0.6–10.4
Total Phosphorus	mg/L	0.2		NA	NA	0.18–1.8
Dissolved Copper	µg/L	6	NA	32	NA	3.3–22.6
Total Lead	µg/L	4	NA	260	NA	1.1–95
Dissolved Zinc	µg/L	40	NA	250	NA	3.0–37
Total Aluminum	µg/L	590	NA	750	NA	131–19,650
Chloride	mg/L	19	100	NA	100	2.6–290[5]

Modeled Parameter	Units	Predicted Average Annual Concentration	TMDL/ LA Basin Plan Water Quality Objectives	California Toxics Rule Criteria[1]	Wasteload Allocations for MS4 Discharges into the Santa Clara River Reach 5	Range of Observed[2] Concentrations in Santa Clara River Reach 5

Source: Geosyntec, 2010, 2011.

[1] *Hardness = 250 mg/L, based on minimum observed value at USGS Station 11108500. Lead criteria is for total recoverable lead. NAWQC aluminum criteria for pH 6.5 – 9.0.*

[2] *Range of concentrations observed in the Santa Clara River during wet weather (see Section 2.3.1 of* ***Appendix 4.22****).*

[3] *30-day average.*

[4] *30-day average in Reach 5 below Valencia.*

[5] *This value was observed in 1965.*

NA – not applicable

b. Groundwater Quality

As discussed above, the anticipated quality of runoff discharges from the project's developed areas and irrigation to groundwater would not contribute loads or concentrations of pollutants of concern that would be expected to cause or contribute to a violation of the groundwater quality standards. By extrapolating these results to existing and proposed development throughout the watershed, and based on a review of adapted plans and projections, it is concluded that no adverse cumulative effects would occur to groundwaters. Therefore, the project's incremental effects on groundwater quality are not expected to be significant.

The project's discharges to groundwater, after PDFs, both during construction and post-development would comply with adopted regulatory requirements that are designed by the RWQCB to assure that regional development does not adversely affect water quality, including the Project LID Performance Standard, MS4 Permit and SUSMP requirements; Construction General Permit requirements; General Dewatering Permit requirements; and benchmark Basin Plan groundwater quality objectives. Any future urban development occurring in the Santa Clara River watershed must also comply with these requirements. Therefore, cumulative impacts on groundwater quality from the proposed project and future urban development in the Santa Clara Watershed are addressed through compliance with the MS4 Permit and SUSMP requirements, Construction General Permit requirements, General Dewatering Permit requirements, and benchmark Basin Plan groundwater quality objectives, which are intended to be protective of beneficial uses of the groundwater. Based on compliance with these requirements designed to protect beneficial uses, cumulative groundwater quality impacts would be mitigated to a level that is less than significant.

c. Groundwater Recharge

Increased urbanization in the Santa Clarita Valley has resulted in the irrigation of previously undeveloped lands. The effect of irrigation is to maintain higher soil moisture levels during the summer than would exist if no irrigation were occurring. Consequently, a greater percentage of the fall/winter precipitation recharges groundwater beneath irrigated land parcels than beneath undeveloped land parcels. In addition, urbanization in the Santa Clarita Valley has occurred in part because of the importation of State Water Project (SWP) water, which began in 1980. SWP water use has increased steadily, reaching nearly 44,500 acre-feet (af) in 2003. Two-thirds of this water is used outdoors, and a portion of this water eventually infiltrates to groundwater. The other one-third is used indoors and is subsequently routed to local WRPs and then to the Santa Clara River (after treatment-unless recycled). A portion of this water flows downstream out of the basin, and a portion infiltrates to groundwater.

Records show that groundwater levels and the amount of groundwater in storage were similar in both the late 1990s and the early 1980s, despite a significant increase in the urbanized area during these two decades. This long-term stability of groundwater levels is attributed in part to the significant volume of natural recharge that occurs in the streambeds, which do not contain paved, urban land areas. On a long-term historical basis, groundwater pumping volumes have not increased due to urbanization, compared with pumping volumes during the 1950s and 1960s when water was used primarily for agriculture. Also, the importation of SWP water is another process that contributes to recharge in the Valley. In summary, urbanization has been accompanied by long-term stability in pumping and groundwater levels, plus the addition of imported SWP water to the Valley, which together have not reduced recharge to groundwater, nor depleted the amount of groundwater that is in storage within the Valley.

Based on the above discussion, the cumulative impact on groundwater recharge is considered less than significant.

d. Hydromodification

As identified in the MS4 Permit, the increased volume, increased velocity, and discharge duration of stormwater runoff from the cumulative existing and future developed areas in watersheds of natural drainages, including the Santa Clara River, has the potential to accelerate downstream erosion and impair stream habitat. Given the very large size of the Santa Clara River watershed, the contribution of the project to the cumulative hydromodification impacts to the Santa Clara River is difficult to assess quantitatively. Therefore, a qualitative assessment that references total predicted development per adopted General Plans and projections for the Santa Clara River watershed is provided below.

Effect of Watershed Impervious Area. The limited hydromodification impact research to date has focused on empirical evidence of channel failures in relationship to directly connected impervious area (DCIA) or total impervious area. However, more recent research has established the importance of the size of watershed, channel slope and materials, and climatic and precipitation patterns. (Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams. Technical Report 450. April 2005.) Impervious area that drains directly to a storm drain system and then to the receiving water is considered "directly connected," whereas impervious area that drains through vegetation or to infiltration facilities is considered "disconnected."

Booth and Jackson (1997) reported finding a correlation between loss of channel stability and increases in DCIA. In Washington State, streams displayed the onset of degradation when the DCIA increases to 10 percent or more. Even a lower imperviousness of 5 percent was found to cause significant degradation in sensitive watersheds. (Booth, D.B., and Jackson C.R. 1997 Urbanization of Aquatic Systems: Degradation Thresholds, Stormwater Detection, and the Limits of Mitigation. Journal of the American Water Resources Association, volume 33 (5), page 1077-1090.) The Center for Watershed Protection described the impacts of urbanization on stream channels and established thresholds based on total imperviousness within the tributary drainage area. It stated "a threshold for urban stream stability exists at about 10 percent imperviousness." It further stated that a "sharp threshold in habitat quality exists at approximately 10 percent to 15 percent imperviousness." These studies, however, addressed changes in a very different climatic region than Southern California.

Geosyntec's work in the San Francisco Bay area's Santa Clara Valley also evaluated the relationship between imperviousness and stream channel degradation in an area that had predominately directly connected impervious areas. (Geosyntec Consultants, 2004. Hydromodification Management Plan, Santa Clara Valley Urban Runoff Pollution Prevention Program.) Geosyntec found similar results to those published by Booth and Schuler, where channel erosion was observed at approximately 6 to 9 percent imperviousness for two separate watershed systems. More recent studies conducted by Geosyntec in this same watershed area showed that levels as low as 2 to 3 percent total imperviousness could lead to stream channel degradation, depending on channel characteristics. This region also has different climatic characteristics than Southern California.

Although physical degradation of stream channels in semi-arid climates of California may be detectable when watershed imperviousness is between 3 and 5 percent, not all streams would respond in the same manner. (SCCRWP, 2005b. Managing Runoff to Protect Natural Streams: The Latest Developments on Investigation and Management of Hydromodification in California. Technical Report 475. December 2005.) Management strategies need to account for differences in stream type, stage of channel adjustment,

current and expected amount of basin imperviousness, and existing or planned hydromodification control strategies.

The absolute measure of watershed imperviousness that could cause stream instability in the Santa Clara River depends on many factors, including watershed area, land cover, and soil type; development impervious area and connectedness; reduced sediment yield; longitudinal slope of the river; channel geometry; and local boundary materials, such as bed and bank material properties and vegetation characteristics. Based on land use data provided by the County of Los Angeles, the estimated cumulative level of percent impervious area at buildout in the Santa Clara River watershed upstream from the Specific Plan area is 9 percent.

Effect of Catchment Drainage Area. The SCCWRP found signs of hydromodification impacts in Southern California streams when watershed percent imperviousness was around 2 to 3 percent for streams with a catchment drainage area of less than 5 mi^2. (SCCWRP, 2005a. Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams. Technical Report 450. April 2005.) Recognizing that their findings were based on the type and size of catchments that were measured, the researchers in the SCCWRP study attempted to develop a framework by which their results could be extended to other stream types. They developed a classification system based on watershed characteristics, stream channel characteristics (including level of vegetative development), and stream channel resistance, and suggested these features could be important in selecting management strategies and approaches to control hydromodification impacts. The Level 1 classification is based on watershed characteristics that include the size, shape, and topography of the watershed.

The catchment drainage area (CDA) is stated to be the most obvious differentiator among watersheds, as this is likely to have the greatest effect on runoff. The SCCWRP study focused on small watershed (<5 mi^2); whereas, the CDA of the Santa Clara River at the Los Angeles County line, near the western edge of the Specific Plan area is about 640 mi^2. Based on the differences in CDA, the SCCWRP findings with respect to CDA would not be applicable to the Santa Clara River. Information in the SCCWRP report suggests that smaller watersheds are more responsive and sensitive to changes in land use, whereas larger watersheds (>30 mi^2) were said to be less responsive to land use changes. Geosyntec's work in the San Francisco Bay area, found significant hydromodification impacts on streams of watersheds that were 40 mi^2 in size; however, this is still substantially smaller than the Santa Clara River watershed at the Los Angeles County line. Given the large CDA for the Santa Clara River, the river is likely less responsive to potential hydromodification effects, but channel morphology must still be examined to determine the level and potential significance of Santa Clara River response.

Application to the Santa Clara River. Balance Hydrologics assessed the potential effects of the planned cumulative urbanization within the Santa Clara River upstream of the County line (the upper watershed) on channel morphology by examining historical changes in the Santa Clara River channel pattern in response to different types of major disturbance, using historical rainfall and other relevant records and aerial channel photography. (Balance Hydrologics, 2005. Assessment of Potential Impacts Resulting from Cumulative Hydromodification Effects, Selected Reaches of the Santa Clara River, Los Angeles County, California. Prepared by Balance Hydrologics, Inc., for Newhall Land, October 2005 [provided in Appendix E of the Water Quality Technical Report in **Appendix 4.22**]). The findings of this analysis are summarized below.

The Santa Clara River is a dynamic, episodic system. Understanding the magnitude of geomorphic change over the course of recent history in response to natural and human disturbances in the watershed is a key factor in assessing the potential response to future urbanization within the watershed.

For example, the construction of Castaic Dam in the 1974 (affecting approximately 30 percent of the Santa Clara River watershed above Castaic Creek) cut off a significant supply of sediment to the Santa Clara River. This change, however, does not appear to have had an effect on the channel dimensions of the Santa Clara River mainstem. The width of the active corridor as well, as the general form of the channel, are generally consistent before and after construction of the dam. It appears that the Santa Clara River had enough buffering capacity to absorb this change. The depletion of sediment supply to the mainstem, which would typically be expected to cause erosive effects, did not, in fact, result in those effects, perhaps because reductions in sediment were offset by additional available sediment stored in the basin in the upper watershed as a result of movement along the San Gabriel fault.

Similarly, the amount of vegetation within the Santa Clara River corridor appears to have generally increased since the 1960s, likely due to the increase in available summer flows due to the Valencia and Saugus WRPs' discharges. However, this vegetation does not seem to provide enough erosion resistance to maintain a "stable" channel capable of withstanding regular "re-sets," large events that completely alter the form of the Santa Clara River channel (which occur at intervals averaging about a decade), or much less than the expected lifetime of the riparian woodlands, which do get established. Despite heavy vegetation on the channel banks near the Specific Plan area and in areas of groundwater upwelling, the stream still responds to large events by a general widening and/or shift of the active channel within the River corridor.

After studying the response of the River to several different anthropogenic and natural disturbances, the report concluded that the Santa Clara River, as with many streams in semi-arid Southern California, is highly episodic. Concepts of "normal" or "average" sediment-supply and flow conditions have limited

value in this "flashy" environment, where episodic storm and wildfire events have enormous influence on sediment and storm flow conditions. In these streams, a large portion of the sediment movement events can occur in a matter of hours or days. Other perturbations that can potentially affect channel geometry appear to have transitory or minor manifestations. For example, effects on the channel width due to the 1980s levee construction were barely discernible by the first few years of the 21st century, probably mostly due to morphologic compensation associated with the storm events in the mid- to late 1990s. As a result, channel morphology, stability, and character of the Santa Clara River is almost entirely determined by the "re-set" events that occur within the watershed.

Fluvial Study. Additional study of the Santa Clara River has been performed by Pacific Advanced Civil Engineering, Inc., who prepared a comprehensive fluvial analysis for the Santa Clara River through the Specific Plan area for LACDPW. (PACE, 2006b. Newhall Ranch River Fluvial Study Phase I Final Draft, Prepared for Newhall Land by Pacific Advanced Civil Engineering, Inc. Fountain Valley, California). A river fluvial analysis is the study of the river bed and bank sediment movement over time and as a result of flow in the river and changes in the tributary watershed.

The fluvial analysis had three distinct components:

1. Analysis of long term trends of river bed and bank sediment build-up (aggre~~e~~adation) or removal (degradation) was performed. More than 80 years of available historic topographic mapping of the river indicated no real trend of aggre~~e~~adation or degradation in the study reach.

2. General (capital storm event) aggre~~e~~adation/degradation calculations were performed to determine the expected fluvial response of the river to the LACDPW design storm event (>140,000 cfs). USACE computer modeling software (SAM) was used to evaluate existing and proposed project conditions. Only minor variations in the fluvial response were shown in the modeling.

3. Local aggre~~e~~adation/degradation resulting from river curvature, existing and proposed bridges, river bed material, and various other components were considered and estimates of aggre~~e~~adation and degradation were calculated.

To complete the fluvial analysis, long term, general, and local aggre~~e~~adation/degradation components were added together to obtain the total aggre~~e~~adation/degradation for each river section within the study reach.

One of the purposes for the fluvial analysis, which has been approved by LACDPW, was to provide a level of understanding of the Santa Clara River Newhall Ranch reach fluvial mechanics near Newhall Ranch, as it relates to existing conditions and proposed Specific Plan development conditions, in order to identify any potential project impacts. The fluvial analysis showed very little change between the pre- and post-development conditions and, therefore, concluded that there is no potential adverse impact to the fluvial mechanics of the river.

As discussed above, the project would include a number of hydrologic source control PDFs that would substantially lessen any potential contribution to cumulative hydromodification impacts to the Santa Clara River. In addition, it is presumed that all future development within the Specific Plan, Legacy, and Entrada subregions would implement hydromodification controls consistent with the Newhall Ranch Specific Plan Sub-regional Stormwater Mitigation Plan. Further, other future projects within the watershed reflected in adopted plans and projections would implement hydromodification controls to meet flow criteria that would be adopted by the LACDPW under Part 4, Section D.1 of the MS4 Permit. These measures are designed to mitigate and prevent direct and cumulative hydromodification impacts.

Geomorphic Study. Within the Santa Clara River watershed, major perturbations (urbanization, dam construction, levee construction, decadal changes in climate, and increases in woody vegetation) do not appear to have had a significant impact on the geomorphic expression of the Santa Clara River. Large "re-set" events (those which are typically not affected by increases in impervious area) have episodically completely altered the form of the Santa Clara River channel. These events, occurring on average once every 10 years, are a dominant force in defining channel characteristics. The geomorphic dominance of re-set events determines the geomorphic character of the Santa Clara River, and the Santa Clara River's response to anthropogenic perturbations, including hydromodification impacts associated with development, is expected to be minimal in light of the re-set-driven nature of the Santa Clara River channel. Due to these episodic re-sets, "unraveling" of the Santa Clara River mainstem due to hydromodification associated with cumulative urban development within the watershed, as is seen in many smaller Southern California watersheds, is not expected to occur. The re-set events appear to adequately buffer changes that may occur in short-term sediment transport between re-set events.

Conclusion. Based upon the above discussion, concluding that the project includes hydromodification controls as PDFs, that future development projects within the watershed would control flow in compliance with the regional program, and that large-scale changes naturally occur in the Santa Clara River in response to major episodic events, the project's contribution to cumulative hydromodification impacts to the Santa Clara River would be less than significant and consistent with the requirements of the MS4 permit.

10. CUMULATIVE MITIGATION MEASURES

Because cumulative development would be subject to the same or similar required mitigation measures as the proposed project, no additional cumulative mitigation measures are proposed or required.

11. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

With the incorporation of source and treatment controls into the project design, and implementation of the Newhall Ranch Specific Plan Program EIR and Mission Village-specific mitigation measures, no significant unavoidable impacts would occur with respect to water quality.

b. Cumulative Impacts

No significant unavoidable cumulative impacts have been identified or are anticipated for the proposed project, as it relates to water quality.

1. SUMMARY

The entire project site occupies 1,854.5 acres, including the 1,261.8-acre Mission Village tract map site and an additional 592.8 acres of off-site land primarily within the boundaries of the approved Specific Plan. The project site includes 277.9 acres of riparian vegetation, including 111.8 acres of riparian woodland (southern willow scrub, shrub tamarisk, and southern cottonwood-willow riparian) and 166.1 acres of other riparian vegetation communities. The project site includes 1,576.8 acres of upland vegetation communities and land covers, of which 1,430.4 acres occur outside the 100-year floodplain of the Santa Clara River. The project site includes 1.5 miles of the Santa Clara River mainstem; this represents 1.7 percent of the overall Santa Clara River mainstem (86 miles). The total Mission Village project area, inclusive of infrastructure improvements, includes approximately 5 miles of the Santa Clara River mainstem (6 percent of overall). The Mission Village project, including the necessary off-site project components, would result in the permanent conversion of, or temporary disturbance to, 1,493.1 acres of the following:

- *413.4 acres of California sagebrush scrub*
- *16.1 acres of California sagebrush scrub–Artemisia*
- *12.9 acres of California sagebrush scrub–black sage*
- *83.2 acres of California sagebrush scrub–California buckwheat*
- *13.9 acres of California sagebrush scrub–undifferentiated chaparral*
- *127.0 acres of California sagebrush scrub–purple sage*
- *0.1 acre of disturbed California sagebrush scrub*
- *394.3 acres of disturbed lands*
- *219.9 acres of land currently used for agricultural purposes*
- *8.0 acres of developed land*
- *19.7 acres of river wash*
- *28.8 acres of southern cottonwood-willow riparian forest*
- *66.1 acres of California annual grassland*
- *34.3 acres of undifferentiated chaparral*
- *7.8 acres of coast live oak woodland*
- *22.3 acres of big sagebrush scrub*
- *0.7 acre of southern willow scrub*
- *6.9 acres of arrow weed scrub*
- *5.6 acres of Mexican elderberry scrub*
- *2.6 acres chamise chaparral*
- *1.8 acres of chamise–hoaryleaf ceanothus chaparral*
- *1.9 acres of valley oak/grass*
- *1.6 acres of herbaceous wetlands*
- *1.8 acres of mulefat scrub*
- *1.1 acre of disturbed mulefat scrub*
- *0.6 acre of eriodictyon scrub*
- *0.1 acre of giant reed grassland*
- *0.5 acre of alluvial scrub.*

Development of the proposed project would preclude landscape level or regional wildlife movement between the Santa Clara River and undeveloped lands to the south. Dead-End Canyon, Middle Canyon, and Magic Mountain Canyon would be developed and eliminated as potential wildlife movement corridors. Lion Canyon and portions of

Exxon Canyon would not be developed, but would become dead-ends and preclude movement between large habitat areas. Although the Mission Village portion of the Specific Plan area would be developed and affect local wildlife movement, regional habitat connectivity would be maintained. The conceptual regional open space plan developed by Penrod et al.,[1] *provides for landscape-scale habitat connectivity between the Santa Susana Mountains to the south and the Los Padres National Forest to the north encompasses the High Country SMA/SEA 20 and the Salt Creek area and the Santa Clara River west of Mission Village. The High Country SMA/SEA 20 and Salt Creek area comprise an important part of the "least cost (best potential route) path" linkage design identified by Penrod et al.*[2] *They provide a key part of the east–west linkage that crosses I-5 and connects with the Angeles National Forest in the San Gabriel Mountains to the east and with Ventura County SOAR open space to the southwest. They also provide a significant part of the north–south linkage between the Santa Susana Mountains and the "Fillmore Greenbelt" to the northwest that further links up with the Los Padres National Forest and the Angeles National Forest to the north.*

In approving the Specific Plan and Conditional Use Permit No. 94-087-(5), the Board of Supervisors found that the Specific Plan contained sufficient natural vegetative cover and open space to buffer critical resources in the River Corridor SMA/SEA 23 from the development shown in the Specific Plan. The Board of Supervisors further found that the Specific Plan incorporated extensive buffer areas to protect critical resources within the Santa Clara River. The Specific Plan's adopted Resource Management Plan requires a minimum 100-foot-wide setback adjacent to the Santa Clara River between ~~(a)~~ the river side of the top of bank stabilization and ~~(b)~~ development within certain specified land use designations (including those of the Mission Village project site). This requirement may be modified if the Planning Director, in consultation with the County staff biologist, determines that a smaller buffer would adequately protect the riparian resources within the River Corridor SMA/SEA 23, or that a 100-foot-wide setback is infeasible for physical infrastructure planning. Again, these buffer criteria are consistent with the Buffer Study[3] *and CDFG recommendations described below in* ***~~subsection~~Subsection 9(b)(1)(b)(2)(c)****.*

Significant impacts associated with the Specific Plan would occur with respect to the loss of mulefat scrub, coast live oak woodland, coastal sage scrub, Mexican elderberry scrub, southern willow scrub, southern cottonwood willow riparian forest, great basin scrub, scalebroom scrub, valley freshwater marsh, wildlife habitat, special-status bird nests, special-status plant species, protected oaks, special-status wildlife species, and California Department of Fish and Game (CDFG) and U.S. Army Corps of Engineers (Corps) jurisdictional resources. Significant indirect

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1 K. Penrod et al., *South Coast Missing Linkages Projec: A Linkage Design for the Santa Monica-Sierra Madre Connection (*Idyllwild, California: South Coast Wildlands, in cooperation with the National Park Service, Santa Monica Mountains Conservancy, California State Parks, and The Nature Conservancy, 2006).

2 Ibid.

3 Impact Sciences, *North Valencia Annexation Buffer Study,* prepared for Newhall Land and Farming Company. April 28, 1997.

impacts would occur with respect to increased light and glare, increased non-native plant species, and increased human and domestic animal presence.

The direct and indirect impacts associated with development and operation of the Mission Village project are consistent with the findings of the Newhall Ranch Specific Plan Program EIR (March 1999)[4] *and Revised Additional Analysis (May 2003).*[5] *Implementation of the mitigation measures required by the Newhall Ranch Specific Plan Program EIR and the Specific Plan Resource Management Plan (RMP), as well as the additional mitigation measures required by this EIR, would mitigate project-specific impacts to less than significant levels. Due to the incorporation of additional mitigation measures required by this EIR, those project-level significant unavoidable impacts identified in the Newhall Ranch Specific Plan Program EIR (i.e., loss of sensitive animal species, coastal sage scrub, and wildlife habitat, and the increase in human and domestic animal presence) would be mitigated to less than significant. The proposed Mission Village project would contribute toward the cumulative impacts to biological resources. These impacts, however, can be reduced to less than significant levels through mitigation. ~~The Mission Village project would contribute to a significant unavoidable cumulative impact related to regional impacts to coastal scrub and San Fernando Valley spineflower individuals.~~*

The Mission Village Biological Resources Technical report was reviewed by the Significant Environmental Area Technical Advisory Committee (SEATAC) on three separate occasions: January 29, 2007, September 10, 2007, and April 7, 2008. This EIR section reflects comments received from the SEATAC.

2. INTRODUCTION

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

Section 4.6 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with biological resources for the entire Newhall Ranch Specific Plan. Subsequent to certification of the Newhall Ranch Specific Plan Program EIR, a more detailed review was conducted of the Specific Plan's biological effects caused by changes to the hydrology and hydraulics of the Santa Clara River in the Newhall Ranch Revised Additional Analysis (2003),[6] Section 2.3, Floodplain Modifications. The Revised Additional Analysis (Sections 2.2 and 2.4) also examined in greater depth the Salt Creek Corridor and Specific Plan consistency against Los Angeles County (County) General Plan policies pertaining to Significant Ecological Areas (SEA).

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4 County of Los Angeles, *Environmental Impact Report (EIR) for the Newhall Ranch Specific Plan and Water Reclamation Plant* (1999).

5 Impact Sciences, Inc., Revised Additional Analysis to the Newhall Ranch Specific Plan and Water Reclamation Plant Final Program EIR, Volume VIII (2003).

6 Impact Sciences, Inc., *Revised Additional Analysis*.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. Section 4.3 assesses the Mission Village project's existing biological conditions, the project's potential environmental impacts on biological resources, and the biology mitigation measures from the Newhall Ranch Specific Plan Program EIR, and additional mitigation measures recommended by this EIR for the Mission Village project.

All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan and the County of Los Angeles General Plan and Santa Clarita Valley Areawide Plan.

b. Newhall Ranch Specific Plan

The approved Newhall Ranch Specific Plan guides future development of the Newhall Ranch community, located in northern Los Angeles County. The Santa Clara River and SR-126 traverse the northern portion of the Specific Plan area. The river extends approximately 5.5 miles east to west across the Specific Plan site. On May 27, 2003, the Los Angeles County Board of Supervisors approved the Specific Plan, which established the general plan, zoning designations, and development standards necessary to develop the Specific Plan site. The approved Specific Plan sets forth a comprehensive set of plans, development regulations, design guidelines, and implementation programs to develop the Specific Plan site, consistent with the goals, objectives, and policies of the Los Angeles County General Plan and Santa Clarita Valley Area Plan, as amended by General Plan Amendment No. 94-087-(5) (approved May 27, 2003). The Specific Plan was designed so that all subsequent development plans and subdivision maps associated with Newhall Ranch would be consistent with both the Los Angeles County General Plan and Santa Clarita Valley Area Plan. The Specific Plan also includes the Newhall Ranch Water Reclamation Plan (WRP) at the western edge of the Specific Plan area. Individual projects, such as residential, mixed-use, commercial, non-residential developments, roadways, public facilities, and amenities, would be developed over time in accordance with the approved Specific Plan. Many of these individual development projects would require work in and adjacent to the Santa Clara River and its tributaries. The first such project to be processed through the County under the approved Specific Plan is the Landmark Village project, with Mission Village being the second.

Environmental review for both the Specific Plan and the WRP was conducted by Los Angeles County, pursuant to the California Environmental Quality Act (CEQA). In the environmental documentation, the Specific Plan was evaluated at a "program" level, and the Newhall Ranch WRP was analyzed at a "project" level. The County Board of Supervisors certified the adequacy of the Newhall Ranch Specific Plan Program EIR on May 27, 2003. After certification, the Board of Supervisors adopted the required resolution, findings, and conditions approving the Specific Plan, WRP, and other associated local project approvals.

The approved Specific Plan (May 2003) authorizes a broad range of residential (and associated school sites, parks, and other facilities), mixed-use development (*e.g.*, commercial, residential, office), and non-residential development (*e.g.*, commercial, business park, visitor-serving, community facilities, including fire stations, library, WRP), and arterial roads, bridges, and other infrastructure, facilities, and amenities. The Specific Plan's total number of permitted residential dwelling units (20,885) would be constructed on approximately 2,391 acres. The Specific Plan

also permits about 67 acres of commercial uses; approximately 249 acres of business park uses; 36.7 acres of High Country Special Management Area (SMA) Visitor-Serving Uses; approximately 1,010 acres of Open Area; approximately 5,180 acres of SMA/Open Space; 10 neighborhood parks; recreational lake; public trail system; golf course; fire stations; public library; electrical substation; reservation of elementary school sites, junior high school site, and a high school site; a 6.8 mgd WRP; and other associated community facilities and amenities. Buildout of the Specific Plan is projected to occur over approximately 20 years, depending upon economic and market conditions.

(1) Specific Plan's Existing Setting

The Specific Plan area is topographically diverse with slope gradients ranging from moderate to steep in the hillsides, to very gentle in the Santa Clara River floodplain and in major tributary canyons. Also, there are mesas adjacent to the Santa Clara River (*e.g.*, Grapevine Mesa and Airport Mesa). Site elevations range from 825 feet above mean sea level (AMSL) in the Santa Clara River bottom at the Ventura County/Los Angeles County line, to approximately 3,200 feet AMSL on the ridgeline of the Santa Susana Mountains along the southern boundary. The primary ridges are east-, west-, and northwest-trending, with secondary ridges trending north and south. There are many distinctive ridges in the Specific Plan area, including Sawtooth Ridge along the northeastern side of Long Canyon, and Ayers Rock at the northern edge of Potrero Canyon.

Native and naturalized habitats within the Specific Plan area are representative of those found in this region and provide high-quality examples of those plant communities found in the Santa Susana Mountains and the Santa Clara River ecosystems. Upland habitats dominate the landscape within the Specific Plan area, both north and south of the Santa Clara River. The major upland plant communities include California sagebrush scrub, undifferentiated chaparral, coast live oak and valley oak woodlands, and California annual grassland. However, the Specific Plan site also contains valley oak/grass, mixed oak woodland, chamise chaparral, California walnut woodland, and big sagebrush scrub. The Santa Clara River supports a variety of riparian plant communities, including southern cottonwood-willow riparian forest, southern willow scrub, southern coast live oak riparian forest, mulefat scrub, elderberry scrub, arrow weed scrub, giant reed, tamarisk scrub, herbaceous wetland, bulrush/cattail wetland, cismontane alkali marsh, and coastal and valley freshwater marsh and seeps. Intermittent and ephemeral drainages on site also provide habitat for alluvial scrubs.

The ~~riparian~~ habitat along the Santa Clara River has been designated as critical habitat by the USFWS for the state- and federally-listed endangered least Bell's vireo (*Vireo bellii pusillus*) and the federally listed endangered arroyo toad (*Anaxyrus (Bufo) californicus*). The River also provides habitat for the state- and federally listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*). The River itself supports the state- and federally listed endangered and state fully protected unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*).

There are two SEAs within the boundary of the approved Specific Plan: (1) the High Country SMA/SEA 20, which is comprised of diverse oak woodland habitats that function as a wildlife corridor/linkage between the San Gabriel

and Santa Monica Mountains; and (2) the River Corridor SMA/SEA 23, which is comprised of aquatic habitat within the Santa Clara River corridor that supports the endangered unarmored threespine stickleback and other listed and sensitive species.

The applicant leases portions of the Specific Plan area for oil and natural gas production, as well as for cattle grazing, ranching, and agricultural operations (*e.g*., food crop production, dry land farming, honey farming). All such operations are currently ongoing. In addition, the applicant leases the Specific Plan site to the movie industry for set locations. A minor land use includes employee houses, an oil company office, and miscellaneous structures. There are several easements on the Specific Plan site, including oil, natural gas, electrical, telephone, and water easements. In particular, Southern California Edison and Southern California Gas Company maintain distribution lines within on-site easements.

Grazing activities and oil and natural gas production have had an effect on much of the natural habitat on site. Scrub habitats have been displaced by annual grasslands as a result of grazing and land clearing for agriculture and other historic land uses. In addition, the Specific Plan site has been fragmented by dirt and asphalt roads, graded oil well pads and pipelines, and pumping, storage, and transmission facilities. **Figure 2.0-1** depicts the existing and ongoing agricultural, grazing, and oil leasing activities within the project area. Existing cultivated agricultural fields comprise approximately 1,965 acres; oil field leasing and other related disturbed areas comprise about 1,209 acres; and grazing areas comprise approximately 11,048 acres.

(2) Specific Plan's Approved Land Use Plan

The approved Newhall Ranch Specific Plan Land Use Plan in the vicinity of the Mission Village project site is shown on **Figure 2.0-4**, and it provides the framework for the approved development within the Specific Plan site. The approved Land Use Plan describes the land use designations that include Residential (five types), Mixed-Use, Commercial, Business Park, Visitor-Serving, Open Area, the two River Corridor and High Country SMAs, and a Spineflower Conservation Overlay Easement area, all linked by a comprehensive system of roadways, trails, and paseos. Land use overlays are included on the approved Land Use Plan to show approximate locations of public facilities such as parks, schools, library, golf course, fire stations, and the WRP. This information is summarized below. Additional information regarding the Specific Plan's approved Land Use Plan is found in Section 2.3 of the approved Specific Plan (May 2003).

(3) High Country SMA/SEA 20 and River Corridor SMA/SEA 23

The largest land use designation of the Newhall Ranch Specific Plan Land Use Plan (**Figure 2.0-4**) is the approximate 4,205-acre High Country SMA/SEA 20. The High Country SMA/SEA 20 is located in the southern portion of the Specific Plan site and includes oak savannahs, high ridgelines, and various canyon drainages, including the Salt Creek watershed in Los Angeles County. Salt Creek is a regionally significant wildlife corridor that provides an important habitat link to the Santa Clara River. The Santa Clara River is an important east-west

riparian corridor within the Specific Plan site. This corridor also serves as an important connection between the upland habitats to the north and south of the River. Specifically, large expanses of undeveloped land (*i.e.*, Salt Creek in Los Angeles County) allow for the movement of wildlife to the River and back. Salt Creek also provides wildlife movement connectivity between the River Corridor SMA/SEA 23 and the High Country SMA/SEA 20.

The Specific Plan's previously adopted Resource Management Plan requires the High Country SMA/SEA 20 to be dedicated in fee to a *joint powers authority* (JPA) consisting of representatives from the Los Angeles County (four members), the City of Santa Clarita (two members), and the Santa Monica Mountains Conservancy (two members). The JPA would have overall responsibility for recreation within and conservation of the High Country SMA/SEA 20. The Center for Natural Lands Management would be responsible for resource conservation and management in the High Country SMA/SEA 20. An assessment district would be formed under the authority of the Los Angeles County Board of Supervisors to generate revenue to be distributed to the JPA for recreation, maintenance, construction, conservation, and related activities within the High Country SMA/SEA 20.

Prior to dedication in fee of the High Country SMA/SEA 20, the Specific Plan requires that a conservation and public access easement be offered to the County of Los Angeles and that a conservation and management easement be offered to the Center for Natural Lands Management. The Specific Plan also requires that the County's conservation and public access easement be consistent with any other conservation easements to state or federal resource agencies, which may have been granted as part of the mitigation actions required by state and federal permits. In addition, the conservation and public access easement is to prohibit grazing within the High County SMA/SEA 20, except for those grazing activities associated with long-term resource management plans; and restrict recreation to the established trail system.

Pursuant to the Specific Plan, the High Country SMA/SEA 20's dedication in fee is to occur in three approximately equal phases of about 1,400 acres each, proceeding from north to south within the Specific Plan site, as follows: (a) the first offer of dedication would take place with issuance of the 2,000th residential building permit of the Specific Plan; (b) the second offer of dedication would take place with issuance of the 6,000th residential building permit; and (c) the remaining offer of dedication would be completed by the 11,000th residential building permit.

(4) Salt Creek Dedication and Management Area

As part of its approval of the Specific Plan in 2003, the Los Angeles County Board of Supervisors imposed an off-site condition which required that the applicant dedicate to the public the 1,517-acre (approximately) portion of the Salt Creek Watershed in Ventura County, adjacent to the western boundary of the Specific Plan site. Figure 4.3-1, Protected and Preserved Lands, depicts the off-site sal creek area in relation to the Newhall Ranch Specific Plan. The applicant must satisfy this condition by dedicating the Salt Creek area in fee and/or by conservation easement to the JPA, which is responsible for overall recreation and conservation of the High Country SMA/SEA 20. The Salt Creek Area is to be managed in conjunction with and in the same manner as the High Country SMA/SEA 20.

Protection of the Salt Creek Area in both Los Angeles County and Ventura County enhances the Specific Plan's compatibility with animal movement in the region.

The Specific Plan's previously approved Resource Management Plan identified the High Country SMA/SEA 20 as a primary location for mitigating impacts that would occur within the development areas of the Specific Plan. The Salt Creek area provides similar mitigation opportunities. Both the High Country SMA/SEA 20 and the Salt Creek area provide mitigation opportunities for oak resources, slender mariposa lily, coastal sage scrub, and wetland creation, restoration, and enhancement, and other sensitive biological resources.[7]

[7] For further information regarding mitigation opportunities for slender mariposa lily, coastal sage scrub, oak tree/woodland, and wetlands creation/restoration/enhancement within the High Country SMA/SEA 20, please refer to the Biological Resources Technical Report for the Newhall Ranch High Country Special Management Area and Salt Creek Area (Dudek, October 2006), a copy of which is located in **Appendix 4.5** of the 2009 Draft Environmental Impact Statement/Environmental Impact Report EIS/EIR.

SOURCE: Newhall Ranch 2008; Impact Sciences Inc. 2009

FIGURE 4.3-1

Mission Village EIR

DUDEK

Protected and Preserved Lands

The Newhall Ranch Specific Plan will not significantly affect wildlife movement in the Salt Creek corridor. Wildlife movement within the Salt Creek watershed occurs primarily along the general direction of the drainages between the Santa Susana Mountains and the Santa Clara River Valley. These routes are used because they follow the gentlest topography and more open habitat. Wildlife movement between watersheds to the east and west are easiest at the upper and lower ends of the watersheds. At the lower ends, canyons merge in the Santa Clara River Valley and are generally flat with less steep ridges. At the upper ends of the watersheds, the ridgeline of the Santa Susana Mountains provides less steep connections to the upper reaches of the canyons and adjacent watersheds.

As part of the original approval of the Newhall Ranch Specific Plan, the Board of Supervisors established a 0.5-mile-wide buffer south of the Santa Clara River and a 0.125-mile buffer north of the river between all development proposed as part of the Specific Plan and the Los Angeles County/Ventura County jurisdictional line. Habitat loss in the Potrero Creek watershed would potentially cause a shift in some wildlife populations to undisturbed habitats in the Salt Creek watershed in both Los Angeles County and Ventura County. Habitat losses in the Potrero Creek watershed also would potentially affect the long-term movement of wildlife within this watershed and within the Salt Creek watershed in both Ventura County and Los Angeles County. However, no direct impacts to that portion of the Salt Creek watershed in Ventura County would occur in association with the Specific Plan because no development is proposed in the Ventura County portion of the Salt Creek corridor, and because all development proposed as part of the Specific Plan would occur no closer than 0.5 mile from Ventura County.

Note that buildout of the Specific Plan will occur over an approximate 20-year period. Consequently, the displacement of wildlife species, primarily larger mammals, would occur incrementally over an extended period. These larger wildlife species (*e.g.*, mountain lion, deer, bobcat, and coyote) generally have home ranges that are not confined to one watershed, and would be expected to be displaced in relatively small numbers. In contrast, the smaller wildlife species will more likely suffer from direct mortality because of land development, and would not be displaced into adjacent watersheds. This time factor allows for a very gradual shift (*i.e.*, over a period of decades) of wildlife use/movement for those animals able to move a distance of more than 0.5 mile from the Specific Plan area in Los Angeles County to adjacent undeveloped areas, including the Salt Creek watershed in Ventura County. These very gradual (and temporary) increases in wildlife use/movement in the Salt Creek watershed in both Los Angeles County and Ventura County would be easier to absorb over several years (*i.e.*, the animals would have more time to adapt to the available resources or would have time to move out of the Salt Creek watershed to adjacent watersheds). Therefore, the direct impacts of habitat loss in the Specific Plan area on wildlife movement within the Salt Creek watershed, and particularly the Ventura County portion given its distance away from proposed development, are not considered significant. Nevertheless, the Board of Supervisors imposed a condition requiring the applicant to enhance and increase the effectiveness of animal movement protections within the Salt Creek wildlife corridor.

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

The approved Newhall Ranch Specific Plan would develop approximately 5,793 acres of the 11,963-acre Specific Plan site (or 49 percent of the site), and would preserve as undeveloped land a total of approximately 6,170 acres (or 51 percent of the site). In addition, a condition of approval requires the applicant to dedicate to the public 1,517 acres of off-site land in the remaining Salt Creek watershed in Ventura County, adjacent to the Specific Plan site. This land is also required to be managed in conjunction with and in the same manner as the High Country Special Management Area (SMA)/Significant Ecological Area (SEA) 20. Portions of proposed development within the Specific Plan area would occur in sensitive upland and riparian habitats. Therefore, the Specific Plan was determined to have significant impacts on the biological resources located on the site. Implementation of measures contained in the Specific Plan RMP and those measures contained in the Newhall Ranch certified environmental documentation would reduce some, but not all, Specific Plan impacts to special-status plant and wildlife species, riparian, wetland and aquatic resources (located along the river corridor) to below California Environmental Quality Act (CEQA) thresholds of significance. While mitigation is also provided to reduce the magnitude of impacts to upland resources, certain of these impacts were also expected to remain significant. Also, despite the preservation of the major wildlife corridor along the Santa Clara River, the Specific Plan would significantly impact the ability of some animals to move across portions of the Specific Plan area. Table 4.3-1, Significant Biological Impacts – Newhall Ranch Specific Plan and WRP, summarizes the Specific Plan's impacts on biological resources, the applicable mitigation measures, and the significance findings after the mitigation is implemented.

Table 4.3-1
Significant Biological Impacts—Newhall Ranch Specific Plan and WRP

Impact Description	Mitigation Measures	Conclusion After Mitigation
General Wildlife Impacts–Based on the amount of habitat lost (5,132 acres), the impact potential of implementation of the Newhall Ranch Specific Plan on the diminishment of habitat for wildlife or plants is considered significant.	See measures listed below for impacts to sensitive animal species.	Significant
The impact potential of implementation of the Newhall Ranch Specific Plan on the movement of resident wildlife species is considered significant due to the reduction in open land available for wildlife movement between the river and upland areas.	See measures listed below for impacts to sensitive animal species and habitats.	Significant
Loss of Habitat–As approved, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and 1,480 of the 1,896 acres of non-native grassland habitat present on the site (when combined, 42 percent of these vegetation types would be lost). Given the concern for this species (coast horned lizard) in the region, the substantial loss of habitat, and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation.	See measures listed below for impacts to sensitive animal species and habitats.	Significant

Table 4.3-1 (Continued)
Significant Biological Impacts—Newhall Ranch Specific Plan and WRP

Impact Description	Mitigation Measures	Conclusion After Mitigation
It is acknowledged that any loss of plant species listed as Rare, Threatened, or Endangered is considered a significant impact. Those include the following:		
Slender-horned spineflower (significant if present)	Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53	Not Significant
California Orcutt grass	Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53	Not Significant
Lyon's pentachaeta	Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53	Not Significant
Nevin's barberry	Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53	Not Significant
Thread-leaved brodiaea	Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53	Not Significant
Santa Susana tarplant	Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53	Not Significant
Braunton's milk vetch	Mitigation Measures 4.6-27, 4.6-34, 4.6-35, and 4.6-53	Not Significant
San Fernando Valley spineflower (significant in Additional Analysis)	Mitigation Measures 4.6-53, 59, and 65–80	Not Significant
Short-joint beavertail cactus (significant in Additional Analysis)[a]	Mitigation Measures 4.6-27, 34, 35, 53, and 59	Not Significant
Calochortus (potentially significant in Additional Analysis depending upon actual species present)	Mitigation Measures 4.6-27, 34, 35, 53, and 59	Not Significant
Dudleya (potentially significant depending upon actual species present)[a]	Mitigation Measures 4.6-27, 34, 35, 53, and 59	Not Significant
Based on this analysis of indirect impacts to spineflower and other sensitive plants, seven indirect impacts/edge effects are considered significant in connection with the proposed development of Newhall Ranch.	Mitigation Measures 4.6-53, 4.6-59, and 4.6-65–80	Not Significant
Project construction and operation may have potential significant impacts on a number of sensitive animal species through loss of habitat and/or decrease in water quality if impacts are unmitigated. Species include the following:		
Santa Ana sucker	Mitigation Measures 4.6-44, 4.6-53, 4.6-55, 4.6-57, and 4.6-58	Not Significant
Unarmored threespine stickleback	Mitigation Measures 4.6-53, 4.6-54, 4.6-55, 4.6-57, 4.6-58, and 4.6-59	Not Significant
Arroyo chub	Mitigation Measures 4.6-44, 4.6-53, 4.6-55, 4.6-57, and 4.6-58	Not Significant
Arroyo southwestern toad	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Western spadefoot toad	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-56, and 4.6-55	Not Significant
Silvery legless lizard	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Southwestern pond turtle	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-56, and 4.6-55	Not Significant
Coastal rosy boa	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
San Bernardino ringneck snake	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Two-striped garter snake	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-56, and 4.6-55	Not Significant
California horned lizard	Mitigation Measures 4.6-27–4.6-43, 4.6-53, 4.6-56, and 4.6-55	Significant
San Diego horned lizard	Mitigation Measures 4.6-27–4.6-43, 4.6-53, 4.6-56, and 4.6-55	Significant

Table 4.3-1 (Continued)
Significant Biological Impacts—Newhall Ranch Specific Plan and WRP

Impact Description	Mitigation Measures	Conclusion After Mitigation
Coast patch-nosed snake	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Least Bell's vireo	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-56, and 4.6-59	Not Significant
Southwestern willow flycatcher	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-56, and 4.6-59	Not Significant
Northern harrier	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Cooper's hawk	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Vermilion flycatcher	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Yellow warbler	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Summer tanager	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Southern California rufous-crowned sparrow	Mitigation Measures 4.6-27–4.6-43, 4.6-53, 4.6-56, and 4.6-55	Significant
Tricolored blackbird	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-56, and 4.6-55	Significant
Great blue heron	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Great egret	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Snowy egret	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55 and 4.6-56	Not Significant
Black-crowned night heron	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
White-tailed kite	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Swainson's hawk	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Mountain plover	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Western least bittern	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Fulvous whistling duck	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Bell's sage sparrow	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Ferruginous hawk	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Western burrowing owl	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Sharp-shinned hawk	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Golden eagle	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
Pallid bat	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Pocketed free-tailed bat	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Pale Townsend's big-eared bat	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant

Table 4.3-1 (Continued)
Significant Biological Impacts—Newhall Ranch Specific Plan and WRP

Impact Description	Mitigation Measures	Conclusion After Mitigation
Greater western mastiff bat	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Mountain lion	Mitigation Measures 4.6-27–4.6-43, and 4.6-53	Significant
San Diego black-tailed jackrabbit	Mitigation Measures 4.6-27–4.6-43, 4.6-53, 4.6-56, and 4.6-55	Significant
San Diego desert woodrat	Mitigation Measures 4.6-27–4.6-43, 4.6-53, 4.6-56, and 4.6-55	Significant
Yuma myotis	Mitigation Measures 4.6-1–4.6-26, 4.6-53, 4.6-55, and 4.6-56	Not Significant
Development of the Specific Plan would result in impacts to sensitive habitats including the following:		
Coast Live Oak Woodland	Mitigation Measures 4.6-28 and 4.6-48	Significant
Coastal sage scrub	Mitigation Measures 4.6-27–4.6-43	Significant
Valley oak woodland/savanna	Mitigation Measures 4.6-27–4.6-43	Significant
Elderberry scrub	Mitigation Measures 4.6-27–4.6-43, and 4.6-60	Not Significant
Mainland cherry forest	Mitigation Measures 4.6-27–4.6-43, and 4.6-61	Not Significant
Southern willow scrub	Mitigation Measures 4.6-1–4.6-26	Not Significant
Southern cottonwood-willow riparian forest and southern willow riparian woodland	Mitigation Measures 4.6-1–4.6-26	Not Significant
Valley freshwater marsh and ponds	Mitigation Measures 4.6-1–4.6-26	Not Significant
Wetlands	Mitigation Measures 4.6-1–4.6-26	Not Significant
SEA 20–High Country	Mitigation Measures 4.6-1–26	Not Significant
SEA 23–River Corridor	Mitigation Measures 4.6-26a–52	Not Significant
Indirect Impacts–Implementation of the Newhall Ranch Specific Plan has the potential to indirectly impact adjacent natural areas and sensitive biological resources that occur proximal to the site. This would occur as a result of increased use of the Santa Clara River and upland areas by humans and domestic animals, increased use of adjacent natural areas by animals typical of an urban environment, and the potential effects of light, glare, sediment, and urban pollutant runoff, unless mitigated.	Mitigation Measures 4.6-18, 4.6-19 and 4.6-56	Significant
Cumulative Biological Impacts	None Proposed/Required	Significant

Note:
[a] It has since been determined that no sensitive Dudleya species are known to occur on the Newhall Ranch Specific Plan site.
Source:
Biota Report for the Newhall Ranch Specific Plan (July 1996), Newhall Ranch Specific Plan Program EIR (March 1999), and Revised Additional Analysis (May 2003).[8]

Based on the Newhall Ranch Specific Plan Program EIR and record, the County's Board of Supervisors found that the Specific Plan would result in impacts (as identified in **Table 4.3-1**, above) that would be unavoidably significant

[8] Los Angeles County Department of Regional Planning, *Biota Report, Newhall Ranch Specific Plan* (1996); County of Los Angeles, *EIR for the Newhall Ranch Specific Plan*; Impact Sciences, Inc., *Revised Additional Analysis*.

even with implementation of all identified feasible mitigation measures. Consistent with Section 15093 of the *State CEQA Guidelines*, the Board of Supervisors found that the Specific Plan offered overriding economic, legal, social, public benefits that outweighed the identified significant unavoidable impacts and made them acceptable.

4. EXISTING CONDITIONS

a. General Project Site Characteristics

The Mission Village project site is located on the Val Verde and Newhall 7.5-minute USGS quadrangle maps (**Figure 4.3-2, Project Vicinity Map**), and is in northwestern Los Angeles County, approximately 30 miles northwest of downtown Los Angeles. The project site is largely undeveloped except for roads and pads associated with past oil well drilling operations, cattle grazing, and other agricultural activities. Slopes range from gentle in the mesa and canyon floor areas to very steep along the Santa Clara River bluffs and sandstone bedrock outcrops. The site topography is dominated by the north-trending Lion Canyon on the western margin of the site and the Magic Mountain Canyon on the eastern margin of the site. Located mid-site are Middle Canyon and Dead End Canyon. These canyons drain northward into the Santa Clara River which is located in the northern portion of the project site. Elevated flat lands are present on the northern portion of the site in the vicinity of Airport Mesa and Exxon Mesa. Below the elevated flat lands are old, uplifted stream and fan deposits. Elevations on the site range from 940 feet above sea level along the Santa Clara River to a high point of 1,510 feet above sea level. Dominant vegetation types on the project site include riparian (associated with the Santa Clara River and other on-site drainages), coastal sage scrub, mixed chaparral, and oak woodland. Agricultural crops are currently cultivated in Middle Canyon and were previously cultivated on Exxon Mesa.

In addition to the 1,261.8-acre tract map site, the project also includes 592.8 acres of development at locations beyond the tract map site. There are a number of off site project components, including the following:

- An underground utility corridor that generally runs east/west along SR-126 extending from the Valencia Water Reclamation Plan (WRP) (Plant 32) on the east to the proposed Newhall Ranch WRP on the west, which would serve to extend utility services to the tract map site and ultimately the Newhall Ranch Specific Plan development.

- Magic Mountain Parkway and related improvements would be extended west from the parkway's present terminus to a location within the tract map site.

- Three water tanks are proposed. Portions of two tank sites lie on site.

- Two power substation site options are proposed within the Potrero portion of the Newhall Ranch Specific Plan and Legacy Village.

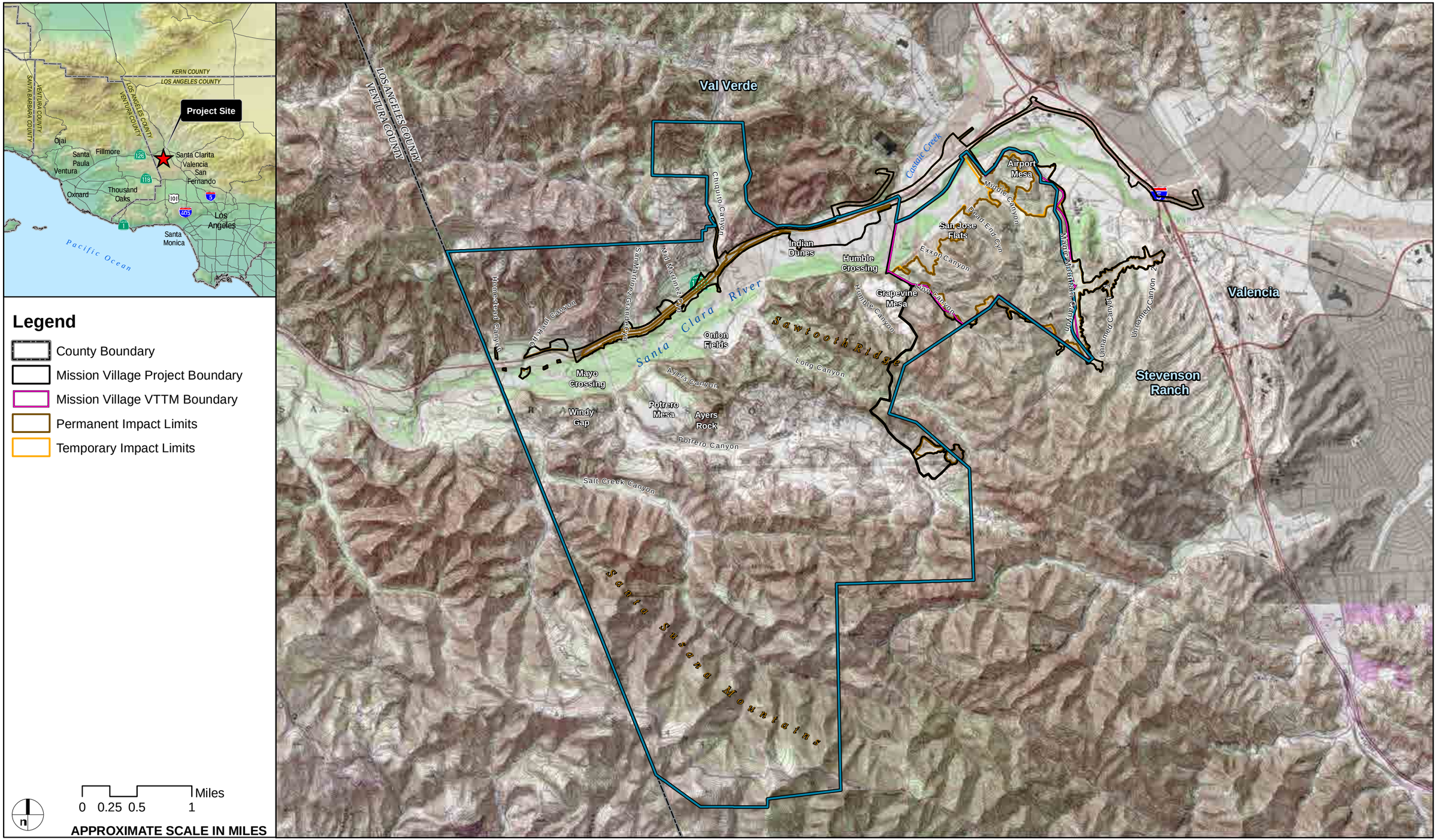

IMAGE SOURCE: USGS 24K Quad

FIGURE 4.3-2

Mission Village Biota Report

Project Vicinity Map

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- A Water Quality Basin is proposed to the northeast of the tract map site. A small portion of the water quality basin and a portion of the access road to the site are located within the tract map site. Most of the basin would be located outside of the tentative tract boundary.

- Two debris basins located to the south of the site.

- Additional proposed off-site activities include: (1) work associated with Lion Canyon drainage, (2) grading associated with construction of the northerly extension of Westridge Parkway and southerly extension of Commerce Center Drive, and (3) miscellaneous earthwork to tie proposed grades into natural grades.

For the purposes of this analysis, the "tract map site" refers only to the proposed location of the Mission Village development itself. The "project site" includes the tract map site, plus the off-site improvements discussed above.

b. Geologic and Soil Characteristics

The project site is located in the Transverse Ranges geomorphic province of Southern California in the eastern portion of the Ventura Basin. The Ventura Basin has been tectonically downwarped in the geologic past to produce a large-scale synclinal structure, which has developed a thick accumulation of Cenozoic sediments. The project site is underlain by sedimentary rock of the Saugus Formation that has been tectonically deformed into southeast-plunging folds with local faulting in the Airport Mesa area. Younger terrace deposits locally overlie the bedrock with minor to moderate angular discordance. Alluvium is present in the larger drainage areas and slopewash layers on most of the site. Two major topographic features known as mesas are located on the northeastern (Airport Mesa) and northwestern (Exxon Mesa) portions of the site. These mesas consist of older stream channel and alluvial fan deposits (Quaternary terrace deposits ("Qt")) that have been uplifted and overlie the bedrock of the Saugus Formation. The soils occurring on the project site are discussed below, and the locations of the mapped soil polygons are shown in **Figure 4.3-3, Project Site Soils**.

(1) Bedrock Formations

(a) Saugus Formation (TQsl and TQsu)

The bedrock underlying the site consists of Plio-Pleistocene, non-marine sedimentary rock of the Saugus Formation. This formation includes light gray to yellowish-gray sandstone, pebbly sandstone and pebble to cobble conglomerate, light yellowish brown to brown sandy siltstone, siltstone, mudstone, and rare moderate-brown claystone. Siltstone, claystone, and mudstone units of the Saugus Formation are potentially expansive.

Subsurface investigations and field mapping indicate that the upper section of the Saugus Formation (TQsu) is lithologically distinct from the more typical lower section (TQsl). The lower (older) stratigraphic section of the

Saugus Formation exposed on the western portion of the site, is generally coarse-grained, moderately to well indurated, and lithologically similar to the typical Saugus Formation characteristics. The upper (younger) stratigraphic section exposed on the eastern portion of the site is less indurated and commonly contains more thinly bedded siltstone and mudstone than the typical Saugus Formation characteristics.

The bedrock exposed to the south of the Saddle Lineament is identified as the upper member of the Saugus Formation (TQsu). North of the Saddle Lineament the bedrock encountered in subsurface explorations is mostly coarse grained and is designated as undifferentiated Saugus Formation (TQsl).

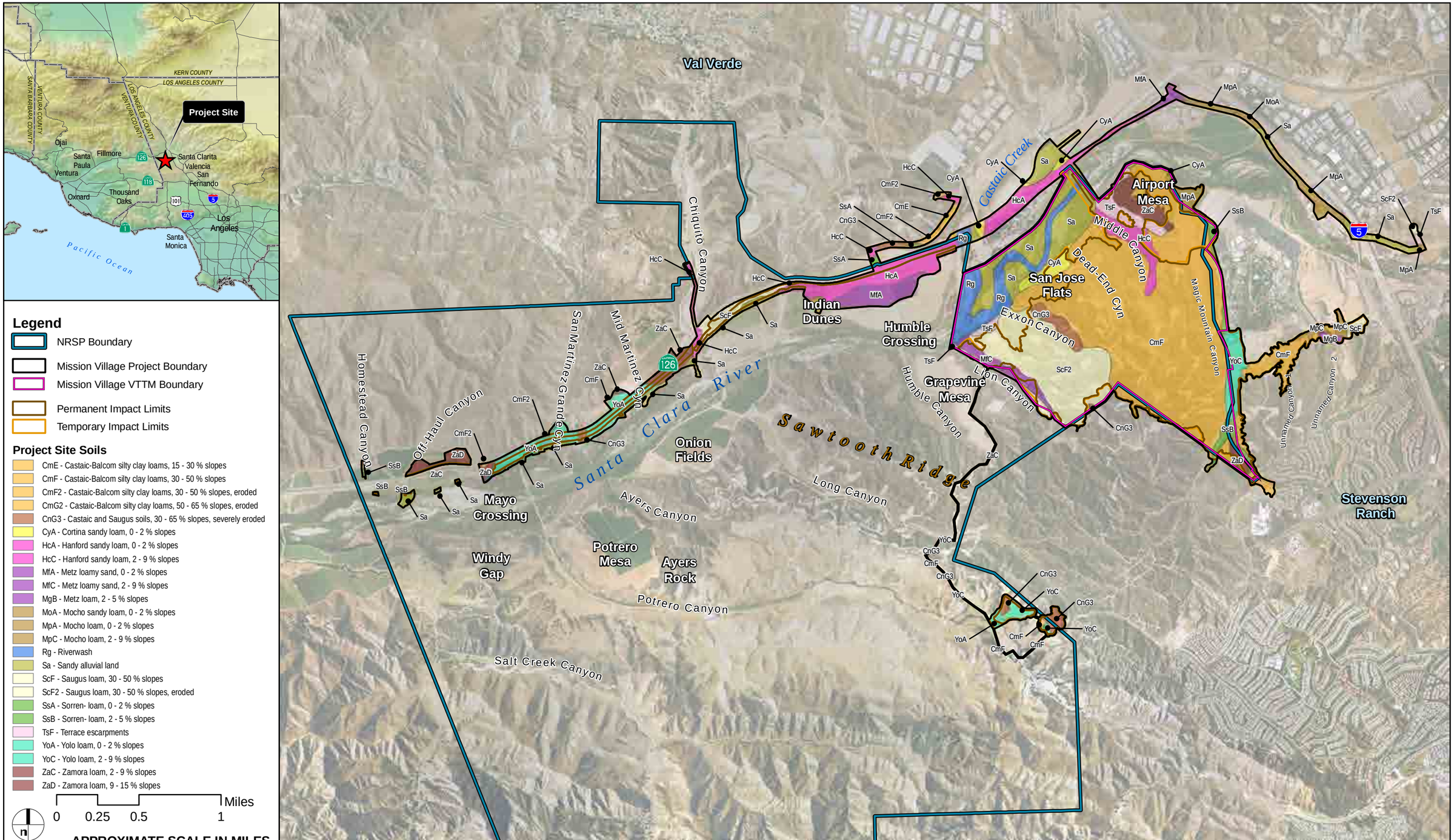
(b) Pico Formation (Tp)

The Pliocene Pico Formation underlies the southern portion of the project site. The Pico Formation observed on the project site consists of moderately hard, light gray to light greenish-gray sandstone and pebbly sandstone with local interbeds of light greenish-gray to olive-gray siltstone, sandy siltstone, and rare moderate-brown mudstone. The sandstones are generally well sorted and massive to locally well bedded with common low angle cross bedding. Pebbles are generally well rounded and commonly crystalline in composition. The siltstone and mudstone units are potentially expansive. Thin, low strength clay seams are present within this formation and can be problematic relative to slope stability. The Pico Formation soil is primarily located in the vicinity of the proposed Long Canyon Road and Valencia Boulevard segments along the western portion of the project site and along the southern portion of the project site in the vicinity of the proposed Magic Mountain Parkway extension.

(2) Surficial Deposits

(a) Quaternary Terrace Deposits (Qt)

Deposits of relatively flat-lying older alluvium which are significantly higher than the active stream channel areas are designated as terrace deposits (Qt). At least two fill-terrace levels are present on the project site. The dominant upper terrace forms large mesas on the northwestern portion of the site (Exxon Mesa) and northeastern portion of the site (Airport Mesa), which are roughly 180 to 200 feet above the adjacent drainages. A second lower terrace level is present on the margins of Lion Canyon and locally in the larger canyons to the east across the site. The lower terrace surface is largely eroded but appears to commonly extend at least 20 to 40 feet above the adjacent drainages. Small relic Qt deposit remnants were also encountered on portions of the upper slopes on the south side of Middle Canyon. The lower terrace deposits typically consist of pebbly sandstone, pebble to cobble conglomerate, and silty sandstone which range up to an observed thickness of 23 feet.



SOURCE: NRCS SSURGO Soil Survey 2008
IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-3

DUDEK

Mission Village EIR

Project Site Soils

The upper terrace deposits which compose the large mesa areas range in depth up to 112 feet and typically consist of interbedded light yellowish-brown to yellowish gray sand, gravelly sand and silty sand with interbeds of yellowish-brown sandy silt, gravelly sandy silt, and local brown silt to clayey silt. Cobbles only occur locally in the upper portion of the deposits. However, there is usually a coarse grained layer at the base which consists of 3 to 10 feet of coarse-grained sand and gravelly sand with cobbles and boulders (typically 2 feet maximum diameter, but up to 5 feet diameter were locally observed).

(b) Quaternary Alluvium (Qal)

The larger canyon areas and Santa Clara River floodplain are underlain by alluvium. Older, incised alluvium is commonly present on the margins of the canyons. These deposits typically consist of sands and gravel with cobbles, boulders, and local silty intervals.

(c) Quaternary Slopewash (Qsw)

Slopewash is a non-bedded, heterogeneous accumulation of soil and weathered bedrock deposited by gravity on slopes. Swales and side-canyons adjacent to the larger canyon drainages commonly contain accumulations of slopewash. The thickest accumulations occur at the toe of slopes and where broad swales join main drainage areas. The maximum thickness of slopewash colluvium encountered in the exploratory excavations conducted as part of the geological investigation is about 15 feet.

c. Drainage Patterns

The Mission Village project site is located within the Santa Clara River basin. The Santa Clara River flows through the northern portion of the project site from east to west. The watershed of the Santa Clara River basin is 1,634 square miles in area. The portion of the watershed in which the project site lies is located generally east of the Ventura/Los Angeles County line and is approximately 640 square miles in size with the remainder of the watershed west of the Ventura/Los Angeles County line. It drains portions of the Los Padres National Forest from the north, the Angeles National Forest from the northeast and east, and the Santa Susana Mountains from the south and southeast. The Newhall Ranch site is located within a smaller, 32. 4 square-mile tributary watershed. The Mission Village site represents approximately 1.97 square miles, or 0.31 percent of the 640 square mile watershed, and 6.09 percent of the 32.4 sq. mile Newhall Ranch tributary watershed.

The entire tributary drainage area for the Mission Village project site is approximately 2,656 acres and is comprised of fifteen drainage areas that drain toward the Santa Clara River. Runoff generally flows through the drainage areas via sheet flows and natural concentrated flows. All runoff from the tributary area eventually discharges to the Santa Clara River. The drainages on and bordering the project site are discussed in more detail in **Section 4.2, Hydrology**.

5. METHODS

a. Literature/Database Review

To evaluate the natural resources found or potentially occurring on the Mission Village project site, Dudek searched the technical literature and reviewed databases. Specifically, reports reviewed included the Biota chapter of the Newhall Ranch Specific Plan Program EIR as revised (March 1999), the Newhall Ranch Biota Report (July 1996), the Newhall Ranch Revised Additional Analysis (May 2003), Section 2.2, Salt Creek Corridor, Section 2.3, Floodplain Modifications, and Section 2.6, Spineflower and Other Sensitive Plant Species, and various technical reports documenting the biological surveys conducted on the project site and greater Newhall Ranch (shown later in this document in **Table 4.3-2**).[9] Dudek also reviewed literature sources specific to the common plants and animals, plant communities, and special-status species occurring in the County (**Section 10.0, References**).

In addition, the most recent versions of the California Natural Diversity Data Base (CNDDB) and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants were reviewed for the USGS 7.5-minute quadrangle on which the project site is located (i.e., Val Verde) and the eight surrounding quadrangles (i.e., Newhall, Warm Springs Mountain, Whitaker Peak, Cobblestone Mountain, Piru, Simi Valley West, Simi Valley East and Oat Mountain)[10] (**Appendix 4.3**).

b. Field Surveys

All surveys were conducted by biologists qualified and/or permitted to conduct such surveys. Habitat and species observations were noted on data sheets, aerial photographs, and maps. Specific information concerning any special-status species observed on site was recorded on appropriate data sheets. All surveys were conducted in accordance with published resource agency survey protocols, where they exist, or consistent with accepted survey methodologies for the particular species when published protocols did not exist. A summary of surveys dates, surveyors, and methodologies are provided in **Table 4.3-2, Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into This EIR**. The survey reports referenced in **Table 4.3-2**, which includes additional information on specific methods used during the course of field surveys, are included in **Appendix 4.3**.

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9 County of Los Angeles, *EIR for the Newhall Ranch Specific Plan*; Los Angeles County Department of Regional Planning, *Biota Report*; Impact Sciences, Inc., *Revised Additional Analysis*.

10 The CNDDB Map is available on the California Department of Fish and Game website at www.dfg.ca.gov/biogeodata/cnddb/rarefind/asp (last accessed July 22, 2009).

Table 4.3-2
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into This EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
Plant Surveys	FLx[11]	May 5–7, 2001	Focused plant surveys were conducted in the northeast portion of the Mission Village project site (referred to as Airport Mesa at the time) by FLx in 2002. The surveys were floristic in nature and were conducted according to accepted scientific protocol. Vegetation types and plant species associations were noted and their dominant species recorded.
		October 16–17, 2002	
		April 14–27	
		May 31–June3	
		June 15–17, and September 13–16, 2004	
		April 18–28, 2005	
		April 24 and May 5, 2006	
	Dudek[12]	May–August, 2002;	Focused plant surveys were conducted in portions of the Specific Plan
		May–August, 2003;	

11 FL*x*, *Rare Plant Surveys: Newhall Ranch Specific Plan Project Sites, Los Angeles County, California* (2002); FL*x*, *Rare Plant Survey for* Helianthus *sp., River Village and Water Reclamation Plant, Los Angeles County, California* (2002); FL*x*, *Rare Plant Survey for* Helianthus *sp.; Castaic Junction, Los Angeles County, California* (2002); FL*x*, *Sensitive Plant Species Surveys: Santa Clara River, Newhall Ranch/Valencia Company Project Sites, Los Angeles County, California* (2004); FL*x*, "Sensitive Plant Species Surveys at the Magic Mountain Entertainment Site Fireworks Area" (2004); FL*x*, "Sensitive Plant Species Surveys at the Magic Mountain Entertainment Site Fireworks Area" (2005); FL*x*, "Sensitive Plant Species Surveys at the Magic Mountain Entertainment Site Fireworks Area" (2006); FL*x*, "Sensitive Plant Species Survey for the Potrero Irrigation Project" (2006).

12 Dudek and Associates, Inc., *2002 Sensitive Plant Survey Results for Newhall Ranch Specific Plan Area, Los Angeles County, California* (2002); Dudek and Associates, Inc., *2002 Sensitive Plant Survey Results for Entrada [Magic Mountain Entertainment], Los Angeles County, California* (2003); Dudek and Associates, Inc., *2002 Sensitive Plant Survey Results for the Valencia Commerce Center, Los Angeles County, California* (2003). Dudek and Associates, Inc., "Survey Results for Sensitive Plant Species within Water Well 206" (2003); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for the Isola and Ventura Homestead Sites, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for the Valencia Commerce Center, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for Newhall Ranch Specific Plan Area, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for the Castaic Junction Site, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for the Magic Mountain Entertainment Site, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2004 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2004 Sensitive Plant Survey Results for the Valencia Commerce Center, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2004 Sensitive Plant Survey Results for the Entrada Site, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for the Salt Creek Site, Los Angeles County, California* (2004). Dudek and Associates, Inc., *2005 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area, Los Angeles County, California* (2006); Dudek and Associates, Inc., *2005 Sensitive Plant Survey Results for the Entrada [Magic Mountain Entertainment] Site, Los Angeles, California* (2006); Dudek and Associates, Inc., *2005 Sensitive Plant Survey Results for the Valencia Commerce Center, Los Angeles, California* (2006); Dudek and Associates, Inc., *2006 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area, Los Angeles County, California* (2006); Dudek and Associates, Inc., *2006 Sensitive Plant Survey Results for the Entrada [Magic Mountain Entertainment] Site, Los Angeles, California* (2006); Dudek and Associates, Inc., *2006 Sensitive Plant Survey Results for the Valencia Commerce Center, Los Angeles, California* (2006).

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
		April–July, 2004; May–July, 2005; April–August 2006; May–July 2007; ongoing	area, Salt Creek area, and the Valencia Commerce Center (VCC) and Entrada planning areas for special-status species. The survey area included the Mission Village site. The surveys were floristic in nature and were conducted according to accepted scientific protocol. Survey methods varied slightly within the different study areas, but included focused surveys for the CNPS List 1 and 2 species and focused surveys for San Fernando Valley spineflower within areas identified by CDFG staff and in the remaining vegetation within the study areas.
Vegetation Community Surveys	Dudek[13]	November and December 2005; July and August 2006	Biologists conducted vegetation community mapping throughout the Specific Plan and Salt Creek areas, and the VCC and Entrada planning areas. Vegetation community and land cover classifications used in these reports primarily follow the Vegetation Classification and Mapping Program "List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database."[14]

13 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area* (2006); Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch Specific Plan Area, Los Angeles County, California* (2006); Dudek and Associates, Inc., *Biological Resources Technical Report for the Valencia Commerce Center, Los Angeles County, California* (2006); Dudek and Associates, Inc., *Biological Resources Technical Report for the Entrada Site, Los Angeles County, California* (2006).

14 CDFG (California Department of Fish and Game). 2003. "List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database." *California Natural Diversity Database*. Vegetation Classification and Mapping Program. September 2003.

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
Oak Tree Surveys	Impact Sciences, Land Design. Consultants, Richard Johnson & Associates, Inc., Dudek[15]	2003–2006	Biologists conducted on-site surveys and evaluations of the oak trees pursuant to the Los Angeles County Oak Tree Ordinance (CLAOTO) from 2003 through 2006. The specific area was covered on foot through areas where oak trees occur within the proposed project development area (including a 200-foot buffer). Oak trees were surveyed from the base of each tree. Oak trees subject to CLAOTO were also mapped within the VCC and Entrada planning areas. In addition, to comply with Public Resources Code ~~Section~~§ 21083.4, biologists surveyed the site's oak woodlands, which are defined as areas with at least 10% cover by oak trees with an understory of non-grass vegetation and at least 20% cover by oak trees with an understory of grass vegetation. Oak/grass includes areas where oak trees comprise between 10% and 20% of the total cover with an understory of grass vegetation. These surveys not only captured oak woodland habitat, but also the entire range of oak trees in terms of size and maturity, including those trees that are five (5) inches or greater in diameter, measured at breast height, as identified in Public Resources Code ~~Section21083~~§21083.4(a). Tree stands (tree groupings) outside of these areas, in undisturbed or preserved areas, were delineated on aerial images and evaluated in the field via a sampling protocol and later statistically analyzed for population estimates. Oak woodlands were mapped during the Vegetation Community Surveys.
Jurisdictional Delineation of Waters and Streambeds	URS[16]	2003	The focus of the delineation was the Santa Clara River and its tributaries within the Specific Plan area. Published Corps/CDFG delineation protocols were utilized in the field.
	Glenn Lukos Associates, Inc[17]	2006	The focus of the delineation was the Santa Clara River and its tributaries within the Entrada planning area. Published Corps/CDFG

15 Impact Sciences, Inc., *Newhall Ranch Oak Tree Survey* (2006); Impact Sciences, Inc., *Mission Village Oak Tree Report, Los Angeles County, California* (2006); Impact Sciences, Inc., *Landmark Village Planning Area Oak Tree Report, Los Angeles County, California* (2006); County of Los Angeles, *EIR for the Newhall Ranch Specific Plan*; Land Design Consultants, *Entrada Oak Tree Report* (2007); Richard Johnson & Associates, Inc., *Arborist Survey Report for Valencia Commerce Center VTPM 18108, Los Angeles County, California* (2007); Dudek, "Oak Tree Estimate for High Country SMA and the Salt Creek Area" (2007); Impact Sciences, Inc., *Easterly Extension of Magic Mountain Parkway, Oak Tree Report, Los Angeles County, California* (2006); Impact Sciences, Inc., "Oak Tree Report: Mission Village VTTM 61105 Los Angeles County, California March 2010 update" (2010).

16 URS, *Jurisdiction Delineation, Newhall Ranch Project for a Portion of the Santa Clara River and its Tributaries, Los Angeles County, California* (2003).

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
			delineation protocols were utilized in the field.
Invertebrates (Fairy Shrimp)	Dudek[18]	December 2007–March 2008	Wet season vernal pools surveys were conducted in five previously identified depressions associated with western spadefoot surveys in the Specific Plan area, three in Potrero Canyon,[19] one between Lion Canyon and Grapevine Mesa, and one east of Lion Canyon.[20] Two of the five depressions retained water in 2007/2008 and were surveyed for shrimp presence.
Invertebrates (Butterflies)	Compliance Biology, Guy Bruyea[21]	April and May 2004	The RMDP site and the Entrada planning area were surveyed to determine the presence or absence of San Emigdio blue butterfly, quino checkerspot butterfly, and their associated host plants. A general butterfly inventory was also conducted.
		April and May 2005	The Salt Creek Canyon Preservation area was surveyed to determine the presence or absence of San Emigdio blue butterfly, quino checkerspot butterfly, and their associated host plants. A general butterfly inventory was also conducted.
	RECON[22]	March 15–May 10, 1999	Focused surveys for quino checkerspot butterfly and its associated habitat were conducted. The survey area included the Specific Plan Phase 1 development area (the northern portion of the Specific Plan area, including the Santa Clara River Valley, Homestead Canyon, Off-Haul Canyon, San Martinez Grande, Mid-Martinez Grande, and Chiquito Canyon).
Invertebrates	Dudek[23]	June 2007	Biologists conducted a site visit to the Middle Canyon Spring as well as

17 Glenn Lukos Associates, Inc., "Jurisdictional Delineation for Entrada, an Approximately 850-Acre Property in Los Angeles County, California" (2006).

18 Dudek, *Wet Season Presence/Absence Survey for Vernal Pool Branchiopods for Newhall Ranch, Los Angeles County, California* (2008).

19 Dave Crawford, Compliance Biology, Inc., telephone call to Sherri Miller (Dudek), November 2007.

20 Compliance Biology, Inc., *Results of the Focused Western Spadefoot Toad Surveys on the Mission Village Project Site* (2006).

21 Compliance Biology, Inc., *Results of Butterfly Surveys on the Newhall Ranch Project Site, Los Angeles County, California* (2004); Compliance Biology, Inc., *Results of Butterfly Surveys on Newhall Land, Stevenson Ranch Phase V Site, Los Angeles County, California* (2004); Compliance Biology, Inc., *Results of Butterfly Surveys on Magic Mountain Entertainment Site, Los Angeles County, California* (2004); Compliance Biology, Inc., *Results of Butterfly Surveys on Newhall Salt Canyon Habitat Preservation Area, Los Angeles County, California* (2005).

22 RECON, *Quino Checkerspot Butterfly Habitat Assessment for Phase 1 Development and Permit Areas of Newhall Ranch* (1999).

23 Dudek, *Draft Middle Canyon Spring Survey and Status Report.* Prepared for Newhall Land and Farming (2007).

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
(Gastropods)			the lower reach of the Middle Canyon drainage to document the biotic conditions of the spring area, including the presence of the undescribed snail. (In 2010, the undescribed species of snail was formally described as *Pyrgulopsis castaicensis* **n. sp.**[24] and is referred to by its new scientific name herein.)
Invertebrates (Gastropods)	Aspen[25]	Five days between November 2009 and January 2010	Surveys for terrestrial snails focused on microhabitats within California annual grassland, coastal scrub, riparian woodland, riparian scrub, big sagebrush scrub, mulefat scrub, oak woodland, and chaparral where these species have the potential to occur. Surveyed microhabitats included, but were not limited to, brush and debris piles, rock piles, isolated rocks, leaf litter, logs, trash/debris piles, and other unique features that may provide soil moisture or refugia. These areas were searched by raking through leaf and stick litter, visually inspecting cracks and crevices, and turning over objects, such as logs and rocks.
Invertebrates (General Insects)	Jones et al. CSU, Fullerton[26]	April and May 2004	An observational and sampling study of potential pollinators of the San Fernando Valley spineflower was conducted in areas occupied by the spineflower, resulting in a compilation of the insects occurring in these areas.
Semi-Aquatic Amphibians (Frogs, Toads, and Salamanders) and Reptiles; Fish	RECON[27]	March 15–May 30, 1999	Surveys for arroyo toads were conduced along portions of the Santa Clara River and Castaic Creek within the Specific Plan and VCC planning areas using USFWS survey protocols.
	White and Leatherman BioServices[28]	2000	Habitat assessment for arroyo toad habitat was conducted at Tesoro del Valle along the San Francisquito Creek, east of the project area.
	Ecological Sciences[29]	April–June 2001	USFWS protocol surveys for arroyo toad were conducted along

24 R. Hershler and H. Liu, 2010. "Two New, Possibly Threatened Species of *Pyrgulopsis* (Gastropoda: Hydrobiidae) From Southwestern California," *Zootaxa* 2243:1-17.

25 C. Huntley, "Re: Snail Methods, etc." Email from C. Huntley (Aspen) to P. Behrends (Dudek), A.C. Lynch (Sohagi Law Group), D. Bedford (CDFG), K. Drewe (CDFG), S. White (Aspen), M. Carpenter (Newhall Land), S. Rojas (Newhall Land), and S. Miller (Dudek), March 12, 2010.

26 C.E. Jones et al., *Newhall Ranch Investigation of the San Fernando Valley Spineflower* (2004).

27 RECON, *Survey for Arroyo Southwestern Toad for Newhall Ranch* (1999).

28 White and Leatherman BioServices, "Results of Arroyo Toad Habitat Assessment at Tesoro del Valle" (2000).

29 S.D. Cameron, "Permit Submittal Requirement, TE-808242, Arroyo Toad Surveys, Los Angeles County, California." (2001); Ecological Sciences, Inc., "Results of Focused

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
			portions of the Santa Clara River, Castaic Creek, San Francisquito Creek, Santa Clara River South Fork, and Bouquet Creek within the Specific Plan and VCC planning areas.
		April–June 2005	USFWS protocol surveys for arroyo toad were conducted along portions of the Castaic Creek and San Francisquito Creek within the Specific Plan and VCC planning areas.
		March–June 2003	USFWS protocol surveys for arroyo toad were conducted along portions of the Santa Clara River, Castaic Creek, Castaic Reservoir site, San Francisquito Creek, South Fork of the Santa Clara River, and Bouquet Creek within the Specific Plan and VCC planning areas.
		March–June 2004	USFWS protocol surveys for arroyo toad were conducted along portions of the Santa Clara River and the South Fork of the Santa Clara River, and Castaic Creek within the Specific Plan and VCC planning areas.
	Impact Sciences[30]	April–June, 2001	USFWS protocol surveys for arroyo toad were conducted in portions of the Santa Clara River and adjacent uplands from near the confluence of Castaic Creek, downstream to the Los Angeles County border, within the Specific Plan and VCC planning areas. Surveys were also conducted within the Natural River Management Plan area. Surveys for southwestern pond turtle and two-striped garter snake were conducted concurrently with the arroyo toad surveys.[31]

Arroyo Toad Surveys, Castaic Creek, Santa Clarita, California" (2005); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, San Francisquito Creek, Santa Clarita, California" (2005); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Castaic Creek, Santa Clarita, California" (2003); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Castaic Reservoir Site, Santa Clarita, California" (2003); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Hart/Pony Baseball Site and Hart/Pony Commercial Site, Santa Clarita, California" (2003); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, NRMP Project Area, Santa Clarita, California" (2003); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Round Mountain Site, Santa Clarita, California" (2003); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Soledad Site, Santa Clarita, California" (2003); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Castaic Creek, Santa Clarita, California" (2004); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Portions of Santa Clara River/South Fork, Santa Clarita, California" (2004); Ecological Sciences, Inc. "Results of Focused Arroyo Toad Surveys, NRMP Soledad/Riverpark Area, Santa Clarita, California" (2004); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, San Francisquito Creek, Santa Clarita, California" (2004).

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

31 Surveys for the southwestern pond turtle primarily were visual surveys and were not conducted using the U.S. Geological Survey protocols for visual and trapping surveys (U.S. Geological Survey, *Western Pond Turtle (*Emys marmorata*) Visual Survey Protocol for the Southcoast ecoregion* (2006), *Western Pond Turtle (*Emys marmorata*)*

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
	Sandburg, Nancy[32]	May 8–May 29, 2001	Focused surveys for arroyo toad and California red-legged frog east of the project area, along the Santa Clara River from the River's End vacation park to the Transit Mix Concrete Company mine. These were not conducted using USFWS survey protocols.
	BonTerra Consulting[33]	2003	Surveys were conducted in 35 earth-bottom channels, including some channels in the project area for unarmored threespine stickleback and Santa Ana sucker.
	Compliance Biology[34]	March 19–June 25, 2004	USFWS protocol surveys for arroyo toad were conducted in portions of the Santa Clara River and adjacent uplands near the confluence of Castaic Creek, downstream to the Los Angeles County border within the Specific Plan and VCC planning areas. Surveys for southwestern pond turtle and two-striped garter snake were conducted concurrently with the arroyo toad surveys.
		March 10 and March 23, 2004	Surveys for potential western spadefoot toad breeding habitat were conducted in the Mission Village area within the Specific Plan area during the known breeding season. Surveys consisted of habitat evaluations with a focus on the presence of temporary or seasonal rain pools. All flat lowland areas were surveyed for standing water, dirt roads were inspected for deep road ruts that may fill with rainwater, and temporary man-made retention basins were surveyed.
		May 9 and May 23, 2004	Surveys for potential western spadefoot toad breeding habitat were conducted in the River Village project site and associated borrow sites (now referred to as Landmark Village). Surveys consisted of habitat evaluations with focus on the presence of temporary or seasonal rain pools. All flat lowland areas were surveyed for standing water, dirt

Trapping Survey Protocol for the Southcoast Ecoregion (2006)). The USGS surveys are designed to provide systematic habitat assessment and population estimates and are more rigorous than presence/absence surveys. The USGS surveys have not been adopted nor required for the purpose of CEQA analyses.

32 Nancy Sandburg, "Field Summary of Santa Clara River Surveys for *Bufo californicus* and *Rana aurora draytonii*, May 8 through May 29, 2001" (2001).

33 BonTerra Consulting, *Los Angeles County Soft Bottom Channels 2003 Focused Survey Results* (2003).

34 Compliance Biology, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, River Village Project; Newhall Ranch, Valencia, California* (2004); Compliance Biology, Inc., "Results of Focused Western Spadefoot Toad Surveys on the River Village Project Site and Associated Borrow Sites" (2004); Compliance Biology, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, Newhall Ranch, Valencia, California* (2004); Compliance Biology, Inc., *Results of the Focused Western Spadefoot Toad Surveys on the Castaic Mesa Project Site* (2006); Compliance Biology, Inc., *Results of the Focused Western Spadefoot Toad Surveys on the Mission Village Project Site*.

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
			roads were inspected for deep road ruts that may fill with rainwater, and temporary man-made retention basins were surveyed.
		May 12, 2004	Surveys for potential western spadefoot toad breeding habitat were conducted in the West Creek area near Copperhill Drive and San Francisquito Creek. Surveys consisted of habitat evaluations with focus on the presence of temporary or seasonal rain pools. All flat lowland areas were surveyed for standing water, dirt roads were inspected for deep road ruts that may fill with rainwater, and temporary man-made retention basins were surveyed.
		February–March 2006	Surveys for potential western spadefoot toad breeding habitat were conducted in the Castaic Mesa area upstream of the VCC planning area near Castaic Lagoon. Surveys consisted of habitat evaluations with focus on the presence of temporary or seasonal rain pools. All flat lowland areas were surveyed for standing water, dirt roads were inspected for deep road ruts that may fill with rainwater, and temporary man-made retention basins were surveyed.
	ENTRIX[35]	March 31, April 1, November 8, 10, 2004; February 1, 2005	Reconnaissance-level (non-USFWS protocol) field surveys were conducted, focusing on arroyo toad, California red-legged frog, southwestern pond turtle, two-striped garter snake, and identifying habitat within portions of the Santa Clara River floodplain between Castaic Creek and Chiquito Canyon Creek within the Specific Plan area. Limited seining and dipnetting were also conducted.
	Peter H. Bloom[36]	April–July 2007	USFWS protocols surveys for arroyo toad were conducted along approximately 8 miles of the Santa Clara River adjacent to the proposed Mission Village project area. The survey area encompassed all habitats within the River channel and up to 700 meters from the River in some areas.
	San Marino Environmental Associates[37]	May–September 1994	Surveys focused on trapping two-striped garter snake and southwestern pond turtle as part of the ARCO natural resource damage assessment.
		May–July 1995	Surveys focused on documenting presence/absence and distribution of

35 ENTRIX, Inc., *Focused Special-Status Aquatic Species Assessment—Santa Clara River, Mission Village Project, Newhall Ranch, California* (2006); ENTRIX, Inc., *Focused Special-Status Aquatic Species Assessment—Santa Clara River, Landmark Village Project, Newhall Ranch, California* (2006).

36 Peter H. Bloom, *Report on Arroyo Toad Surveys on Landmark Village, Newhall Land and Farming Company Property, Los Angeles County, California* (2007).

37 San Marino Environmental Associates (SMEA), *Two-Striped Garter Snake Data, ARCO Natural Resource Damage Assessment* (1994); SMEA, *Southwestern Pond Turtle*

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
			unarmored threespine stickleback, arroyo chub, Santa Ana sucker, arroyo toad, California red-legged frog, and western spadefoot toad. Surveys did not use the USFWS survey protocol. Surveys included the Santa Clara River between Castaic Creek confluence and Bouquet Canyon Road bridge within the Specific Plan, VCC, and Entrada planning areas.
	Haglund and Baskin[38]	June 3 and July 14, 2000	Focused surveys for unarmored threespine stickleback, arroyo chub, and Santa Ana sucker were conducted using a seine in the Santa Clara River at the I-5 Bridge.
	Aquatic Consulting Services, Inc.[39]	May–September 2000	Reconnaissance surveys were conducted along the Santa Clara River within the Specific Plan, Entrada, and VCC planning areas in the following areas: Castaic Junction, Commerce Center Bridge, west of Commerce Center Bridge to the Ventura County line, and Ventura County line to Las Brisas Bridge. Surveys focused on aquatic habitats with emphasis on state and federally listed species. In addition, other species of fish, amphibians, and reptiles were also surveyed.
	Impact Sciences[40]	March–June 2002	Focused surveys were conducted for unarmored threespine stickleback and other special-status fish species in the portion of the Santa Clara River from near its confluence with Castaic Creek, (east) upstream approximately 7.2 miles.
		September 16 and 25, 2002	Focused surveys were conducted for unarmored threespine stickleback and other special-status fish species in the Natural River Management

Data, ARCO Natural Resource Damage Assessment (1994); SMEA, *Sensitive Aquatic Species Survey; Santa Clara River and San Francisquito Creek; Newhall Land and Farming Company Property; Los Angeles, California* (1995).

38 T.R. Haglund and J.N. Baskin, *Fish and Wildlife Survey and Habitat Assessment of the Santa Clara River at Interstate 5* (2000).

39 Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part II: Commerce Center Bridge Project Area, Los Angeles County, California* (2002); Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part III: West of Commerce Center Bridge to the Ventura County Line, California* (2002); Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part IV: Ventura County Line to Las Brisas Bridge, Ventura County, California* (2002); Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part I: Castaic Junction Project Area, Los Angeles County, California* (2002).

40 Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species; Newhall Ranch, Valencia, California* (2003); Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species; Natural River Management Plan Area, Valencia, California* (2003); Impact Sciences, Inc., *Annual Status Report for Unarmored Threespine Stickleback within the Natural River Management Plan Area, Valencia, California* (2003); Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species; Castaic Mesa, Castaic Creek, Los Angeles County, California* (2003).

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
			Plan area.
		May 2003	Focused surveys were conducted for unarmored threespine stickleback and other special-status fish species in Castaic Mesa and Castaic Creek.
	UCLA, Thomas Haglund, Ph.D.[41]	2004–2005	The report presents the results of a field and laboratory study on the occurrence of threespine stickleback in portions of the Santa Clara River on the Specific Plan site.
	ENTRIX[42]	2004–2005	This report summarizes the focused assessment of fish presence, aquatic habitat quality and quantity, and potential project effects on threatened or endangered fish species inhabiting the Newhall Ranch reach of the Santa Clara River as well as tributary drainages to the Santa Clara River. This assessment covered the mainstem Santa Clara River from Salt Creek Canyon upstream to the Middle Canyon confluence and included the Salt Creek and Potrero Creek tributaries. Specifically, this report focused on potential impacts to the state and federally listed unarmored threespine stickleback and other fish species, including arroyo chub and Santa Ana sucker.
Terrestrial Reptiles	Impact Sciences[43]	September–October 2004; August 2006	Pitfall trap lines were located throughout the Specific Plan area in representative habitat types in September and October 2004 and August 2006. All pitfall traps were active (open) for five consecutive days and nights, and they were checked once per day (in the morning). All captured animals were identified and released. For surveys for silvery legless lizard, 40 hours of hand raking were conducted in the late afternoons in October 2004 in areas with sandy or loose soil within suitable habitat (scrub, chaparral, sycamore, cottonwood, and oak communities).
Birds	Daniel Guthrie[44]	1988–2006; ongoing	Annual bird surveys, including protocol surveys for California

[41] Thomas Haglund, *Current Status of the Unarmored Threespine Stickleback (*Gasterosteus aculeatus williamsoni*) along Portions of the Santa Clara River Drainage* (1989).

[42] ENTRIX, Inc., *Focused Special-Status Fish Species Habitat Assessment—Santa Clara River and Tributary Drainages, Newhall Ranch, Los Angeles County, California* (2009).

[43] Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area, Los Angeles County, California* (2006).

[44] Daniel Guthrie, *Status of the Least Bell's Vireo along the Santa Clara River and Its Tributaries near Valencia, California, Spring 1988* (1988); Daniel Guthrie, *Status of the Least Bell's Vireo along the Santa Clara River and Its Tributaries near Valencia, California, Spring 1989* (1989); Daniel Guthrie, *Birds along the Santa Clara River and Its Tributaries near Valencia, California, with Special Reference to Least Bell's Vireo; Spring 1990* (1990); Daniel Guthrie, *Surveys for Least Bell's Vireo Along the Santa Clara River and Its Tributaries near Valencia* (1991); Daniel Guthrie, *Surveys along Castaic Creek for least Bell's Vireo* (1991); Daniel Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California* (1992); Daniel Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California*

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
			gnatcatcher, least Bell's vireo, and southwestern willow flycatcher, have been conducted annually that include the Mission Village project site. Protocol surveys for least Bell's vireo and southwestern willow flycatcher were most recently conducted on the Mission Village project site in 2006, while protocol surveys for California gnatcatcher were most recently conducted on the project site in 2004.
	BonTerra Consulting[45]	2003	USFWS protocol surveys were conducted in 35 earth-bottom channels

(1993); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 1993; Castaic Creek Downstream to just below Newhall Ranch* (1993); Daniel Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California* (1994); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 1994; Castaic Creek Downstream to just below Las Brisas Crossing* (1994); Daniel Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1995* (1995); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 1995; Castaic Creek Downstream to just below Las Brisas Crossing* (1995); Daniel Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1996* (1996); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 1996; Castaic Creek Downstream to just below Las Brisas Crossing* (1996); Daniel Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1997* (1997); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 1997; Castaic Creek Downstream to just below Las Brisas Crossing* (1997); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 1998; Castaic Creek Downstream to just below Las Brisas Crossing* (1998); Daniel Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1998* (1998); Daniel Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 1999* (1999); Daniel Guthrie, *Bird Surveys in the Proposed Riverwood Project Area, near Valencia, California* (1999); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 1999; Ventura County Line Downstream to just below Las Brisas Crossing* (1999); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 2000; Mouth of Castaic Creek Downstream to the Los Angeles/Ventura County Line* (2000); Daniel Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2000* (2000); Daniel Guthrie, *Bird Surveys along the Santa Clara River; Los Angeles/Ventura County Line Downstream to Just Below Las Brisas Crossing* (2000); Daniel Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001* (2001); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 2001; Mouth of Castaic Creek Downstream to just below Las Brisas Crossing* (2001); Daniel Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2002* (2002); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 2002; Mouth of Castaic Creek Downstream to just below Las Brisas Crossing* (2002); Daniel Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003* (2003); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 2003; Mouth of Castaic Creek Downstream to just below Las Brisas Crossing* (2003); Daniel Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2004* (2004); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 2004; Mouth of Castaic Creek Downstream to just below Las Brisas Crossing* (2004); Daniel Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California* (2005); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 2005; Mouth of Castaic Creek Downstream to just below Las Brisas Crossing* (2005); Daniel Guthrie, *White-Tailed Kite Populations along the Upper Santa Clara River* (2005); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 2006; Mouth of Castaic Creek Downstream to just below Las Brisas Crossing* (2006); Daniel Guthrie, *Bird Surveys of The Old Road Phase III Environmental Project Study Area, near Valencia, California, 2006* (2006); Daniel Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California* (2006).

[45] BonTerra Consulting, *Los Angeles County Soft Bottom Channels 2003 Focused Survey Results*.

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
			for least Bell's vireo and southwestern willow flycatcher. The 1997 report is a follow up to the Labinger *et al.* 1996 survey and contains an additional section regarding the presence of other special-status species identified during the survey. The 1998 and 1999 reports focused on least Bell's vireo monitoring, as well as documenting other avian species. These surveys focused on impacts to the avian community and impacts to listed species, including monitoring of known least Bell's vireo population; other surveys were conducted for western yellow-billed cuckoo and southwestern willow flycatcher. Although this survey was a follow-up to the 1996 survey, the overall surveyed area was increased in order to understand the distribution of endangered species and subsequent restoration planning.
	PCR[46]	1998	USFWS protocol surveys for coastal California gnatcatcher surveys were conducted in upland habitats on the east and west sides of Castaic Creek (upstream of the VCC planning area).
	Daniel Guthrie[47]	2000 and 2004	USFWS protocol surveys for coastal California gnatcatcher as well as surveys for other upland birds were conducted in upland portions of the Specific Plan area.
	Haglund and Baskin[48]	April–July 2000	Surveys using USFWS survey protocol for least Bell's vireo and southwestern willow flycatcher were conducted along Santa Clara River at the I-5 Bridge.
	Impact Sciences[49]	May–June 2000	Six USFWS protocol surveys for coastal California gnatcatcher were

[46] PCR (Planning Consultants Research), "Results of Focused California Gnatcatcher Surveys for the West Creek/East Creek Project Site, Valencia, Los Angeles County" (1998).

[47] Daniel Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area near Valencia, California* (2000); Daniel Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development near Valencia, California* (2000); Daniel Guthrie, *Bird Surveys in the Proposed Magic Mountain Entertainment Project Area, near Valencia, California, 2000* (2000); Daniel Guthrie, *Bird Surveys of Castaic Junction, an Area on the North Side of the Santa Clara River at the Junction of State Route 126 and Interstate 5, near Valencia, California* (2000); Daniel Guthrie, *Bird Observations for Spring 2004 in the Proposed Homestead and Chiquito Areas, near Valencia, California* (2004); Daniel Guthrie, *Bird Observations in the Commerce Center Project Site, near Valencia, California, 2004* (2004); Daniel Guthrie, *Bird Observations in the Stevenson Ranch, Phase 5 Area, near Valencia, California, 2004* (2004); Daniel Guthrie, *Bird Observations for Spring 2004 in the Proposed Potrero Valley, Long Canyon, Oak Valley and Onion Fields Development Areas near Valencia, California* (2004); Daniel Guthrie, *Bird Observations for Spring 2004 in the Proposed Mesa East and West Development near Valencia, California* (2004); Daniel Guthrie, *Bird Observations in the Proposed Magic Mountain Entertainment Project Area, near Valencia, California, 2004* (2004); Daniel Guthrie, *Bird Surveys along the Santa Clara River, 2004*.

[48] Haglund and Baskin, *Fish and Wildlife Survey and Habitat Assessment*.

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
			conducted in a 156-acre portion of the Specific Plan site where California sagebrush scrub occurs.
	Compliance Biology[50]	2003	Six USFWS protocol surveys for coastal California gnatcatcher were conducted in a 2-acre area in Riverpark where California sagebrush scrub occurs, upstream of the Specific Plan site by Soledad Canyon.
		2006	Six USFWS protocol surveys for coastal California gnatcatcher were conducted in an 80-acre area in Castaic Mesa where California sagebrush scrub occurs, upstream of the VCC planning area by Castaic Lagoon.
		2008	Six USFWS protocol surveys for coastal California gnatcatcher were conducted in the VCC planning area.
	SAIC[51]	2003	Six USFWS protocol surveys for coastal California gnatcatcher were conducted on the Stevenson Ranch Phase V project site, adjacent to the Specific Plan area.
	Forde Biological Consultants[52]	May–July 2006	USFWS protocol surveys for least Bell's vireo and southwestern willow flycatcher were conducted along Castaic Creek between Castaic Lagoon and Lake Hughes Road and Tapia Canyon Road (upstream of the VCC planning area).
	Bloom Biological, Inc.[53]	February–June 2007	Winter and spring bird surveys for special-status avian species and all raptors (both common and special-status) were conducted on portions of the project applicant's property (including the Mission Village project site). The survey area encompassed all habitats within the riverbed and approximately 0.5 mile on each side of the river. The survey effort included USFWS protocol surveys for least Bell's vireo

[49] Impact Sciences, Inc., "Results of Focused Surveys for the Coastal California Gnatcatcher, ±156-Acre Project Site, Santa Clarita, Los Angeles County, California" (2000).

[50] Compliance Biology, Inc., *Results of Focused Coastal California Gnatcatcher Surveys; Prospective Water Tank Locations, River Park Project, Los Angeles County, California* (2003); Compliance Biology, Inc., *Results of Focused Survey for Coastal California Gnatcatcher Surveys; River Park Project, Santa Clarita, Los Angeles County, California* (2003); Compliance Biology, Inc., *Results of Focused Coastal California Gnatcatcher Surveys; Castaic Mesa Project, Los Angeles County, California* (2006); Compliance Biology, Inc., *Results of Focused California Gnatcatcher Surveys on the Valencia Commerce Center SCP Site; Los Angeles County, California* (2008).

[51] Science Applications International Corporation (SAIC), "Results of Focused Coastal California Gnatcatcher Surveys for the Stevenson Ranch Phase V Project Site, Los Angeles, California" (2003).

[52] Forde Biological Consultants, *Least Bell's Vireo and Southwestern Willow Flycatcher Presence-Absence Survey; Castaic Creek below Castaic Lagoon to halfway between Lake Hughes Road and Tapia Canyon Road, Castaic, Los Angeles County, California* (2006).

[53] P.H. Bloom and C.A. Niemela, *2007 Results of NRMP Annual Riparian Bird Surveys on the Santa Clara River Portion of Newhall Land and Farming Company Property, Los Angeles County, California* (2007).

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
			and southwestern willow flycatcher, riparian bird surveys, raptor nest surveys, and winter burrowing owl surveys.
	Bloom Biological, Inc.[54]	April–June 2007; ongoing	USFWS protocol focused surveys for least Bell's vireo and southwestern willow flycatcher and yellow-billed cuckoo were conducted along 25 miles of the Santa Clara River and its major tributaries.
	Bloom[55]	November 2007–February 2008	Field surveys were conducted to find special-status avian species, including raptors, with special emphasis placed on surveying abandoned agricultural fields for burrowing owls and oak woodlands for long-eared owls. Survey locations were along a 10-mile reach of the Santa Clara River and on Newhall Ranch property on both sides of SR-126 as well as in lower Salt Creek, Potrero Canyon and upland habitat. Additionally, several nights were spent surveying and camping in selected oak woodlands surrounding the Landmark Village project site in an attempt to detect the presence of long-eared owls. Surveys were conducted during daylight hours as well as up to four hours after sunset.
		November 2007–June 2008	Field surveys were conducted for white-tailed kite along the Santa Clara River from Las Brisas Bridge in Ventura County to I-5 and on all lands within Newhall Ranch, including both sides of SR-126, lower Salt Creek, and Potrero Canyon. Upon detection, foraging and nesting individuals were observed for up to several hours if possible.
	DUDEK[56]	April–June 2007	Six USFWS protocol surveys for coastal California gnatcatcher were conducted in Landmark Village.

54 Ibid.

55 Bloom Biological, Inc., *Interim Report of Winter Surveys of Special-Status Bird Species on Portions of Newhall Land and Farming Company Property (Including Newhall Ranch), Los Angeles County, California* (2008); Bloom Biological, Inc., *Report on White-Tailed Kites on Portions of Newhall Land and Farming Company Property (including Newhall Ranch); Los Angeles and Ventura Counties, California* (2009); Jeff Priest, "Focused California Gnatcatcher Survey, Landmark Village Project, Los Angeles County, California" (2007); Paul Lemons, "Focused California Gnatcatcher Surveys for Mission Village, Los Angeles County, California" (2008).

56 Priest, "Focused California Gnatcatcher Survey, Landmark Village Project"; Lemons, "Focused California Gnatcatcher Surveys for Mission Village."

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
		July 2007–January 2008	Nine USFWS protocol surveys for coastal California gnatcatcher were conducted in Mission Village.
Mammals	San Marino Environmental Associates[57]	August 7–10, 2006 (bats)	Additional bat surveys were conducted within the project area to determine occurrence of, and habitat use by, bat species. Standard visual, acoustic, and mist-netting sampling methods were used to survey bats. Sampling was conducted near roosting sites and in potential foraging areas; acoustic devices and mist nests were deployed where bats were expected to fly low or in a somewhat defined air space; and visual surveys were conducted during the day and night at potential roost sites, and at dusk while observing bats in flight.
		May 1993–September 1994	This report provides results of a number of surveys conducted to document the presence of rare plants and animals within approximately 80 square miles of the Santa Clarita water district service area, which includes a portion of Los Angeles County Sensitive Ecological Area (SEA) 23 (also known as the River Corridor SMA/SEA 23). This document contains lists of anticipated species and indicates the species actually found during the surveys.
	Impact Sciences[58]	March–September 2004 July 2006	Field surveys were conducted to sample mammal species in dominant vegetation communities throughout the Specific Plan site during 2004. Survey locations were in representative dominant vegetation communities within the Specific Plan area. Five different survey methods were utilized: small mammal trapping, scent/track stations, spotlighting, cameras, and ANABAT bat detector recording.
General Biological Surveys	RECON and Impact Sciences[59]	1995	This report provides general biological resources information derived from surveys conducted on the Specific Plan area and its vicinity during the spring and summer months. These surveys included habitat, vegetation identification, percentages and mapping; avian surveys; river surveys that included documentation of fish, reptiles, and amphibian species; plant species documentation; butterfly surveys; and other wildlife surveys that included small mammal trapping methods.

[57] SMEA, *Rare Plant and Animal Survey; Santa Clarita Water District Service Area, Los Angeles County, California* (1995).

[58] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area, Los Angeles County, California* (2005); H.L. Johnson, "Bat Survey; August 7–10, 2006 for the Newhall Ranch, Valencia, California" (2006).

[59] RECON and Impact Sciences, Inc., *Biota Report: Newhall Ranch Specific Plan; Santa Clara River Valley, California; Tentative Tract Map 44831* (1996).

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
	Impact Sciences[60]	Spring 1999	This habitat assessment report was created based on the results of vegetation surveys along the Santa Clara River on the portion of the Specific Plan site. Data were collected based on structure and composition of habitat and were used to assess the likelihood or potential for occurrence of special-status species that may occur on this portion of the river. In addition, during this study the potential for mitigation through habitat creation or enhancement of riparian habitat was also assessed.
		1996	This report provides results from a number of surveys conducted at four sites, two of which were located within the Specific Plan area. The focus of these surveys was to study the relation between upland habitat quality and use by riparian bird species and small mammals along the edge of the Santa Clara River in order to make habitat buffer recommendations.
	Dudek[61]	April through July 2003 November and December 2005 May through August 2006	Biologists conducted general wildlife surveys throughout the High Country SMA/SEA 20 portion of the Specific Plan and Salt Creek areas in 2005 and within the VCC and Entrada planning areas in 2006.
	Compliance Biology[62]	April and May 2006	This report was conducted upstream of the VCC planning area in Castaic Mesa. The purpose was to assess the existing on-site biological conditions and the suitability of on-site habitats to support sensitive biological resources.
Newhall Ranch Mitigation Feasibility Study	Dudek & Associates[63]	November 7–10, November 14–18, December 19–21, 2005; and August 15–	The report evaluates mitigation opportunities within the Newhall Ranch Specific Plan Area, including the High Country Special Management Area, for slender mariposa lily, California sagebrush scrub, oak trees, and wetlands within the High Country Special Management area.

60 RECON, *Santa Clara River Corridor Habitat Assessment for Newhall Ranch* (1999); Impact Sciences, Inc., *North Valencia Annexation Buffer Study* (1997).

61 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*; Dudek and Associates, Inc. *Biological Resources Technical Report for the Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *Biological Resources Technical Report for the Valencia Commerce Center*; Dudek and Associates, Inc., *Biological Resources Technical Report for the Entrada Site*.

62 Compliance Biology, Inc., *Biological Resource Assessment, Castaic Mesa Project, Los Angeles County, California* (2006).

63 Dudek and Associates, Inc., *Newhall Ranch Mitigation Feasibility Study* (2007).

Table 4.3-2 (Continued)
Biological Surveys Conducted on the Mission Village Site and Technical Reports Incorporated into EIR

Taxonomic Group/Technical Report	Consultant	Survey Dates/ Season	General Methods
		16, 2006.	Methods included identification, ranking, and prioritization of mitigation opportunities.
Water Quality	GeoSyntec Consultants[64]	November 2006	The Mission Village Water Quality Technical Report addresses the potential impacts of the proposed project on water quality in the Santa Clara River. Potential changes in water quality are addressed for pollutants of concern based on runoff water quality modeling, literature information, and professional judgment.
Flood Technical Report	PACE[65]	November 2006	The Mission Village Flood Technical Report assesses the hydrology and hydraulics of the Santa Clara River corridor as a result of proposed floodplain modifications associated with the Mission Village project. The report analyzes impacts to aquatic and riparian habitats downstream of the project site.

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

65 PACE (Pacific Advanced Civil Engineering, Inc), *Flood Technical Report for the Mission Village Project* (2006).

6. BIOLOGICAL RESOURCES

a. Plant Communities and Land Uses

Field investigations identified 27 plant communities (and alliances/subassociations~~)~~[66]) and three existing land use types (agriculture, developed areas, and disturbed lands) on the project site. The plant communities and land covers are described below and listed in **Table 4.3-3, Existing Vegetation Communities, Floristic Alliances and Associations, and Land Cover Types in the Project Area**. The plant communities correspond to the *Vegetation Classification and Mapping Program, List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database*[67] where applicable. Where plant communities do not fit a defined vegetation community classification, they are defined by their dominant plant species. The plant communities and land uses on the project site have been mapped as shown on **Figure 4.3-4-A1** through **4.3-4-A5, Plant Communities and Land Uses on the Mission Village Project Site**, and **Figure 4.3-~~4B1~~4B, Middle Canyon Spring – Existing ~~Conditions.~~Condition.** A list of all plant species observed on the project site is included in **Appendix 4.3**.

66 Alliances are named for constant dominants or codominants in the uppermost canopy layer. When a group concept contains two layers of vegetation (e.g., tall temperate grassland with sparse broad-leaved evergreen shrubs), the alliance is named after species in the dominant stratum, while the association name includes species from the dominant and uppermost strata. Associations are named with species from the alliance name, and have additional species that represent dominants or indicators from any layer of the vegetation. When an association has several layers, an attempt is made to include species that are dominants or indicators from at least the two most dominant layers. Indicator species are those species, other than dominants, which have been chosen to distinguish an association or alliance from others like it, or to indicate specific environmental conditions that have a controlling influence on vegetation in the community. However, the indicator species are seldom limited to controlling influence on vegetation in the community. Descriptive terms such as wetland, mesic, serpentine, etc., are used sparingly, when species composition for a type is not known well enough to provide full representation using species alone.

67 CDFG, "List of California Terrestrial Natural Communities."

Table 4.3-3
Existing Vegetation Communities, Floristic Alliances and Associations, and Land Cover Types in the Project Area

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	Acreage
Grass and Herb Dominated Communities	Non-Native Grassland	California annual grassland	Not mapped to association level	82.4
Scrub and Chaparral	Coastal Scrub	California sagebrush scrub	Not mapped to association level	517.2
			California sagebrush – *Artemesia*	16.1
			California sagebrush–purple sage	132.9
		California sagebrush–black sage scrub	California sagebrush–black sage	12.9
		California sagebrush–California buckwheat scrub	Not mapped to association level	84.7
		California sagebrush scrub–undifferentiated chaparral	Not mapped to association level	15.5
		Disturbed California sagebrush scrub	Not mapped to association level	0.1
	Undifferentiated Chaparral Scrubs	Not mapped to alliance level	Not mapped to association level	35.9
	Chaparral with Chamise	Chamise chaparral	Not mapped to association level	2.6
		Chamise-hoaryleaf ceanothus chaparral	Not mapped to association level	1.8
	Other Scrubs	Eriodictyon scrub	Not mapped to association level	0.6
Broad Leafed Upland Tree Dominated	Oak Woodland and Forest	Coast live oak forest and woodland	Coast live oak woodland	31.7
		Valley oak forest and woodland	Valley oak woodland	2.3
			Valley oak/grass	3.3
Riparian and Bottomland Habitat (60.000.00)	Other Riparian/Wetland	Herbaceous wetland	Not mapped to association level	4.0
		River wash	Not mapped to association level	115.1
		Alluvial scrub	Not mapped to association level	0.5
		Big sagebrush scrub	Not mapped to association level	24.6
		Giant reed	Not mapped to association level	5.6
	Low to High Elevation Riparian Scrub	Arrow weed scrub	Not mapped to association level	7.6
		Mexican elderberry scrub	Not mapped to association level	5.8
		Mulefat scrub	Not mapped to association level	1.8
		Disturbed mulefat scrub	Not mapped to association level	1.1
	Riparian Forest and Woodland	Southern willow scrub	Not mapped to association level	1.5

Table 4.3-3 (Continued)
Existing Vegetation Communities, Floristic Alliances and Associations, and Land Cover Types in the Project Area

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	Acreage
		Tamarisk scrub and woodland	Shrub tamarisk	1.1
		Fremont cottonwood riparian forest and woodland	Southern cottonwood–willow riparian	109.2
Man-Made Land Cover Types		Agriculture	N/A	224.4
		Developed land	N/A	8.1
		Disturbed land	N/A	404.3
			Total	1,854.5

~~Figure 4.3-4~~

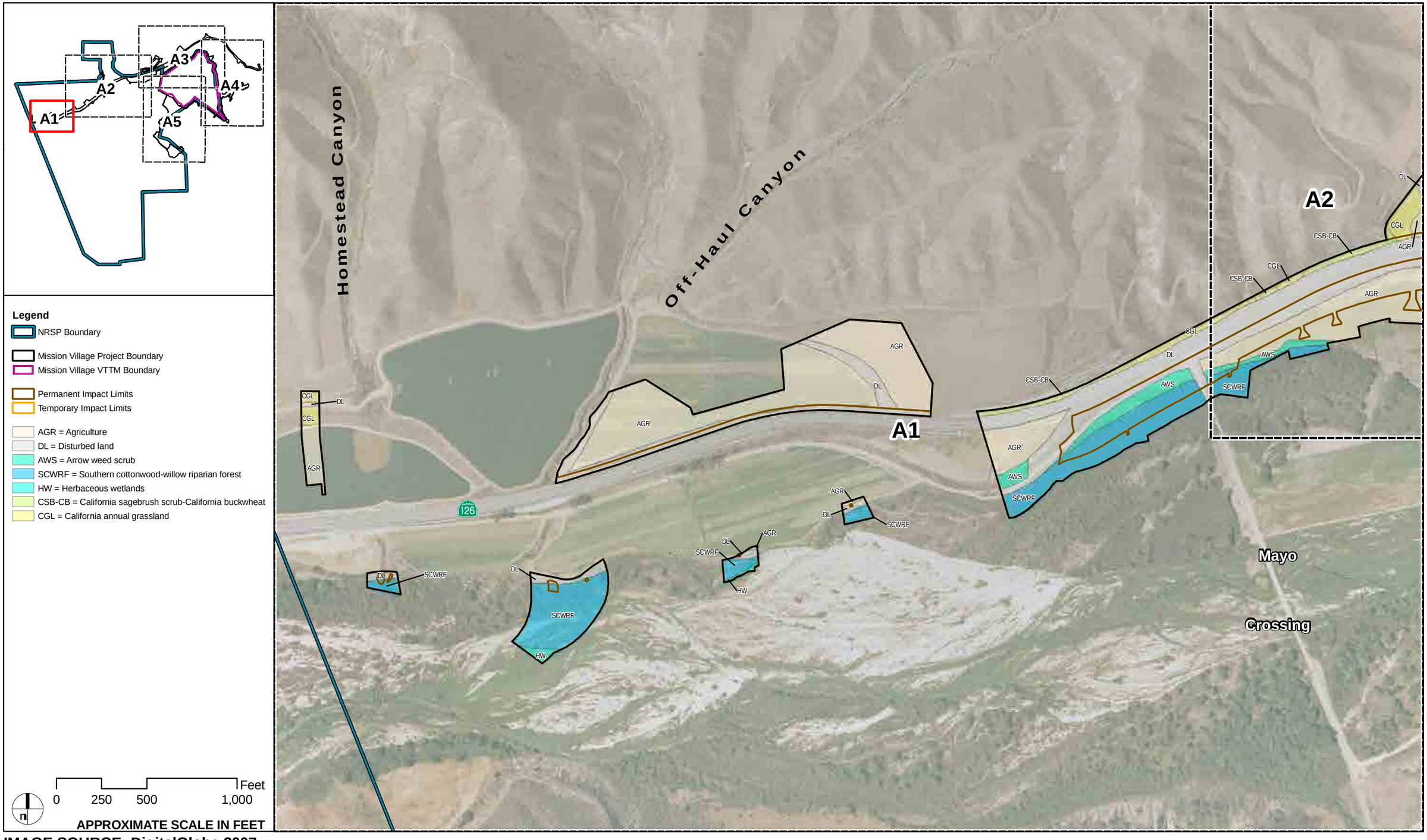


IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-4-A1

Mission Village EIR

DUDEK

Plant Communities and Land Uses at the Mission Village Project Site

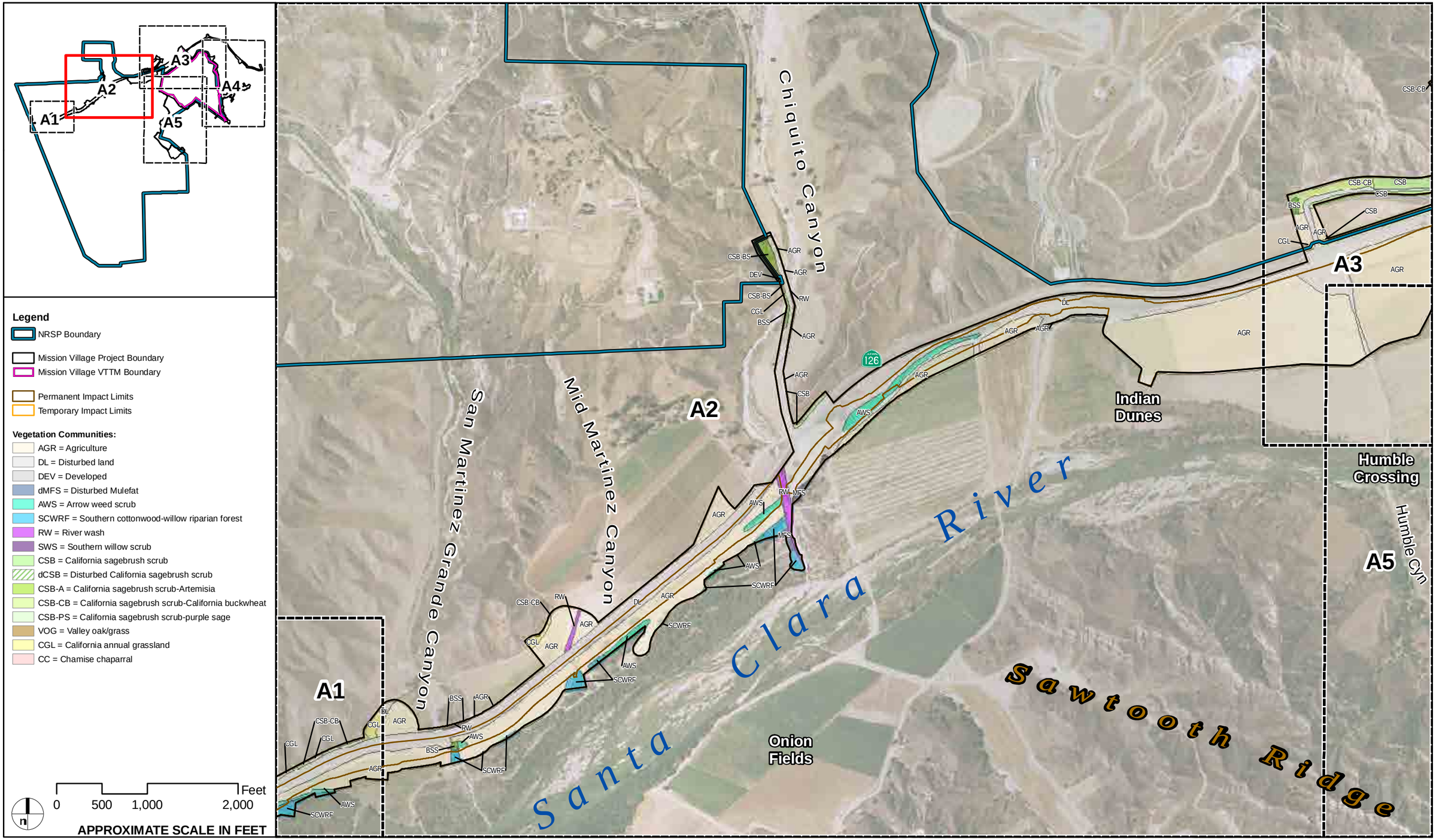


IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-4-A2

Mission Village EIR

DUDEK

Plant Communities and Land Uses at the Mission Village Project Site

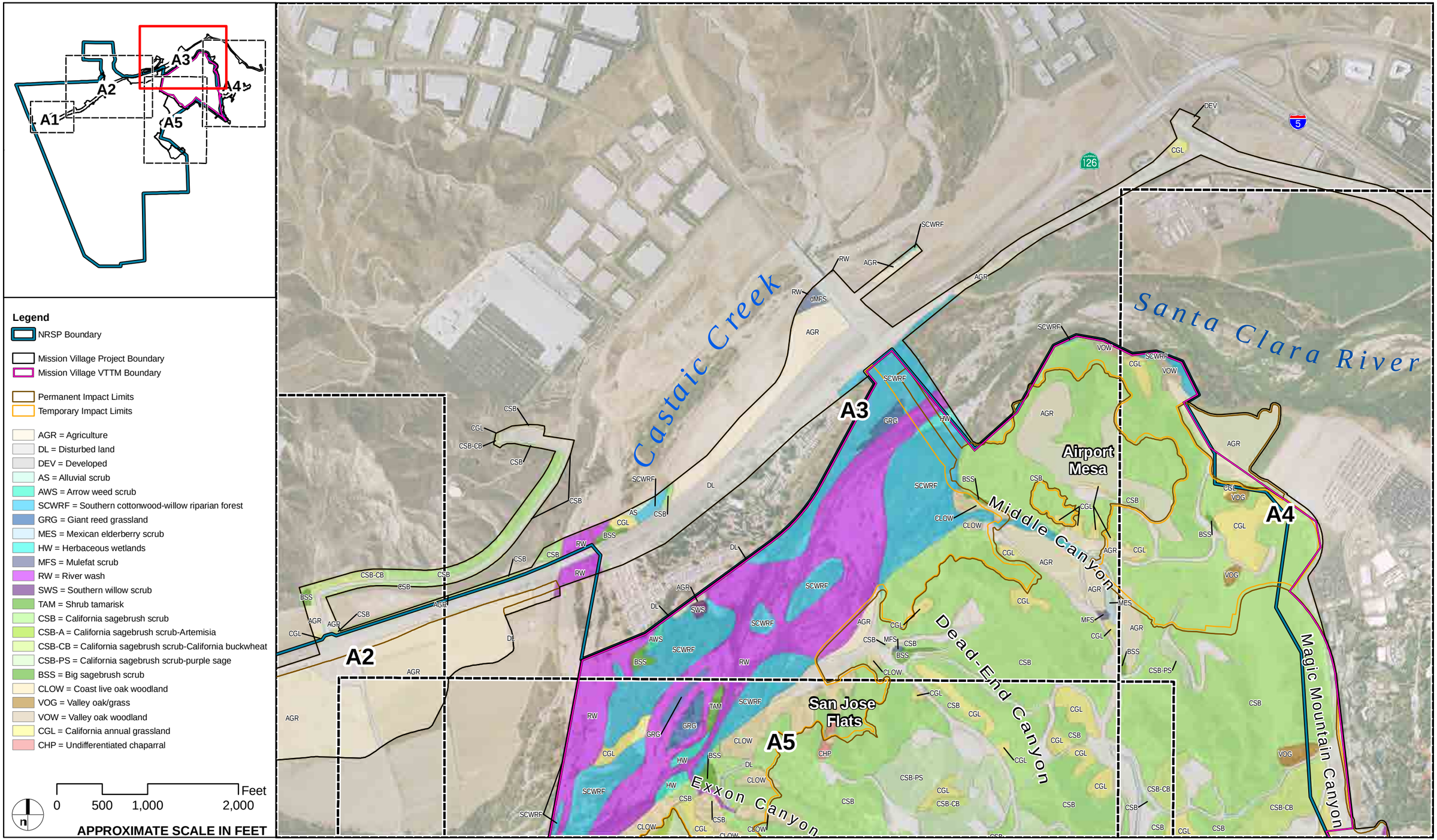


IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-4-A3

Mission Village EIR

DUDEK

Plant Communities and Land Uses at the Mission Village Project Site

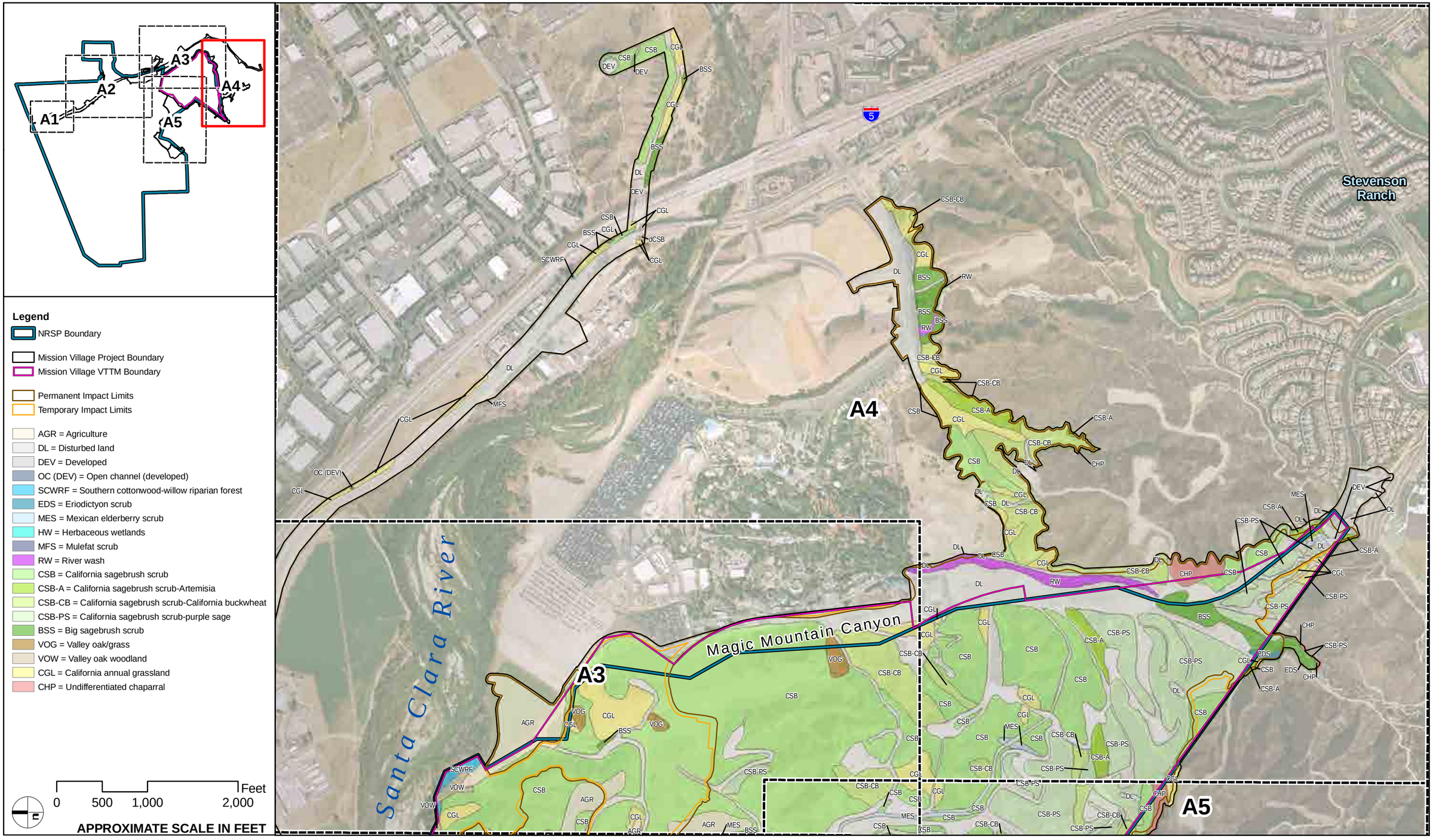


IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-4-A4

Mission Village EIR

Plant Communities and Land Uses at the Mission Village Project Site

DUDEK

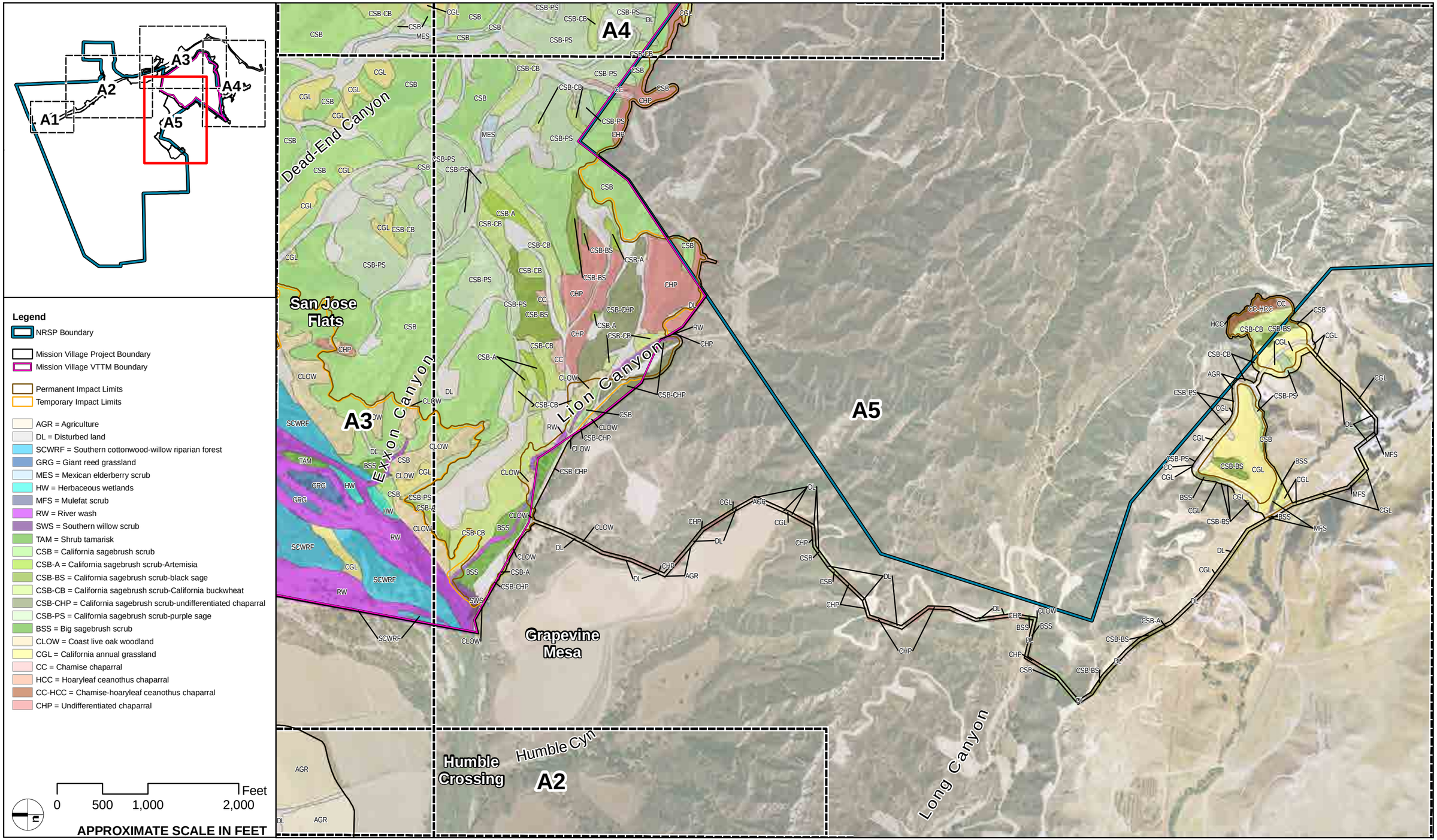


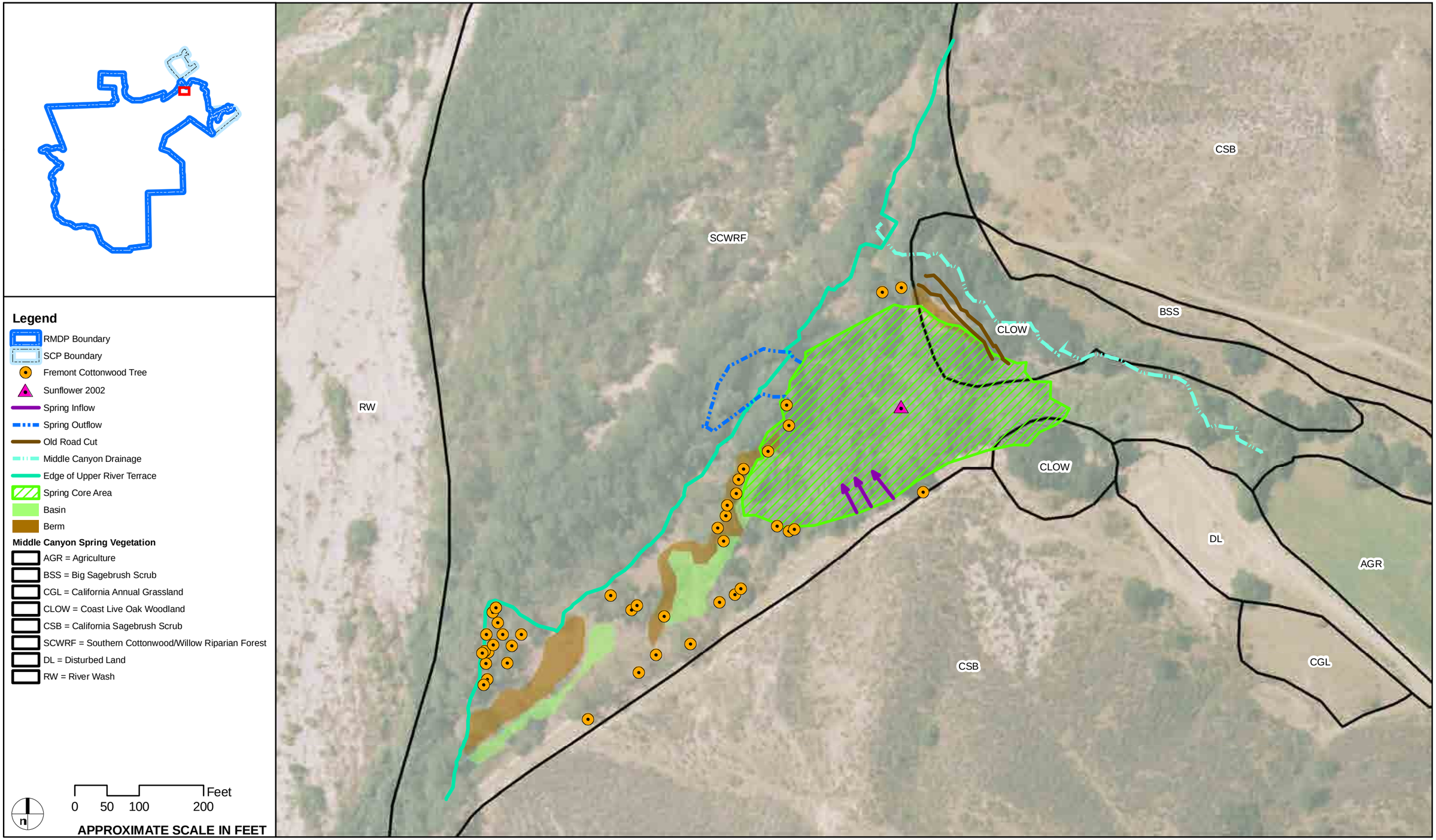
IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-4-A5

Mission Village EIR

DUDEK

Plant Communities and Land Uses at the Mission Village Project Site



AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-~~4-B1~~4B

Mission Village EIR

DUDEK

Middle Canyon Spring - Existing ~~Conditions~~ Condition

Grass and herb dominated communities (40.000.00)[68]

Non-Native Grassland (42.000.00)

California Annual Grassland (42.040.00). There are 82.4 acres of California annual grassland on the project site. This non-native, annual grassland is characterized by a mixture of weedy, introduced annuals, primarily grasses.[69] On site, grassland areas consist of various annual non-native grasses including wild oat (*Avena* spp.), bromes (*Bromus diandrus, B. madritensis* ssp. *rubens, B. hordeaceus*), and slender oat (*Avena barbata*). Other herbaceous species include black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), Russian thistle (*Salsola tragus*), and dove weed (*Eremocarpus setigerus*). It may occur where disturbance by maintenance (e.g., mowing, scraping, disking, and spraying), grazing, repetitive fire, agriculture, or other mechanical disruption has altered soils and removed native seed sources from areas formerly supporting native vegetation.[70]

Scrub and chaparral (30.000.00)

Coastal Scrub (32.000.00)

There are 779.3 acres of coastal scrub (including alliances and associations) on the project site. Of this acreage, 262.1 acres are mapped as the California sagebrush scrub alliance, including 149.0 acres of two California sagebrush scrub associations (which are described below); 12.9 acres mapped as the California sagebrush-black sage association; 84.7 acres mapped as the California sagebrush–California buckwheat scrub alliance; 15.5 acres mapped as the California sagebrush scrub–undifferentiated chaparral alliance, and 0.1 acre disturbed California sagebrush scrub. Dominant native species found in these plant alliances and associations include California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*) and California sagebrush (*Artemisia californica*). Other common plants include various sages (*Salvia leucophylla, S. mellifera, S. apiana*), deerweed (*Lotus scoparius*), California aster (*Lessingia filaginifolia* var. *filaginifolia*), California encelia (*Encelia californica*), giant wild-rye (*Leymus condensatus*), and chaparral bushmallow (*Malacothamnus fasciculatus*). The understory generally is sparse and contains native grasses, including valley needlegrass and native herbs such as wishbone bush (*Mirabilis californica*) and morning glory (*Calystegia macrostegia*).

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68 Species identification numbers refer to California Natural Diversity Database (CNDDB) vegetation classifications for that species.

69 J.O. Sawyer and T. Keeler-Wolf, *Manual of California Vegetation* (Sacramento: California Native Plant Society, 1995); R.F. Holland, *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Sacramento, California: CDFG, 1986.

70 Holland, *Preliminary Descriptions*.

Coastal scrub has been mapped to the alliance level, and in some cases to the association level. Each type is dominated by a particular species that characterizes the alliance/association. In some cases, the dominant plant species may be the only species that is readily apparent. These alliances and associations are listed below.

California Sagebrush Scrub (32.010.00). There are 262.1 acres of California sagebrush scrub alliance and 0.07 acres of disturbed California sagebrush scrub on site. The unburned California sagebrush scrub on site includes a mixture of California sagebrush, black sage, purple sage, and California buckwheat. Other native shrubs in this community located on site include our Lord's candle (*Yucca whipplei*), Mexican elderberry (*Sambucus mexicana*), white sage, California encelia, chaparral bushmallow, giant wild-rye (*Elymus condensatus*), bush monkeyflower (*Mimulus aurantiacus*), coastal prickly-pear (*Opuntia littoralis*), and skunk bush (*Rhus trilobata*). Smaller native species that occur on site include yellow pincushion (*Chaenactis glabriuscula*), long-stem golden yarrow (*Eriophyllum confertiflorum*), common forget-me-not (*Cryptantha intermedia*), common owl's clover, deerweed, wild cucumber (*Marah macrocarpus* var. *macrocarpus*), silver puffs (*Uropappus lindleyi*), slender woolly buckwheat (*Eriogonum gracile* var. *gracile*), granny's hairnet (*Pterostegia drymarioides*), cliff malocothrix (*Malacothrix saxatilis*), and California melic (*Melica imperfecta*). Non-native species occurring on the site include red-stemmed filaree (*Erodium cicutarium*), tocalote (*Centaurea melitensis*), Russian thistle (*Salsola tragus*), horehound (*Marrubium vulgare*), and tree tobacco (*Nicotiana glauca*)).

Two associations of California sage scrub alliance are also present on site: California sagebrush (32.010.01) and California sagebrush–purple sage (32.010.04). These associations were mapped in areas where California sagebrush and purple sage are the co-dominant species, although lesser amounts of the other species listed above may occur.

- California sagebrush–*Artemesia* (association of California sagebrush scrub, dominated only by California sagebrush) (32.010.01)—16.1 acres
- California Sagebrush–Purple Sage (association of California sagebrush scrub, dominated by California sagebrush and purple sage) (32.010.04), including disturbed—132.9 acres.

California Sagebrush–Black Sage Scrub (32.120.00). There are 12.9 acres of this alliance on site, in the California Sagebrush–Black Sage association. In addition to California sagebrush and black sage, this vegetation community supports the following species on site: shrubs, such as yerba santa (*Eriodictyon crassifolium*), our Lord's candle, Great Basin sagebrush (*Artemisia tridentata*), Mexican elderberry, giant wild-rye, and California encelia; native herbaceous species, including yellow-fiddleneck (*Amsinckia menziesii*), common forget-me-not, common eucrypta (*Eucrypta chrysanthemifolia*), California chicory (*Rafinesquia californica*), wild cucumber, and southern sun cup (*Camissonia bistorta*); and non-native species such as short-podded mustard, red-stemmed filaree, and horehound.

California Sagebrush–California Buckwheat Scrub (32.110.00). There are 84.7 acres of this alliance present on site. On site, this vegetation community is dominated by California sagebrush and California buckwheat, and also supports native shrubs such as skunk bush, purple sage, Mexican elderberry, goldenbush (*Ericameria palmeri* var. *pachylepis*), and chaparral bushmallow; native wildflowers including wishbone-bush, California poppy (*Eschscholzia californica*), blue dicks (*Dichelostemma capitatum*), coast goldfields (*Lasthenia californica*), globe and angel gilia (*Gilia capitata* and *G. angelensis*); and non-native species, including red-stemmed filaree and short-podded mustard (*Hirschfeldia incana*).

California Sagebrush Scrub–Undifferentiated Chaparral (modified from 32.300.00 Coastal Sage–Chaparral Scrub). There are 15.5 acres of this alliance present on site. On site, this vegetation community includes native shrubs, such as California sagebrush, skunk bush, California buckwheat, purple sage, and chaparral bushmallow; smaller native species, such as coastal lotus (*Lotus salsuginosus*), angel's gilia (*Gilia angelensis*), blue dicks, California peony (*Peonia californica*), California aster, whispering bells (*Emmenanthe penduliflora*), fascicled tarweed (*Hemizonia fasciculata*), and tansy-leaved phacelia (*Phacelia tanacetifolia*)); and non-native species, including red-stemmed filaree and short-podded mustard.

Undifferentiated Chaparral Scrubs (37.000.00)

There are 40.3 acres of undifferentiated chaparral scrubs and alliances on the project site, including 35.9 acres of undifferentiated chaparral, 2.6 acres of the alliance chamise chaparral (37.101.00), and 1.8 acres of the chamise-hoaryleaf ceanothus chaparral alliance (37.107.00). Species found on site within this plant community include chamise (*Adenostoma fasciculatum*), hoary leaf ceanothus (*Ceanothus crassifolius*), spiny redberry (*Rhamnus crocea*), sugar bush, black sage, toyon (*Heteromeles arbutifolia*), California buckwheat, California encelia, bush monkey flower, mountain mahogany (*Cercocarpus betuloides* var. *betuloides*), blue elderberry, chaparral bushmallow, holly-leaf redberry (*Rhamnus ilicifolia*), holly-leaf cherry (*Prunus ilicifolia*), and heart-leaved penstemon (*Keckiella cordifolia*). The understory is poorly developed due to the dense vegetation cover.

Chaparral with Chamise (37.100.00)

Chamise Chaparral (37.101.00). The 2.6 acres of the mapped chamise chaparral alliance present on site is dominated by chamise and also supports the following: native shrub species, such as hoaryleaf ceanothus, skunk bush, toyon, bladder pod (*Isomeris arborea*), California buckwheat, giant wild-rye, black sage, and California encelia; smaller native plants, including California peony, California aster, wishbone-bush, common forget-me-not, globe gilia, wild cucumber, and chaparral nightshade; and non-native species , including black mustard (*Brassica nigra*) and short-podded mustard.

Chamise–Hoaryleaf Ceanothus Chaparral (37.107.00). There are 1.8 acres of mapped chamise–hoaryleaf ceanothus chaparral present on site and dominated by chamise with hoaryleaf ceanothus also very common.

Other Scrubs

Eriodictyon Scrub. Eriodictyon scrub is dominated by yerba santa (*Eriodictyon crassifolium* var. *nigrescens*). It does not conform with CDFG[71]-defined vegetation communities and is defined here as a scrub community dominated by yerba santa. Eriodictyon scrub occurs in the project area along the southern end of Magic Mountain Canyon and occupies 0.6 acre. On site, eriodictyon scrub is dominated by an almost monotypic stand of yerba santa. This vegetation community does support a few other sparsely distributed native shrubs, including California buckwheat, goldenbush, black sage, and purple sage; native herbaceous species western jimsonweed (*Datura wrightii*) and butterweed (*Senecio flaccidus* var. *douglasii*); and the non-native tocalote.

Broad leafed and upland tree dominated (70.000.00)

Coast Live Oak Forest and Woodland (71.060.00**)**

This alliance on site is mapped to the association level as coast live oak woodland (71.060.19). There are 31.7 acres of coast live oak woodland on the project site. This community occurs at the base of north-facing slopes along the River Corridor and is dominated by coast live oak (*Quercus agrifolia*). The understory is characterized by annual grasses, spiny redberry (*Rhamnus crocea*), skunkbrush, Mexican elderberry, holly-leaf cherry (*Prunus ilicifolia* ssp. *ilicifolia*), wild cucumber, eucrypta, clarkias (*Clarkia* spp.), and bedstraw (*Galium* spp.).

Valley Oak Forest and Woodland (71.040.00)

There are 5.6 acres of valley oak forest and woodland on the project site. Small patches occur within the Magic Mountain Canyon area. In addition to valley oak trees, valley oak woodland and valley oak/grass support native shrubs (Mexican elderberry and coyote brush); native herbaceous species, including miner's lettuce, California fuchsia (*Epilobium canum* ssp. *canum*), common owl's-clover, blue dicks, common lomatium (*Lomatium utriculatum*), fiesta flower, wild cucumber, yellow fiddleneck, blue dicks, arroyo lupine, California goosefoot, coast paintbrush (*Castilleja affinis*), shrubby phacelia, common forget-me-not, yellow fiddleneck, common eucrypta, and arroyo lupine; as well as non-native species (common chickweed, short-podded mustard, black mustard, common sow-thistle, bull thistle (*Cirsium vulgare*), shepherd's purse, milk thistle, cheeseweed, and non-native grasses).

- Two associations of valley oak forest and woodland are also present on site: valley oak woodland (71.040.08) and valley oak/grass (71.040.05). These associations were mapped in areas where California sagebrush and purple sage are the co-dominant species, although lesser amounts of the other species listed above may occur.

71 CDFG, "List of California Terrestrial Natural Communities."

- Valley oak woodland (association of Valley Oak Forest and Woodland - this community is characterized by a predominance of valley oaks in sufficient numbers to form a greater than 20 percent canopy cover) (32.010.01)—2.3 acres

- Valley oak/grass (association of Valley Oak Forest and Woodland) - this community is characterized by a predominance of valley oaks in sufficient numbers to form a less than 20 percent canopy cover) (32.010.04)—3.3 acres.

Riparian and bottomland habitat (60.000.00)

Other Riparian/Wetland Communities

Herbaceous Wetland. There are 4.0 acres of herbaceous wetlands on the project site. These wetlands occur within the banks of the Santa Clara River or its tributaries. Commonly occurring species include Hooker's evening primrose (*Oenothera elata*), cocklebur (*Xanthium strumarium*), and immature mulefat (*Baccharis salicifolia*), willows (*Salix* spp.), and Fremont cottonwood (*Populus fremontii*) seedlings and saplings. This community does not fit into a defined plant community classification and was defined on site by the dominant plant species.

River Wash. There are 115.1 acres of river wash on the project site. The stretch of the Santa Clara River occurring within and bordering the location of the proposed bridge and haul routes, as well as areas within Magic Mountain Canyon, are sparsely vegetated and subject to scouring by seasonal storm flows. Soils are sandy riverwash and gravel, and in places form sand bars and low terraces within the channels. Shrub species occurring in and adjacent to the channel include mulefat, sandbar willow, tamarisk, scale-broom, sandwash groundsel (*Senecio flaccidus* var. *douglasii*), big saltbush (*Atriplex lentiformis* ssp. *lentiformis*), and big sagebrush. Smaller species growing in the riverbed include white sweetclover (*Melilotus albus*), buckwheat (*Eriogonum baileyi*), cocklebur, California croton (*Croton californicus*), California evening primrose (*Oenothera californica* ssp. *californica*), Mediterranean schismus (*Schismus barbata*), foxtail chess (*Bromus madritensis* ssp. *rubens*), and annual bur-sage (*Ambrosia acanthicarpa*).

Alluvial Scrub

There is 0.5 acre of alluvial scrub on the project site. This community occurs in creeks and washes on alluvial material. On site, this community occurs solely within the Santa Clara River and its tributaries. Species found include big sagebrush, mule fat, tree tobacco, scalebroom (*Lepidosparum squamatum*), big saltbush (*Atriplex lentiformis*), and California sagebrush. This community does not fit into a defined plant community classification and was defined on site by the dominant plant species.

Big Sagebrush Scrub (35.110.00). There are 24.6 acres of big sagebrush scrub on the project site. As a CDFG[72]-recognized alliance (35.110.00) of Great Basin Scrub, big sagebrush scrub is a widespread and characteristic shrub of the high desert and Great Basin floristic provinces, where it often occurs with pines and junipers. In the Santa Clarita area, however, it seems to occur in vegetation transitional to more typical cismontane coastal scrub. Big sagebrush scrub occurs along the outer margins of the floodplains of Magic Mountain Canyon, Lion Canyon, and the Santa Clara River. On the site (and within the greater Newhall Ranch landscape), big sagebrush scrub is characterized by almost pure stands of big sagebrush, including *Artemisia tridentata* ssp. *tridentata*, *A. tridentata* ssp. *parishii*, and presumed hybrids of these subspecies.[73]

Giant Reed (42.080.00)

There are 5.6 acres of giant reed on the project site. This non-native plant community is comprised of monotypic or nearly monotypic stands of the invasive grass giant reed (*Arundo donax*). Typically it occurs on moist soils and in streambeds. Within the project site, giant reed is associated with the Santa Clara River.

Low to High Elevation Riparian Scrub (63.000.00)

Arrow Weed Scrub (63.710.00). There are 7.6 acres of arrow weed scrub on the project site. This community occurs in moderate to dense streamside thickets strongly dominated by arrowweed (*Pluchea sericea*). On site, arrow weed scrub occurs along the banks of the Santa Clara River or its tributaries and is dense, with a few tamarisk individuals interspersed throughout.

Mexican Elderberry Scrub (63.410.00). There are 5.8 acres of Mexican elderberry scrub on the project site. This open scrub community is dominated by Mexican elderberry but also contains scattered laurel sumac, toyon, and lemonadeberry, as well as an understory of grasses.

Mulefat Scrub (63.510.00)

There are 1.8 acres of mulefat scrub and 1.1 acres of disturbed mulefat scrub on the project site. This plant community is a relatively low (two to three m), dense, shrubby plant community that occurs in riparian vegetation, edges of catchment basins, and in canyons. It is dominated by mulefat and may contain a small number of arroyo willow (*Salix lasiolepis*), upland shrubs, and facultative herbs. Mulefat scrub is a seral community that occurs

72 CDFG, "List of California Terrestrial Natural Communities."

73 Dudek and Associates, Inc., *Newhall Ranch High Country Specific Management Area Biological Resources Technical Report* (2006).

mainly along major drainages and floodplains where the riparian vegetation is open or disturbed. Frequent flooding and/or scouring apparently maintain this community in an early successional state.[74]

Riparian Forest and Woodland (61.000.00)

Southern Willow Scrub (63.130.00). There are 1.5 acres of southern willow scrub on the project site. This plant community is present in locations within the floodplain of Castaic Creek and the Santa Clara River. This community is dominated by willow shrubs, but also includes mulefat and Mexican elderberry. The understory is sparse, with species such as mugwort, shrubby phacelia (*Phacelia ramosissima*), and annual grasses present.

Tamarisk Scrub and Woodland (63.810.00). This alliance on site was mapped at the association level as shrub tamarisk (63.810.02). There are 1.1 acres of shrub tamarisk on the project site. Shrub tamarisk occurs on site in small, fairly monotypic patches in Castaic Creek near the confluence with the Santa Clara River, and just upstream of this confluence in the Santa Clara River. On site, shrub tamarisk is dominated by tamarisk but also includes scattered native shrubs (coyote brush, quail brush, and mulefat), smaller native species (winged three-square, chaparral nightshade, cocklebur), and non-native species (horehound and short-podded mustard).

Southern Cottonwood-Willow Riparian Forest (61.130.02). There are 109.2 acres of southern cottonwood-willow riparian forest on the project site. This community occurs on low terraces above the main channel of the Santa Clara River and along Castaic Creek. It consists of tall, open, broadleaved, winter-deciduous trees, and is dominated by Fremont cottonwood (*Populus fremontii* ssp. *fremontii*) and willows (*Salix laevigata*, *S. exigua*, *S. lasiolepis*). Understory plants include mulefat (*Baccharis salicifolia*), arrow weed (*Pluchea sericea*), Mexican elderberry, mugwort (*Artemisia douglasiana*), hoary nettle (*Urtica dioica* ssp. *holosericea*), ripgut grass (*Bromus diandrus*), and alkali rye (*Leymus triticoides*). Two invasive plant species, giant reed (*Arundo donax*) and tamarisk (*Tamarix ramosissima*), are also common throughout this plant community.

The Middle Canyon Spring complex occurs within the southern cottonwood-willow riparian forest plant community on the project site. Current surface size of the spring area can be delimited within an approximately 400-foot by 400-foot polygon. The spring is located on what appears to be an upper terrace of the Santa Clara River. Approximately 4 feet of elevation separates this terrace from the river floodplain. An intermediate elevation terrace or geological structure is present between the spring terrace and the Santa Clara River floodplain. Spring flows currently saturate a core area of the spring and then drain off via two excavated channels that drain water onto the intermediate terrace, whereupon the water sheet flows until spilling over the terrace edge into the Santa Clara River floodplain. The spring vegetation exhibits a clear pattern in response to these characteristic flow patterns. Rushes (*Scirpus* sp.) appear to be associated with more consolidated flow while more dichotomous vegetation appears where sheet flow

[74] Holland, *Preliminary Descriptions*.

is present. Within this setting, two sensitive species (the Newhall sunflower (*Helianthus inexpectatus*) and *Pyrgulopsis castaicensis* n. sp.) find habitat conditions that specifically fulfill the needs and tolerances of each species and allow these populations to survive and persist.

Man-Made Land Cover Types

Agriculture. There are 224.4 acres of land on the project site actively used for agricultural purposes. This land cover is regularly disked and generally occurs in the northern portion of the project site.

Developed Land. There are 8.1 acres of developed land on the project site. These areas primarily include road corridors, parking lots, commercial areas, and various impermeable surfaces throughout the project site.

Disturbed Land. There are 404.3 acres of disturbed lands on the project site. These areas include portions of the site that are mostly void of vegetation, consisting primarily of dirt roads and oil pads, and still retain permeable surfaces.

b. Common Wildlife

Discussed below are representative common wildlife species (those not provided a sensitivity status by regulatory agencies) that were observed on the project site during the field surveys. A complete list of wildlife species observed or potentially occurring on the Mission Village project site is provided in **Appendix 4.3**. Special-status wildlife species observed or potentially occurring on the project site are discussed under ~~**subsection**~~**Subsection 7, Sensitive Biological Resources**, below.

(1) Amphibians and Reptiles

The Santa Clara River and other on-site drainages provide habitat for amphibians, including toads, frogs, and salamanders. Western toad (*Bufo boreas)*, Pacific chorus frog (*Pseudacris regilla*) and California chorus frog (*Pseudaris cadaverina*), all of which are common in the project area, have been observed in the portion of the river bordering the project site. Additionally, numerous tadpoles, juveniles, and adult forms of the invasive African clawed frog (*Xenopus laevis*) were observed throughout backwater areas of the Santa Clara River along and adjacent to the project site.[75] No other common amphibian species have been observed or detected during the site surveys. Three salamander species that are relatively common in suitable habitat within their ranges have some potential to occur on or adjacent to the project site: arboreal salamander (*Aneides lugubris*), black-belly salamander (*Batrochoseps nigriventris*), and ensatina (*Ensatina eschscholtzii*). However, these species are not expected to be common or widespread on the project site because they were not observed during the several amphibian and semi-

[75] Compliance Biology, Inc., *Results of the Focused Western Spadefoot Toad Surveys on the Mission Village Project Site.*

aquatic reptile surveys in the Newhall Ranch Specific Plan area (see **Table 4.3-2**). Amphibians on or adjacent to the project site are expected to be largely restricted to the riverine and riparian habitats.

Common reptile species observed on the project site include western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), red coachwhip (*Masticophis flagellum piceus*), San Diego alligator lizard (*Elgaria malticarinata webbii*), western skink (*Eumeces skiltonianus*), San Diego gopher snake (*Pituophis catenifer annectens*), common kingsnake (*Lampropeltis getulus*) and southwestern rattlesnake (*Crotalus viridis helleri*). Common reptiles are expected to be abundant throughout the project site.

(2) Birds

The agricultural, grassland and scrub habitats on the project site provide foraging habitat for a number of raptor species, including turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*) and American kestrel (*Falco sparverius*). The oak trees located throughout the site provide nesting habitat for raptors. Other bird species observed within the upland portions of the project site include American robin (*Turdus migratorius*), house finch (*Carpodacus mexicanus*), savannah sparrow (*Passerculus sandwichensis*), Brewer's blackbird (*Euphagus cyanocephalus*), house sparrow (*Passer domesticus*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), European starling (*Sturnus vulgaris*), white-throated swift (*Aeronautes saxatalis*), California towhee (*Pipilo crissalis*), canyon wren (*Catherpes mexicanus*), rock wren (*Salpinctes obsoletus*), western scrub-jay (*Aphelocoma californica*), California thrasher (*Toxostoma redivivum*), hermit thrush (*Catharus guttatus*), white-crowned sparrow (*Zonotrichia albicollis*), yellow-rumped warbler (*Dendroica coronata*), Say's phoebe (*Sayornis saya*), and California quail (*Callipepla californica*).

The riparian habitats on and bordering the project site provide nesting and foraging habitat for numerous raptor and passerine bird species. Bird species commonly observed within the riparian plant communities include bushtit (*Psaltriparus minimus*), Wilson's warbler (*Wilsonia pusilla*), orange-crowned warbler (*Vermivora celata*), black phoebe (*Sayornis nigricans*), Bewick's wren (*Thryomanes bewickii*), brown-headed cowbird (*Molothrus ater*), wrentit (*Chamaea fasciata*), cliff swallow (*Petrochelidon pyrrhonota*), tree swallow (*Tachycineta biocolor*), American crow (*Corvus brachyrhynchos*), Nutall's woodpecker (*Picoides nutallii*), song sparrow (*Melospiza melodia*), common yellowthroat (*Geothlypis trichas*), ruby-crowned kinglet (*Regulus calendula*) and numerous other species.

Several bird species that were identified by Los Angeles Audubon Society as Los Angeles County's Sensitive Bird Species[76] have potential to occur on or adjacent to the Mission Village project site, including Virginia rail (*Rallus limicola*), sora (*Porzana carolina*), greater roadrunner (*Geococcyx californianus*), lesser nighthawk (*Chordeiles*

[76] Los Angeles Audubon, *Los Angeles County's Sensitive Bird Species* (2009).

acutipennis), belted kingfisher (*Megaceryle alcyon*), hairy woodpecker (*Picoides villosus*), gray flycatcher (*Empidonax wrightii*), marsh wren (*Cistothorus palustris*), mountain bluebird (*Sialia currucoides*), Swainson's thrush (*Catharus ustulatus*), Wilson's warbler, vesper sparrow (*Pooecetes gramineus*), and western meadowlark (*Sturnella neglecta*). Los Angeles Audubon considers these species at risk locally due to the following factors: they are susceptible to possible extirpation as a winter and/or breeding species in the County; they are sensitive to urbanization; their population trends, if known, may be in decline; the County's importance to the species; and their limited distribution. The species from the County list identified above are not, however, officially designated by federal, state, or local agencies as special-status species. For that reason, they are not analyzed as special-status species in this EIR. Instead, these species are analyzed as part of the common wildlife category, and the mitigation for significant impacts to common bird species applies to these species as well.

(3) Mammals

A variety of common mammal species occur in the vicinity of the project site. During mammal surveys (which included small mammal trapping for rodents) conducted on and bordering the project site in 2004, the following common species were observed or identified by tracks, scat, or other sign: mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), desert cottontail (*Sylvilagus auduboni*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), raccoon (*Procyon lotor*), gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*), western harvest mouse (*Reithrodontomys megalotis*), deer mouse (*Peromyscus maniculatus*), dusky-footed woodrat (*Neotoma fuscipes*), California mouse (*Peromyscus californicus*), California pocket mouse (*Chaetodipus californicus*), California vole (*Microtus californicus*) and Pacific kangaroo rat (*Dipodomys agilis*). The medium to larger mammals observed on the site (i.e., mule deer, coyote, bobcat, desert cottontail, raccoon, fox, striped skunk) do not typically rely on a specific single habitat and are presumed to utilize all of the habitat types on the project site. Similarly, based on the results of the 2004 surveys, small mammals were found to utilize all the habitat types on the project site. In addition**,** the following common bat species were confirmed in the vicinity of the project site: big brown bat (*Eptesicus fuscus*), western red bat (*Lasiurus blossevillii*), hoary bat (*Lasiurus cinereus*), California myotis (*Myotis californicus*), long-legged bat (*Myotis volans*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), western pipistrelle (*Pipistrellus hesperus*), and Mexican free-tailed bat (*Tadarida brasiliensis*).

(4) Gastropods

Three native species of shoulderband snails were detected during the surveys for the Trask shoulderband snail within the Newhall Ranch Specific Plan area and nearby areas, including Southern California shoulderband snail (*Helminthoglypta tudiculata* cf. *H.t. convicta*), Vasquez rocks shoulderband snail (*Helminthoglypta vasquezi*), and Grapevine shoulderband snail (*Helminthoglypta uvasana*). None of these species are designated by CDFG as special-status species. The Southern California shoulderband snail and Vasquez rocks shoulderband snail were

detected in the project area in a variety of habitat types, including California annual grassland, coastal scrub, and in riparian areas. All snails were found in association with their expected microclimates (*i.e.*, under rocks, in leaf litter, woody debris piles, under the decaying bases of yucca bushes, and similar moist environments). Vasquez rocks shoulderband snail was found at several locations in the proposed project area and proposed open space areas, including the mouth of Middle Canyon; portions of upper Middle Canyon; and the Magic Mountain Canyon watershed. Southern California shoulderband snail was found at several locations in the proposed project area, including the Middle Canyon area. Grapevine shoulderband snail was not detected in the project area, but was located in the Piru Creek floodplain near the confluence with the Santa Clara River. This species was previously known only from the type locality near Fort Tejon State Historical Park in Kern County. This detection extends the known range of this species at least 42 miles southwest of the type locality and greatly expands the known distribution of the species. Based on these new occurrences, this species is expected to also occur in the project area.

c. Wildlife Habitat Linkages/Regional Open Space

Wildlife corridors are described as pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or human induced factors such as urbanization. The fragmentation of natural habitat creates isolated "islands" of vegetation that may not provide sufficient area or resources to accommodate sustainable populations for a number of species. Wildlife corridors: (1) allow animals to move between remaining habitats to replenish depleted populations and increase the available gene pool; (2) provide live-in habitat for some species; (3) provide escape routes from fire, predators, and human disturbances, which reduce the risk that catastrophic events (such as fire or disease) will result in population or species extinction; and (4) serve as travel paths for individual animals moving throughout their home range in search of food, water, mates, and other needs, or for dispersing juveniles in search of new home ranges.

The following analysis of wildlife movement and habitat linkages between the project site and surrounding open space areas is based on extensive field visits conducted over the past decade in association with the Newhall Ranch Specific Plan Program EIR, the Final Additional Analysis and the related Biological Constraints Analysis (BCA) and Biota Report for the Specific Plan. It is also based on (1) a review of available aerial photography and mapping of the Specific Plan and adjacent watersheds in both Los Angeles County and Ventura County; (2) an evaluation of habitat types and distribution associated with the Mission Village project site and surrounding areas; (3) a review of the animal species known to use or expected to utilize these habitats; and (4) the conceptual regional wildlife habitat linkage design identified in the South Coast Missing Linkages Project.[77] In this discussion, wildlife movement and habitat linkages are addressed from a watershed and habitat perspective, as the preservation of habitats within

[77] Penrod et al., *South Coast Missing Linkages Project*.

watersheds that connect remaining open space areas is critical to providing movement corridors for the variety of wildlife species that occur in the Specific Plan area, inclusive of the Mission Village project site.

The Mission Village project site, indeed the Newhall Ranch Specific Plan area, is part of a larger regional wildlife movement interface that exists between the Los Padres/Angeles National Forest, the Santa Clara River, and the Santa Susana Mountains.[78] This interface spans a distance of approximately 35 miles, from approximately Saticoy on the west in Ventura County to Castaic Junction on the east in Los Angeles County. The Santa Clara River forms the central east-west corridor of this interface, extending throughout the Newhall Ranch Specific Plan area and west into Ventura County. As shown on **Figure 4.3-5, Potential Wildlife Movement Corridors**, the Newhall Ranch Specific Plan site represents an approximately 2- to 5-mile-wide portion (6 to 14 percent) of this 35-mile-wide interface.

78 e.g., Penrod et al., *South Coast Missing Linkages Project*.

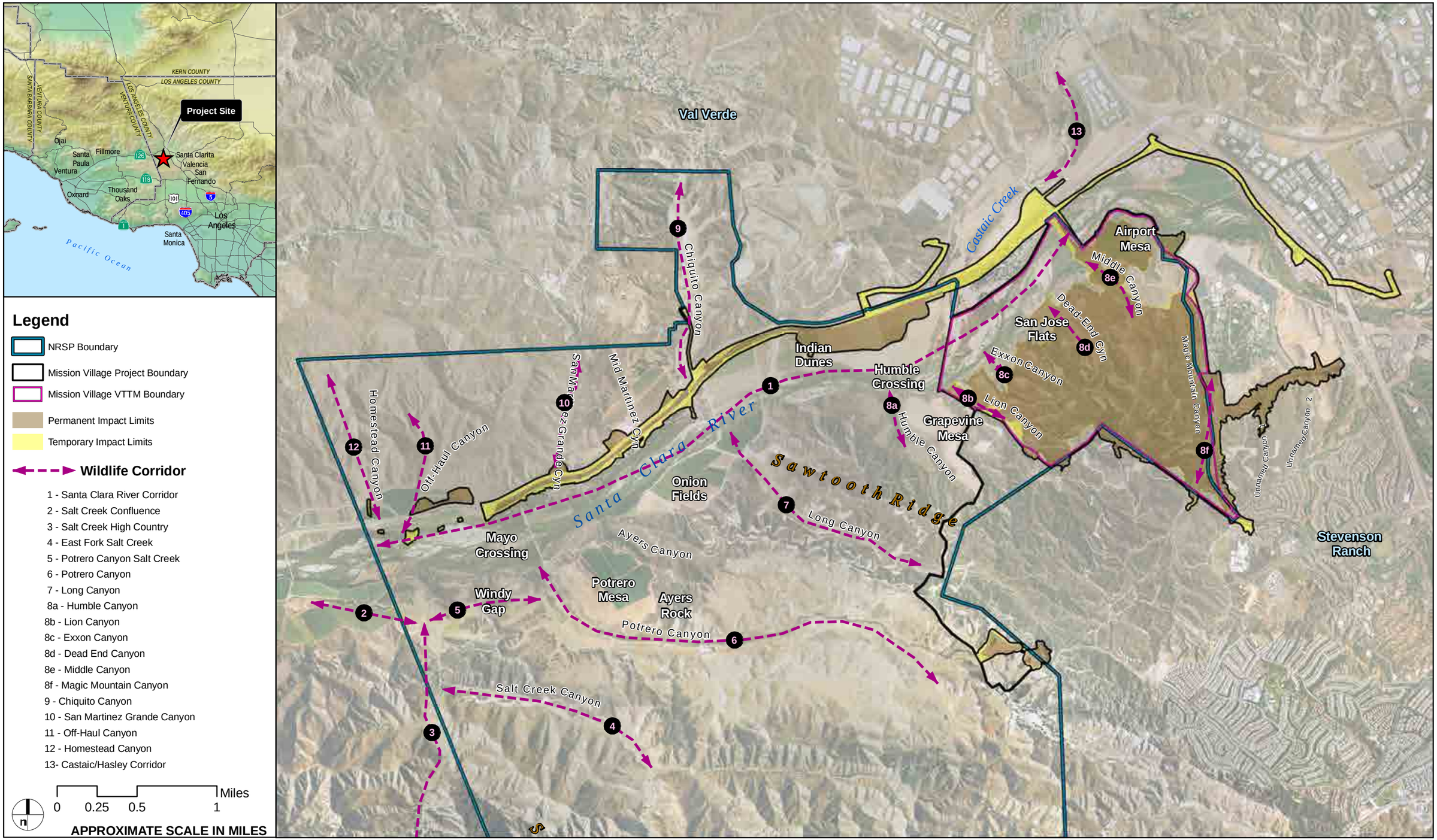

IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-5

Mission Village EIR

Potential Wildlife Movement Corridors

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The Santa Clara River flows from its origins in the San Gabriel Mountains to where it eventually empties into the Pacific Ocean approximately 50 miles to the west. The river is an important migration and genetic dispersion corridor for many wildlife species, including aquatic taxa, riparian obligate species (resident and migratory) and larger, more mobile terrestrial animals.

Penrod et al.[79] identified regional wildlife habitat linkages that would provide upland landscape-scale habitat connectivity between the Santa Susana Mountains to the south and the Los Padres National Forest to the north (**~~subsection~~Subsection 4.3.9.b.1.e**). These conceptual linkages encompass the High Country SMA/SEA 20 and the Salt Creek area within the project site and the Santa Clara River west of the project site. Penrod et al.[80] considered the High Country SMA/SEA 20 and Salt Creek area, along with regional open space conservation areas and initiatives such as "SOAR,"[81] in recommending a linkage design that would connect the Santa Monica Mountains, San Gabriel Mountains, and the Sierra Madre Mountains. This linkage design was also based on a "least cost analysis" that quantitatively models the most efficient routes that target animals could take to travel between these open space areas.[82]

Within the Newhall Ranch Specific Plan area, south of the Santa Clara River, several drainages, including Long Canyon, Potrero Creek, and Salt Creek, are directly connected to the Santa Clara River through their own drainage systems, providing potential wildlife movement routes between the river and the Santa Susana Mountains to the south. These drainages serve to provide habitat linkages between the High Country areas within the Newhall Ranch Specific Plan and the Santa Clara River. Other drainages, including Chiquito Canyon, San Martinez Grande, and Castaic Creek, connect the river to open space areas to the north and eventually the Angeles National Forest further north and the Los Padres National Forest to the northwest.

Chiquito Canyon is located west of the project site, and the Castaic Creek drainage is chiefly north of the project site. Both of these drainages are tributaries of the Santa Clara River and serve as suitable habitat/movement corridors for wildlife route from the river to the north toward the Angeles and Los Padres National Forests. Given the presence of a culvert underneath SR-126 (located to the north of the Chiquito Canyon-Santa Clara River confluence along the western edge of the project site), wildlife could cross under SR-126 and continue to move north through Chiquito Canyon.

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79 Ibid.

80 Ibid.

81 Save Open-Space and Agricultural Resources (SOAR) is a non-profit organization that seeks to maintain agricultural, open space, and rural lands within Ventura County and surrounding regions. Development activities within the SOAR boundaries are limited by County Ordinance.

82 In this context, "least cost" refers to the amount of energy an animal would expend in traveling between habitat areas.

As previously stated, much of the Mission Village tract map site is used for agricultural purposes and a portion of it is disked regularly. These activities, and existing suburban development located nearby, limit the use of the main portion of the site as a movement corridor for most wildlife. While several species are expected to forage occasionally over and within the project area, most species likely move through the area along the canyons and areas west of the project site. However, the large expanses of habitat (including drainages and woodlands) on the Mission Village project site provide potential movement pathways for wildlife moving between the Santa Susana Mountains and the Santa Clara River (which, as discussed above, is an important migration and genetic dispersion corridor for many wildlife species). Additionally, wildlife traveling along the river corridor (through the project site) can access the Castaic Creek drainage, which serves as a suitable habitat/movement corridor for wildlife from the Santa Clara River (north) towards the Angeles and Los Padres National Forests. Given the above, the Mission Village project site is considered part of a locally and regionally important wildlife movement corridor.

Finally, from a broader regional perspective, Dudek completed a comprehensive study of the Santa Clara River watershed.[83]

That study analyzed the cumulative impacts of development, including past projects, current land use zoning, and future and approved projects in the Los Angeles County portion of the watershed. Based on that analysis, the study found that while land conversion has occurred in the Santa Clara River Valley and adjacent foothills, and will continue to occur in the future, the vast majority of the watershed is comprised of natural lands. The study also concluded that the additional impacts of the Mission Village project, the Landmark Village project, Newhall Land and Farming projects in general, and other planned and approved projects in the Los Angeles County portion of the watershed are relatively small in proportion to the size of the overall watershed. Key findings of the study include:

- The Santa Clara River watershed is and for the most part will remain undeveloped—lands converted to agriculture and urban development comprise about 10 percent of the Los Angeles County portion of the upper watershed. Planned and approved projects in Los Angeles County (including the City of Santa Clarita) would increase the amount of development in the upper watershed by about 3 percent.

- The watershed includes substantial existing public lands and planned open spaces that will be protected in perpetuity. Based on current public lands and currently zoned open space, approximately 71 percent of the upper watershed (733,526 acres) is existing or zoned open space.

- Under current land use zoning, important biological and physical features of the entire watershed would be retained. The major vegetation communities (coastal scrubs, chaparral, non-

83 Dudek, *Draft Santa Clara River Watershed Study* (2008).

native grassland, woodlands and forest, and riparian/wetlands) will remain relatively common in the watershed.

- The Newhall Ranch Specific Plan area comprises a very small portion (less than 2 percent) of the entire watershed and is limited to a small area in the southern portion of the watershed. Planned development on the Newhall Ranch Specific Plan area (including the proposed Mission Village project) would impact 1 percent of the entire watershed.

Although encroachment by past development (including agriculture) has caused habitat loss and fragmentation and impacts to species in the watershed, the Dudek study concluded that the existing and proposed cumulative development in the watershed will not significantly impact sensitive biological resources, based on the findings noted above. In addition, the Dudek study found that the Santa Clara River is still a natural river system and provides habitat for several listed threatened or endangered species such as the least Bell's vireo, southwestern willow flycatcher, unarmored threespine stickleback, and arroyo toad, as well as a number of non-listed special-status species.

7. SENSITIVE BIOLOGICAL RESOURCES

The following discussion focuses on those species and plant communities considered by state and/or federal resource agencies, and by recognized conservation organizations, to be of special status, that are known to occur, or could potentially occur, on the project site. A list of all plant and wildlife species, both common and special status, observed or expected to potentially occur on the project site is found in **Appendix 4.3**.

All of the surveys and reports referenced in this section are incorporated by reference, as permitted in section 15150 of the *State CEQA Guidelines*. All referenced documents are available for public inspection and review upon request to: County of Los Angeles, Department of Regional Planning, 320 West Temple Street Los Angeles, California 90012 (Samuel Dea; (213) 974-4808) or Impact Sciences, Inc., 803 Camarillo Springs Road, Suite A-1, Camarillo, California 93012 (Susan Tebo; (805) 437-1900). Additionally, many of these documents are included in the appendices to the Newhall Ranch Resource Management and Development Plan and the Spineflower Conservation Plan Draft EIS/EIR (SCH No. 2000011025), and can be obtained from the California Department of Fish and Game's Web site at http://www.dfg.ca.gov /regions/5/newhall/docs/.

a. Special-Status Plants

For purposes of the analysis presented in this subsection, special-status plants include those species that are: (1) state or federally listed as Rare, Threatened, or Endangered; (2) federal candidates for listing; (3) proposed for state or federal listing; (4) included on Lists 1, 2, 3 or 4 of the CNPS Inventory of Rare and Endangered Plants of California

(CNPS Inventory); (5) species of undescribed taxa; or (6) species designated as special-status by the County of Los Angeles. Plants included on the CNPS Inventory are broken down into the following classifications: List 1A is comprised of plants presumed extinct in California; List 1B is comprised of plants that are Rare, Threatened, or Endangered in California and elsewhere; List 2 is comprised of plants that are Rare, Threatened, or Endangered in California, but more common elsewhere; List 3 is comprised of plants about which more information is needed (a review list); and List 4: plants of limited distribution (a watch list).

Additionally, there is a second designation that follows the List classification, denoting the threat classification. When a List number is assigned to a special-status plant, a further designation of ".1" means that the plant is seriously endangered in California, a further designation of ".2" means that the plant is fairly endangered in California, and a further designation of ".3" signifies that the plant is not considered to be very endangered in California. Therefore, for example, the slender mariposa lily discussed below is a CNPS List 1B.2 plant, meaning the CNPS has classified this species as being Rare, Threatened, or Endangered in California and elsewhere, and further, the threat classification means that the plant is fairly endangered in California.

Based on a review of the CNDDB and CNPS databases and the survey reports prepared for the Newhall Ranch Specific Plan area and the project site, a total of 41 special-status plant species were identified as occurring in the region. This list formed the basis of the following analysis, wherein each of the identified species is addressed in one of the following two sections: **~~subsection~~Subsection 7.a.(1)** addresses the special-status plant species observed on the site during focused surveys; and **~~subsection~~Subsection 7.a.(2)** addresses the special-status plant species that are known to occur in the project area, but were not observed on or adjacent to the project site during focused surveys. **Table 4.3-2**, above, details the specificity of the focused surveys.

(1) Special-Status Plant Species Observed on or Adjacent to the Project Site

Special-status plant species that were observed on the project site during focused surveys include San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*), slender mariposa lily (*Calochortus clavatus* var. *gracilis*), mainland cherry (*Prunus ilicifolia* ssp. *ilicifolia*), island mountain-mahogany (*Cercocarpus betuloides* var. *blancheae*), Parish's sagebrush (*Artemisia tridentata* ssp. *parishii*), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), Peirson's morning-glory (*Calystegia peirsonii*), Southern California black walnut (*Juglans californica*), and Newhall sunflower (*Helianthus inexpectatus*). In addition, a potentially undescribed species was observed: an undescribed everlasting (*Gnaphalium* sp. *nova)*. While these plants currently have no sensitivity status, it is described in this report because of there unique nature and potential to be assigned a sensitivity status in the future. These nine species are discussed in more detail below, and their locations with respect to the project site are shown on **Figure 4.3-6, Special-Status Plant Species Locations.**

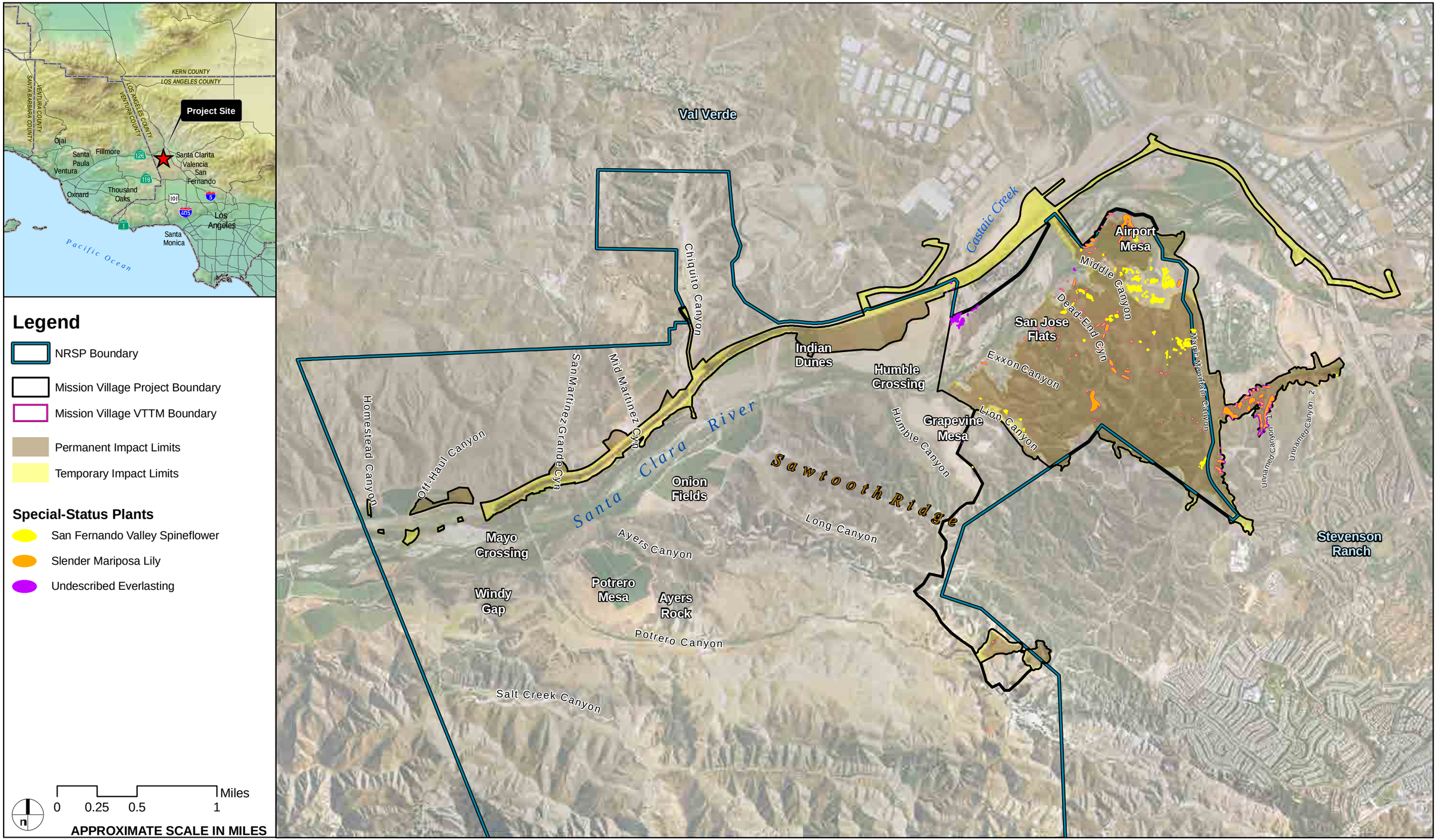

IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-6

Mission Village EIR

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Special-Status Plant Species Locations

San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) is a federal candidate plant species, is state listed as Endangered, and is a CNPS List 1B species. SFVS occurrences were mapped as polygons. Where plants were less than four meters (13.1 feet) from one another, they were mapped in the same polygon. Where they were four meters or farther from one another, they were mapped as separate polygons. The four-meter distance was selected based on topography, vegetation density, detectability of the plants, the general accuracy of the Global Positioning System (GPS), and time constraints. The distance is not specifically tied to SFVS biology (i.e., reproductive biology, seed dispersal) and thus is not intended to reflect reproductively isolated sub-populations, the total extent of the SVFS seed bank, or any other feature of the species' life history. Field botanists walked around the perimeter of each spineflower polygon, defining the boundary by SFVS occurrence at a less-than-four-meter (13.1-foot) distance. Polygon boundaries were defined by manually storing GPS location data in a hand-held Trimble GPS unit (sub-meter precision) every one to four meters (3.3 to 13.1 feet) along the polygon boundary. Each SFVS polygon was given a unique identifier (i.e., numbers and/or letters) in the field. Field data sheets, which included estimated plant numbers and associated species, were completed for each polygon. GPS data were analyzed using GIS or Computer Assisted Drafting software (e.g., ArcGIS, AutoCAD), then delineated so that the outer boundary was defined as a "minimum convex polygon" (i.e., the smallest polygon whose outer perimeter is made up of convex angles).[84]

San Fernando Valley spineflower (SFVS) occurs on the greater NRSP, including locations on the Mission Village project site. This species has been observed in four general areas within the NRSP, including Airport Mesa, Grapevine Mesa, Potrero Canyon and San Martinez Grande Canyon. Most of the plants occur on slopes with a south-facing aspect within openings in sparsely vegetated in habitat characterized as open California sagebrush scrub and associations, California annual grasslands, or at the edge of agricultural fields on mesas. Most of the observed San Fernando Valley

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84 Dudek and Associates, Inc., *2002 Sensitive Plant Survey Results for Newhall Ranch Specific Plan Area, Los Angeles County, California* (2002); Dudek and Associates, Inc., *2002 Sensitive Plant Survey Results for Entrada [Magic Mountain Entertainment], Los Angeles County, California* (2003); Dudek and Associates, Inc., *2002 Sensitive Plant Survey Results for the Valencia Commerce Center, Los Angeles County, California* (2003). Dudek and Associates, Inc., "Survey Results for Sensitive Plant Species within Water Well 206" (2003); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for the Isola and Ventura Homestead Sites, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for the Valencia Commerce Center, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for Newhall Ranch Specific Plan Area, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for the Castaic Junction Site, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for the Magic Mountain Entertainment Site, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2004 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2004 Sensitive Plant Survey Results for the Valencia Commerce Center, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2004 Sensitive Plant Survey Results for the Entrada Site, Los Angeles County, California* (2004); Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for the Salt Creek Site, Los Angeles County, California* (2004). Dudek and Associates, Inc., *2005 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area, Los Angeles County, California* (2006); Dudek and Associates, Inc., *2005 Sensitive Plant Survey Results for the Entrada [Magic Mountain Entertainment] Site, Los Angeles, California* (2006); Dudek and Associates, Inc., *2005 Sensitive Plant Survey Results for the Valencia Commerce Center, Los Angeles, California* (2006); Dudek and Associates, Inc., *2006 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area, Los Angeles County, California* (2006); Dudek and Associates, Inc., *2006 Sensitive Plant Survey Results for the Entrada [Magic Mountain Entertainment] Site, Los Angeles, California* (2006); Dudek and Associates, Inc., *2006 Sensitive Plant Survey Results for the Valencia Commerce Center, Los Angeles, California* (2006).

spineflower were found on soils mapped by the USDA as slightly eroded to eroded Castaic-Balcom silty clay loam (30 to 50 percent slopes) or Terrace Escarpments.[85] Plants in the vicinities of Grapevine and Airport mesas were observed downslope of terrace surfaces capped by Zamora clay loam (2 to 9 percent slopes), with a few plants occurring on artificial fill or alluvium derived from adjacent terrace deposits. Vegetative cover in the area of San Fernando Valley spineflower occurrences ranged from 5 to 100 percent, but was most commonly between 60 and 80 percent. The soil type for all mapped San Fernando Valley spineflower occurrences in the project area consisted of sandy loams. Elevations at San Fernando Valley spineflower locations on site range from approximately 1,000 to 1,300 feet AMSL.

Surveys for SFVS were conducted throughout the NRSP annually from 2002 through 2007. In 2002, the total population of SFVS was estimated to include nearly 8,000 individuals. In 2003, surveys estimated populations of SFVS totaling approximately 5.9 million individuals. In 2004, the total population of SFVS was estimated to be 560,000 individuals. In 2005, the total population of SFVS on the NRSP was estimated to be approximately 7.4 million individuals. In 2006, the total population of SFVS was estimated to be 1.8 million individuals. In 2007, the total population of SFVS was estimated to be 760 individuals.

On the Mission Village project site, yearly fluctuations of SFVS have also occurred. The acreage of SFVS mapped on the project site has varied significantly between 2002 and 2007, ranging from a low of 0.42 acre up to 7.14 acres, with a cumulative spineflower footprint of 8.57 acres. The variation of spineflower abundance and area occupied from year to year is typical of annual plant species. In the case of spineflower, it appears that climatic conditions influence spineflower abundance and area occupied. On the Newhall Land property, the estimated number of spineflower was lower in 2002, 2004, and 2007, compared to 2003 and 2005, with 2006 falling in between. Years 2002, 2004, and 2007 experienced below-average rainfall; in year 2003, rainfall was considered normal, according to the Western Regional Climate Center. Winter 2004/spring 2005 rainfall was considered to be above normal; in winter 2005/spring 2006, rainfall was slightly below average but was not as low as it was in 2002, 2004, and 2007, according to the Western Regional Climate Center.[86] The wide annual fluctuations of SFVS on site suggest that the locations would be best characterized by the cumulative area occupied rather than by number of individuals. The cumulative occupied area represents the overlap or intersection of spineflower occupied areas mapped from years 2002 through 2007. The Newhall Ranch Spineflower Conservation Plan (SCP) contains detailed information on the SFVS populations on and surrounding the project site (see **Appendix 4.3).** It should be noted that the SCP describes spineflower preserves proposed under Newhall Ranch RMDP-SCP EIS/EIR Alternative 2, which would create greater impacts than the proposed Mission Village project.

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85 U.S. Department of Agriculture (USDA), *Survey, Antelope Valley Area, California: U.S. Department of Agriculture* (1969).

86 Western Regional Climate Center, "Rainfall data," 2006.

Slender mariposa lily is a CNPS List 1B plant (S1.1),[87] but has no federal status. This species is typically found in chaparral, California sagebrush scrub, and grasslands, often on clay and/or rocky soils. Populations of this species have been documented and mapped throughout the project site. The mapped acreage of this species on the Mission Village project site in 2003 was 9.68 acres, in 2004 was 6.63 acres, and in 2005 was 6.23 acres. In total (when the 2003–2005 data is unioned), slender mariposa lily occupies a cumulative footprint of 17.43 acres of the project site.

Mainland cherry. The mainland cherry has no state or federal sensitivity status, but it is locally protected through the County of Los Angeles. This large shrub to tree was incidentally observed from 2002 to 2006 in the Specific Plan area, Entrada, and Valencia Commerce Center (VCC) planning areas as an occasional component of undifferentiated chaparral, big sagebrush scrub, and river wash. Given the low sensitivity status of the species, individual mainland cherry trees were not mapped.

Island mountain-mahogany. The island mountain-mahogany is a CNPS List 4 (S3.3) plant, but it has no federal status. It is an evergreen shrub or shrubby tree that is typically found in chaparral and closed-cone coniferous forests in Los Angeles and Ventura counties, as well as on several of the Channel Islands. Within the Specific Plan, Salt Creek, and Entrada areas, island mountain-mahogany occurs as an occasional component of chaparral communities at the base of north-facing slopes. Given the low sensitivity status of the species, individual island mountain-mahogany plants have not been mapped.

Parish's sagebrush is considered special status by the County of Los Angeles, but it has no federal, state, or CNPS status. This species grows intermixed with the big sagebrush scrub community within the Salt Creek watershed,[88]

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87 Bittman, Roxanne, "California Heritage (CNDDB) Element Ranking," https://transfer.natureserve.org/download/longterm/ERWG/Background_papers/ELEMENT%20RANKING%20with%20explanation%20with%20DT%20edits.doc.

S1: Less than 6 Eos OR less than 1,000 individuals OR less than 2,000 acres
S1.1 = very threatened
S1.2 = threatened
S1.3 = no current threats known.

S2: 6 to 20 Eos OR 1,000 to 3,000 individuals OR 2,000 to 10,000 acres
S2.1 = very threatened
S2.2 = threatened
S2.3 = no current threats known.

S3: 21 to 80 Eos or 3,000 to 10,000 individuals OR 10,000 to 50,000 acres
S3.1 = very threatened
S3.2 = threatened
S3.3 = no current threats known.

S4: Apparently secure within California. This rank is clearly lower than S3, but factors exist to cause some concern; i.e., there is some threat, or somewhat narrow habitat. NO THREAT RANK.

S5: Demonstrably secure to ineradicable in California. NO THREAT RANK.

88 Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for the Salt Creek Site*.

co-occurring with the more common big sagebrush (*Artemisia tridentata* ssp. *tridentata*). According to The Jepson Manual,[89] the differentiating characteristics between the two subspecies in question are as follows: drooping inflorescence branches and hairy fruit in subspecies *parishii* and erect to spreading inflorescence branches and glandular fruit in subspecies *tridentata*.[90] These differences are confirmed by Shultz.[91] Parish's sagebrush occurs along coastal ranges in Baja California and Southern California, extending inland to regions south of the Great Basin.[92] It is considered regionally rare by local botanists.[93] Where big sagebrush scrub occurs along the outer margins of the Magic Mountain Canyon and Santa Clara River floodplains, Parish's sagebrush may be present.

Southwestern spiny rush. The southwestern spiny rush is a CNPS List 4 (S3.2) plant, but it has no federal status. This species is considered locally and regionally rare by local botanists. This stout, robust perennial herb is found primarily on coastal dunes with mesic soils, meadows and alkaline seeps, and marshes and coastal salt swamps. Within the Specific Plan area, southwestern spiny rush individuals were observed annually from 2001 through 2006 in mesic riparian areas along the Santa Clara River. This species is not numerically abundant on site and given the low sensitivity status of the species, individual plants have not been mapped.

Peirson's morning-glory is a CNPS List 4 (S3.2) plant, but has no federal status. This species is typically found in chaparral, coastal scrub, chenopod scrub, cismontane woodland, lower montane coniferous forest, and grasslands. While never abundant, Peirson's morning-glory is widespread on site and was observed on ridges and slopes, weakly climbing over mixed chaparral, California sagebrush, California buckwheat and in annual grasslands.[94] Given the low sensitivity status of the species, observations were not mapped.

Southern California black walnut (*Juglans californica*) is a CNPS List 4 plant, but has no state or federal status. This large shrub to tree was incidentally observed on the project site along the Santa Clara River. Given the low sensitivity status of the species, individual southern California black walnut trees were not mapped.

Newhall sunflower. The Newhall sunflower (*Helianthus*) is a CNPS List 1B.1 plant (S1), but has no federal status. For the purposes of this analysis it is considered a special-status species. The Newhall sunflower was found in 2002

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89 James C. Hickman, *The Jepson Manual: Higher Plants of California* (Berkeley: University of California Press, 1993).

90 Ibid.

91 L.M. Shultz, "*Artemisia tridentata* spp. *parishii*" *Flora of North America North of Mexico* 19 (2006), 517; L.M. Shultz, "*Artemisia tridentata* spp. *tridentata*" *Flora of North America North of Mexico* 19 (2006), 516.

92 Ibid.

93 Mary Meyer, CDFG, personal communication, October 2007.

94 Dudek and Associates, Inc., *2002 Sensitive Plant Survey Results for Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *2004 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *2005 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *2006 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area*; Dudek, *2007 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area, Los Angeles County, California* (2007).

at Middle Canyon Spring, on the south side of the Santa Clara River between Middle Canyon and San Jose Flats within the Specific Plan site. Ten or fewer plants were observed rooted in saturated wetland soils in dense vegetation including cattails, tules, stinging nettle, and wild grape. The species is a perennial with a near-surface tuber that produces annual growth stems that are 4 meters or more in length (16 to 20 feet). The stems produce abundant flowers in late summer through the fall and sometimes topple from their weight and lay about on the vegetation beneath. In 2002, more than 300 flowering stems were estimated in an area under 1 acre in size and appeared to be associated with three to five different clumps of sunflower.

Undescribed everlasting (*Gnaphalium* sp. *nova*) was documented on the project site during the 2003, 2004, and 2005 field seasons. Because this plant is undescribed (a physical description of the plant with known distribution and species name has not been published in a peer reviewed publication) and its extent and distribution are unknown, for the purposes of this analysis it is considered a special-status species. Two main populations and a number of smaller populations of this undescribed species were documented within the Specific Plan area during the 2003, 2004, 2005, and 2007 field seasons.[95] Two main populations of this undescribed species, totaling about 530 individuals, were documented in 2003 in the Santa Clara River corridor near the mouth of Long Canyon and in Castaic Creek south of SR-126 within the Specific Plan area. During the 2004 surveys, these two occurrences were noted again with about 700 plants. In addition, a population of about 250 individuals was observed in the portion of Castaic Creek west of the I-5 Bridge and in an area to the north of the I-5 Bridge. In 2005, the two Specific Plan area occurrences consisted of approximately 800 individuals and five individuals, while approximately 65 individuals were found north of the I-5 Bridge in Castaic Creek. During 2007 surveys, the off-site occurrence north of the I-5 Bridge was estimated at approximately 350 individuals; one main occurrence and a number of smaller occurrences were documented within the Specific Plan area, totaling approximately 85 individuals. These occurrences are primarily on secondary alluvial benches. The vegetation around these plants consists of sparsely vegetated open river wash.

(2) Special-Status Plant Species Known to Occur in the Project Area but Not Observed on or Adjacent to the Project Site

The special-status plant species identified in **Table 4.3-4, Special-Status Plant Species Documented in the Project Area but Not Observed on or Adjacent to the Project Site**, are known to occur in the project area and were target species of the focused plant surveys conducted on, and in the vicinity of, the project site. None of these species were observed on or adjacent to the project site. Given the thoroughness of the survey efforts (**Table 4.3-2**),

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95 Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *2004 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *2005 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area*; A. Causey, "Focused Surveys for the Undescribed Everlasting Species in Castaic Creek and the Santa Clara River in Los Angeles County, California" (2007); FL*x*, "Sensitive Plant Species Surveys at the Magic Mountain Entertainment Site Fireworks Area" (2004).

it is unlikely that any of the species identified below are present on the project site, though the potential of some of these species to occur on the site in future seasons cannot be entirely ruled out.

Table 4.3-4
Special-Status Plant Species Documented in the Project Area but Not Observed on or Adjacent to the Project Site

Common Name *Scientific Name*	Sensitivity Status				Habitat	Growth Form (Blooming)
	Federal	State	CNPS	California Heritage (CNDDB) Element Ranking		
Marsh sandwort *Arenaria paludicola*	FE	CE	1B.1	S1.1	Dense freshwater marsh.	PH (May–August)
Braunton's milk-vetch *Astragalus brauntonii*	FE	—	1B.1	S2.1	Chaparral, coastal sage scrub, grasslands; often on carbonate substrates.	PH-b (March–July)
Coulter's saltbush *Atriplex coulteri*	—	—	1B.2	S2.2	Coastal sage scrub and grasslands on alkaline or clay substrate.	PH (March–October)
Davidson's saltscale *Atriplex serenana* var. *davidsonii*	—	—	1B.2	S2?	Coastal bluff scrub and coastal sage scrub on alkaline substrate.	AH (May–October)
Malibu baccharis *Baccharis malibuensis*	—	—	1B.1	S1.1	Chaparral, coastal sage scrub, cismontane woodland.	Sh-d (August)
Nevin's barberry *Berberis nevinii*	FE	CE	1B.1	S2.2	Chaparral, coastal sage scrub, riparian scrub, cismontane woodland on sandy or gravelly substrate.	Sh-e (March–April)
Thread-leaved brodiaea *Brodiaea filifolia*	FT	CE	1B.1	S2.1	Clay substrate openings in chaparral, sage scrub, and grasslands.	PH-b (March–June)
Catalina mariposa lily *Calochortus catalinae*	—	—	4.2	S3.2	Chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland.	PH ((February)March–June); uncommon in February.
Club-haired mariposa lily *Calochortus clavatus* var. *clavatus*	—	—	4.3	S3	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/usually serpentinite, clay, rocky.	PH (May–June)
Plummer's mariposa lily *Calochortus plummerae*	—	—	1B.2	S3.2	Chaparral, coastal sage scrub, cismontane woodland, grasslands on rocky granitic substrate.	PH-b (May–July)
Late-flowering mariposa lily *Calochortus weedii* var. *vestus*	—	—	1B.2	S2.2	Chaparral, cismontane and riparian woodland.	PH-b (June–August)
Southern tarplant *Centromadia* [=*Hemizonia*] *parryi* ssp. *Australis*	—	—	1B.1	S2.1	Mesic edges of marshes in grasslands.	AH (May–November)
Parry's spineflower *Chorizanthe parryi* var.	—	—	1B.1	S2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/sandy or rocky, openings.	AH (April–June)

Table 4.3-4 (Continued)
Special-Status Plant Species Documented in the Project Area but Not Observed on or Adjacent to the Project Site

Common Name *Scientific Name*	Sensitivity Status				Habitat	Growth Form (Blooming)
	Federal	State	CNPS	California Heritage (CNDDB) Element Ranking		
parryi						
Santa Susana tarplant *Deinandra* [=*Hemizonia*] *minthornii*	—	CR	1B.2	S2.2	Chaparral and coastal sage scrub on rocky substrate.	Sh-d (July–November)
Slender-horned spineflower *Dodecahema leptoceras*	FE	CE	1B.1	S1.1	Alluvial scrub on sandy substrate, chaparral and cismontane woodland.	AH (April–June)
Blochman's dudleya *Dudleya blochmaniae* ssp. *blochmaniae*	—	—	1B.1	S2.1	Clay openings in chaparral and coastal sage scrub, grasslands.	PH (April–June)
Marcescent dudleya *Dudleya cymosa* ssp. *marcescens*	FT	CR	1B.2	S2.2	Chaparral, often on volcanic substrate.	PH (April–June)
Santa Monica Mountains dudleya *Dudleya cymosa* ssp. *ovatifolia*	FT	—	1B.2	S2.2	Chaparral and coastal sage scrub, often on volcanic substrate.	PH (March–June)
Many-stemmed dudleya *Dudleya multicaulis*	—	—	1B.1	S2.1	Coastal bluff scrub, coastal sage scrub, valley and foothill grassland, rocky, often clay substrate.	PH (April–June)
Conejo dudleya *Dudleya parva*	FT	—	1B.2	S2.1	Coastal sage scrub and grassland on rocky, gravelly clays.	PH (May–June)
Round-leaved filaree *Erodium macrophylla*	—	—	2.2	S3.1	Cismontane woodland and grasslands on clay substrate.	AH (March–May)
San Gabriel bedstraw *Galium grande*	—	—	1B.2	S2.2	Broadleafed upland forest, chaparral, cismontane woodland, and lower montane coniferous forest.	Sh-d (January–July)
Palmer's grappling hook *Harpagonella palmeri* var. *palmeri*	—	—	4.2	S3.2	Chaparral, coastal scrub, valley and foothill grasslands.	AH (March–May)
Los Angeles sunflower *Helianthus nuttallii* ssp. *parishii*	—	—	1A	SH	Marshes and swamps.	PH (August–October)
Mesa horkelia *Horkelia cuneata* var. *puberula*	—	—	1B.1	S2.1	Chaparral, cismontane woodland, coastal sage scrub on sandy or gravelly substrate.	PH (February–December)
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	—	—	1B.1	S2.1	Marshes and swamps (coastal salt), playas, vernal pools.	AH (February–June)
Fragrant pitcher sage *Lepechinia fragrans*	—	—	4.2	S3.2	Chaparral.	Sh (March–October)
Ross's pitcher sage	—	—	1B.2	S1.2	Chaparral.	Sh

Table 4.3-4 (Continued)
Special-Status Plant Species Documented in the Project Area but Not Observed on or Adjacent to the Project Site

Common Name *Scientific Name*	Sensitivity Status				Habitat	Growth Form (Blooming)
	Federal	State	CNPS	California Heritage (CNDDB) Element Ranking		
Lepechinia rossii						(May–September)
Ocellated Humboldt lily *Lilium humboldtii* ssp. *ocellatum*	—	—	4.2	S3.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland/openings.	PH Mar–July(August)); uncommon in August.
Davidson's bush mallow *Malacothamnus davidsonii*	—	—	1B.2	S1.1	Chaparral, coastal sage scrub, riparian woodland.	Sh-d (June–January)
California muhly *Muhlenbergia californica*	—	—	4.3	S3.3	Chaparral, coastal scrub, lower mountain coniferous forest, meadows and seeps/mesic, seeps and streambanks.	PH-r (June–September)
Mud nama *Nama strenocarpum*	—	—	2.2	S1S2	Edges of lakes, rivers, ponds, vernal pools.	AH (January–July)
Spreading navarretia *Navarretia fossalis*	FT	—	1B.1	S2.1	Chenopod scrub, marshes, and swamps, playas, vernal pools.	AH (April–June)
Piute mountains navarretia *Navarretia setiloba*	—	—	1B.1	S1.1	Cismontane woodland, pinyon and juniper woodland, valley and foothill grassland/clay or gravelly loam.	AH (April–July)
Chaparral nolina *Nolina cismontana*	—	—	1B.2	S1.1	Chaparral, coastal sage scrub on sandstone or gabbro substrate.	SH-e (April–July)
Short-joint beavertail *Opuntia basilaris* var. *brachyclada*	—	—	1B.2	S1.2	Chaparral, Joshua tree woodland, Mojavean desert scrub.	Sh-ss (April–June)
California Orcutt grass *Orcuttia californica*	FE	CE	1B.1	S2.1	Vernal pools.	AH (April–August)
Lyon's pentachaeta *Pentachaeta lyonii*	FE	CE	1B.1	S1.1	Openings in chaparral and coastal sage scrub, grasslands.	AH (March–August)
Pringle's yampah *Perideridia pringlei*	—	—	4.3	S3.3	Chaparral, cismontane woodland, coastal scrub, pinyon, and juniper woodlands, serpentinite, clay soils.	PH (April–July)
Gambel's watercress *Rorippa gambelii*	FE	CT	1B	N/A	Marsh and swamps (freshwater and brackish).	PH-r (April–September)
Rayless ragwort *Senecio aphanactis*	—	—	2	S1.2	Chaparral, coastal sage scrub, cismontane woodland on alkaline substrate.	AH (January–April)
Salt spring checkerbloom *Sidalcea neomexicana*	—	—	2	S2S3	Chaparral, coastal sage scrub, and playas on alkaline substrate.	PH (March–June)

Table 4.3-4 (Continued)
Special-Status Plant Species Documented in the Project Area but Not Observed on or Adjacent to the Project Site

Common Name *Scientific Name*	Sensitivity Status				Habitat	Growth Form (Blooming)
	Federal	State	CNPS	California Heritage (CNDDB) Element Ranking		
Greata's aster *Symphyotrichum greatae*	—	—	1B.3	S2.3	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and riparian woodland/mesic.	PH-r (June–October)
Sonoran maiden fern *Thelypteris puberula* var. *sonorensis*	—	—	2	S2.2?	Meadows and seeps.	PH-r (January–September)

Key:
Status:
Federal: FE = Federal Endangered; FT = Federal Threatened; FC = Federal Candidate
State: CE = California Endangered; CT = California Threatened; CR = California Rare
CNPS: List 1A = Presumed extinct
List 1B = Plants Rare and Endangered in California and elsewhere
List 2 = Plants Rare, Threatened, or Endangered in California, but more common elsewhere
List 4 = Plants of limited distribution (watch list)
Threat Code Extensions:
.1: The plant is seriously endangered in California
.2: The plant is fairly endangered in California
.3: The plant is not considered to be very endangered in California.
Growth Form:
AH = Annual Herb, Sh = Shrub, r = rhizomatous, PH = Perennial Herb, b = bulb, e = evergreen, d = deciduous, ss = stem succulent

Note: For CNDDB element ranking, uncertainty about the rank of an element is expressed in two major ways: First, by expressing the ranks as a range of values: e.g., S2S3 means the rank is somewhere between S2 and S3. Second, by adding a "?" to the rank: e.g., S2? This represents more certainty than S2S3, but less certainty than S2.

b. Oaks

The County of Los Angeles Oak Tree Ordinance (CLAOTO), Sections 22.56.2050–22.56.2260, protects oak trees that are at least 8 inches in diameter, as well as trees that have two trunks totaling at least 12 inches in diameter, as measured 4.5 feet above natural ground. A heritage oak, as defined by CLAOTO, is any species in the genus *Quercus* that measures 36 inches or more in diameter as measured 4.5 feet above natural ground, or any oak of 36 inches or less in diameter having a significant historical or cultural importance to the community. CLAOTO requires that all potential impacts to oak trees regulated by this ordinance be preceded by an application to the County that includes a detailed oak tree report (see **Appendix 4.3**). Mitigation for impacts to oak trees is usually required as a condition of an Oak Tree Permit issued by the County.

During 2005 and 2006, an oak tree survey was conducted of the on-site oak trees occurring within 200 feet of the proposed grading limits (see **Appendix 4.3**). The survey identified 564 oaks potentially regulated by CLAOTO within the project boundary, 29 of which are heritage oaks. The vast majority of the oaks on the site are coast live oak, but valley oak (*Quercus lobata*) and scrub oak (*Quercus berberidifolia*) also occur.

In addition, Public Resources Code 21083.4 sets forth the following three analytical and mitigation requirements for oak tree impacts: (a) counties must determine whether a project may result in the conversion of oak woodlands; (b) if it does, the county must determine if the conversion will have a significant impact on the environment; and (c) if there is a conversion, and it has a significant impact, the county must impose one or more of the following mitigation measures:

1. Conserve oak woodlands, through the use of conservation easements

2. Plant an appropriate number of trees, including maintaining plantings and replacing dead trees

    a. Maintain planted oak trees for seven years

    b. The planting of oak trees shall not fulfill more than one-half of the mitigation requirement for the project

3. Contribute funds to the Oak Woodlands Conservation fund

4. Other mitigation measures developed by the County.

Public Resources Code 21083.4(a) defines "oak" as a "native tree species in the genus *Quercus*, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height." This statute does not provide a definition of "oak woodland," but Public Resources Code ~~Section~~§ 12220(g) indicates that "forest land" is any "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

Using Section 12220(g) as a guide, this EIR defines "oak woodland" as an area with at least 10% cover by oak trees with an understory of non-grass vegetation and at least 20% cover by oak trees with an understory of grass vegetation. Oak/grass includes areas where oak trees comprise between 10% and 20% of the total cover with an understory of grass vegetation. As part of the Vegetation Communities analysis, biologist surveyed the site and identified all oak woodlands meeting this definition. Note that these surveys not only captured the oak woodland habitat, but also the entire range of oak trees in terms of size and maturity, including all trees with trunk diameters of five (5) inches or more, measured at breast height, as required under Public Resources Code 21083.4(a). These surveys indicate that the project site supports 37.3 acres of oak woodland, as defined.

c. Sensitive Plant Communities

The CDFG Wildlife and Habitat Data Analysis Branch has developed a *List of California Terrestrial Natural Communities*. The most recent version of this list, dated September 2003 (updated 2007), is derived from the California Natural Diversity Database (CNDDB) and is intended to supersede all other lists developed from the CNDDB. It is based on the detailed classification put forth in *A Manual of California Vegetation*.[96] It is also structured to be compatible with previous CNDDB lists.[97]

The two primary purposes of the CNDDB classification are to assist in characterizing vegetation in a consistent manner and to identify rare and declining vegetation types. The ranking of natural communities by rarity or threat is an important facet of this system. For the purposes of this Biota analysis, vegetation communities denoted on the October 2007 list as G1, G2, or G3 (high priority for inventory)[98] or otherwise regulated by local, state, and/or federal resource agencies, are considered to have "special status."

Of the 23 plant communities and three existing land use types occurring on the Mission Village project site, Mexican elderberry scrub, southern willow scrub, and southern cottonwood–willow riparian are currently denoted as G1, G2, or G3 by CDFG[99] and, therefore, are considered special status. In addition to those vegetation communities ranked as G1, G2, or G3, riparian and wetland vegetation communities on site are considered special-status, including herbaceous wetland, river wash, arrow weed scrub, and mulefat scrub. Given the occurrence of *Artemisia tridentata* ssp. *parishii* (which is considered special status by the County of Los Angeles) within the big sagebrush scrub community, this EIR treats big sagebrush scrub as a special-status vegetation community. Please see ~~**subsection**~~**Subsection 6. Biological Resources, a. Plant Communities and Land Uses**, above, for a more detailed discussion of these plant communities and their distribution on the project site.

Note that the Newhall Ranch Specific Plan Program EIR identified coastal sage scrub (coastal scrub) as a special-status plant community. However, this determination was based on a previous CDFG list of terrestrial natural communities, which has been superseded by the current *List of California Terrestrial Natural Communities*.[100] In this new list, coastal sage scrub is not identified as a special-status plant community, although it remains important at a watershed level because it provides habitat for a variety of special-status species and is addressed as such in this EIR.

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96 Sawyer and Keeler-Wolf, *Manual of California Vegetation*.

97 e.g., Holland, *Preliminary Descriptions*.

98 CDFG, "Vegetation Classification and Mapping Program, List of California Vegetation Alliances" (2007).

99 Ibid.

100 CDFG, "List of California Terrestrial Natural Communities."

d. Special-Status Wildlife

Special-status wildlife species include those that are (1) state- or federally listed as Threatened or Endangered, (2) proposed for listing as Threatened or Endangered, (3) designated as state or federal candidates for listing, (4) considered state Species of Special Concern, or (5) considered a state Fully Protected Animal.

Based on a review of the CNDDB and the biological documentation prepared for the project site and the greater Newhall Ranch Specific Plan area, a total of 99 special-status wildlife species were identified that are known to occur in the project region. This list formed the basis of the following analysis, wherein each of the identified species is addressed in one of the following three headings: (1) **~~subsection~~Subsection 7.d.(1)** addresses the special-status wildlife species that were observed on or adjacent to the project site during the course of various field surveys; (2) **~~subsection~~Subsection 7.d.(2)** addresses the special-status wildlife species that have not been observed on the site, but based on the presence of suitable habitat and known occurrences in the area, have the potential to occur on the site as a resident, overwintering or nesting species, and (3) **~~subsection~~Subsection 7.d.(3)** addresses the special-status wildlife species known to occur in the project area, but for which the project site does not provide suitable habitat to support the species as a resident or nesting species, or for which the species is expected to utilize the site only on rare occasions, such as during migration for bird species.

(1) Special-Status Wildlife Species Observed on the Project Site

During the course of various field surveys conducted for the proposed project or greater Newhall Ranch Specific Plan area (**Table 4.3-2**), 61 special-status wildlife species were observed on or bordering the project site. **Table 4.3-5, Special-Status Wildlife Species Observed on or Adjacent to the Project Site,** identifies these species and provides the species' listing status, habitat requirements, and observation information.

Table 4.3-5
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	Federal	State	Other		
INSECTS (BUTTERFLIES)					
Monarch butterfly (wintering sites) *Danaus plexippus*	—	***	—	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby.	Individual monarchs have been observed within the Newhall Ranch Specific Plan area (NRSP), including the High Country[101] ; due to site's distance from coast, it is

[101] Compliance Biology, Inc., *Results of Butterfly Surveys on the Newhall Ranch Project*; Compliance Biology, Inc., *Results of Butterfly Surveys on Newhall Salt Canyon Habitat Preservation Area*; Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
					unlikely that the project site would be used by large numbers of overwintering adults. Not expected to occur in Salt Creek area.
San Emigdio blue butterfly *Plebulina emigdionis*	—	***	—	Often near streambeds, washes, or alkaline areas. Associated with four-wing saltbush (*Atriplex canescens*) and quail brush (*Atriplex lentiformis*).	A colony was observed in Potrero Canyon in NRSP in association with *Atriplex lentiformis* plants.[102] Suitable habitat occurs within Salt Creek.
MOLLUSKS					
Pyrgulopsis castaicensis n. sp.	—	—	—	Occupies groundwater-dependent spring, occurring on muddy and gravelly substrate and in water of depths up to several centimeters.	This species was observed on the NRSP in 2006 at the Middle Canyon Spring complex.[103]
FISH					
Santa Ana sucker *Catastomus santaanae*	—	CSC	—	Occupies small- to medium-sized perennial streams with water ranging in depth from a few centimeters to a meter or more.	This species is known to occur in the Santa Clara River and has been sparsely observed in the portion of the river within NRSP.[104] Population in the Santa Clara River system is not listed as threatened because it is introduced to the area. Not expected to occur in Salt Creek.
Unarmored threespine stickleback *Gasterosteus aculeatus williamsoni*	FE	CE, CFP	—	Slow-moving and backwater areas.	This species is known to occur in the Santa Clara River and has been observed evenly distributed in the portion of the river within NRSP[105] . It was

102 Compliance Biology, Inc., *Results of Butterfly Surveys on the Newhall Ranch Project Site*; Compliance Biology, Inc., *Results of Butterfly Surveys on Newhall Salt Canyon Habitat Preservation Area*.

103 Dudek, *Draft Middle Canyon Spring Survey and Status Report*.

104 CDFG, "RareFind: California Natural Diversity Database," Version 3, http://www.dfg.ca.gov/bdb/html/ cnddb.html; Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species; Newhall Ranch*.

105 Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part III*, Aquatic Consulting Services, Inc., *Surveys along the Santa Clara River; Part IV*; Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species, Newhall Ranch*; Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species; Natural River Management Plan Area*; ENTRIX, Inc., *Special Status Aquatic Species Habitat Assessment Santa Clara River, Landmark Village Project, Newhall Ranch, California* (2005).

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name / *Scientific Name*	Status: Federal	Status: State	Status: Other	Habitat Requirements	On-Site Status
					also observed in Castaic Creek.[106]
Arroyo chub *Gila orcutti*	—	CSC	—		This species is known to occur in the Santa Clara River and has been observed abundantly in the portion of the river within NRSP.[107] Not expected to occur in Salt Creek.
AMPHIBIANS					
Arroyo toad *Anaxyrus (Bufo) californicus*	FE	CSC	—	Restricted to rivers with shallow, gravely pools adjacent to sandy terraces that have a nearly complete closure of cottonwoods, oaks or willows, and almost no herbaceous cover. Requires shallow pools with minimal current, little to no emergent vegetation and a sand or pea gravel substrate overlain with flocculent silt for egg deposition.	Numerous focused surveys have been conducted for the arroyo toad throughout the project site and along the Santa Clara River east of the project site. Surveys include.[108] Adult toads have been documented in limited numbers upstream of the project area along the Santa Clara River and tributaries.[109] One study detected three arroyo toad tadpoles in the river within NRSP site, downstream of

106 Haglund, *Current Status of the Unarmored Threespine Stickleback.*

107 Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part III*, *Aquatic Surveys along the Santa Clara River; Part IV*; Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species; Newhall Ranch*; Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species; Natural River Management Plan Area*; ENTRIX, Inc., *Special Status Aquatic Species Habitat Assessment*)

108 SMEA, *Sensitive Aquatic Species Survey*; RECON, *Survey for Arroyo Southwestern Toad for Newhall Ranch*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part II*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part III*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part IV*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part I*; Sandburg, "Field Summary of Santa Clara River Surveys for *Bufo californicus* and *Rana aurora draytonii*"; Impact Sciences, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians within the Natural River Management Plan Area, Valencia, California*; Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Castaic Creek" (2003); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Castaic Reservoir Site"; Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Hart/Pony Baseball Site and Hart/Pony Commercial Site"; Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, NRMP Project Area "; Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Round Mountain Site"; Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Soledad Site "; Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Castaic Creek" (2004); Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Portions of Santa Clara River/South Fork"; Ecological Sciences, Inc. "Results of Focused Arroyo Toad Surveys, NRMP Soledad/Riverpark Area"; Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, San Francisquito Creek" (2004); Compliance Biology, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, River Village Project*.

109 Impact Sciences, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians within the Natural River Management Plan Area*; Sandburg, "Field Summary of Santa Clara River Surveys for *Bufo californicus* and *Rana aurora draytonii*."

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
					the Commerce Center Drive bridge site;[110] and another study detected three arroyo toad tadpoles, two near the Valencia Water Treatment Plant and one upstream of Commerce Center Drive.[111]
Western spadefoot toad *Spea hammondii*	—	CSC	—	Open areas in lowland grasslands, chaparral, and pine-oak woodlands; requires temporary rain pools that last approximately three weeks.	Two pools were found with western spadefoot toad tadpoles, one near the western boundary of Mission Village and the other near Grapevine Mesa.[112] Seasonal backwater areas within NRSP, as well as seasonal, stock ponds and depressions within existing dirt roads, provide breeding habitat. Given documented occurrences of the species at several on-site locations, and the presence of suitable breeding habitat, the species could occupy additional suitable on-site habitats.
REPTILES					
Silvery legless lizard *Anniella pulchra pulchra*	—	CSC	—	Stabilized dunes, beaches, dry washes, chaparral, pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils.	This species has been observed within NRSP in 2004 in leaf litter of coast live oak woodland;[113] suitable habitat occurs within Salt Creek in association with California sagebrush scrub, chaparral, oak woodland, and riverbank habitats.
Coastal western whiptail	—	***	—	Open areas in semiarid grasslands, scrublands,	Observed within NRSP in High Country[114] and one

110 Aquatic Consulting Services, Inc., *Surveys along the Santa Clara River; Part II*.

111 Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part I.*

112 Compliance Biology, Inc., *Results of the Focused Western Spadefoot Toad Surveys on the Mission Village Project Site*.

113 Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.

114 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
Aspidoscelis tigris stejnegeri				and woodlands.	was observed off site in Castaic Mesa;[115] suitable habitat occurs within Salt Creek in association with grassland, scrub, oak woodland, and riverbank habitats.
Southwestern pond turtle *Actinemys marmorata pallida*	—	CSC	—	Streams, ponds, freshwater marshes, and lakes with growth of aquatic vegetation.	This species was observed in the reach of the Santa Clara River within NRSP;[116] and in Salt Creek;[117] river and riparian habitats within NRSP and Salt Creek provide suitable habitat.
Coast horned lizard *Phrynosoma coronatum*	—	CSC	—	Exposed gravelly-sandy soils with minimal shrubs, riparian woodland clearings, dry chamise chaparral, and annual grasslands with scattered seepweed or saltbush.	This species was also observed during the reptile surveys in 2004 and 2006.[118] Suitable habitat occurs within NRSP and Salt Creek in association with scrub, chaparral, and riverbank habitats; species presumed to occur on site within suitable habitat.
Two-striped garter snake *Thamnophis hammondii*	—	CSC	—	Perennial and intermittent streams with rocky or sandy beds and artificially-created aquatic habitats (man-made lakes and stock ponds); requires dense riparian vegetation.	This species was observed in the reach of the Santa Clara River within and adjacent to the NRSP[119]; river and riparian habitats within Salt Creek provide suitable habitat.
BIRDS					
Cooper's hawk (nesting) *Accipiter cooperi*	—	WL	LC	Dense stands of live oak, riparian woodlands, or other woodland habitats	This species is known to be a year-round resident within the NRSP[120]; it

115 Compliance Biology, Inc., *Biological Resource Assessment, Castaic Mesa Project*.

116 SMEA, *Sensitive Aquatic Species Survey*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part I*; Impact Sciences, Inc., 2002; Compliance Biology, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, River Village Project.*

117 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

118 Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.

119 Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part IV*; Impact Sciences, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, Newhall Ranch, Valencia, California*; Compliance Biology, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, River Village Project*; Compliance Biology, Inc., "Results of Focused Western Spadefoot Toad Surveys."

120 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status				
Scientific Name	**Federal**	**State**	**Other**	**Habitat Requirements**	**On-Site Status**
				near water.	occurs commonly along the Santa Clara River and in Potrero Canyon.[121] This species has been observed nesting within NRSP near Grapevine Mesa and within active territories in NRSP.[122] It has been observed over multiple years foraging within Salt Creek during annual bird surveys. The project site provides foraging and nesting habitat for the species.
Sharp-shinned hawk (nesting) *Accipiter striatus*	—	WL	LC	Nests in woodlands and forages over dense chaparral and scrublands.	This species has been observed within the NRSP hunting along agriculture fields along the Santa Clara River[123] and was observed by Guthrie in the NRSP.[124] It was also observed east of the site along the Santa Clara River[125] and one individual was observed in Salt Creek.[126] All observations were thought to be migrants and/or wintering birds. The project site is outside the known breeding range for this species. This species forages in woodlands, chaparral, scrublands, and edge/ecotone areas between habitats which occur throughout the project site.
Tricolored blackbird	BCC,	CSC	—	Freshwater marshes and	This species has been

(Gymnogyps californianus) *on Portions of Newhall Land and Farming Company Property, Los Angeles County, California* (2007).

121 Bloom Biological, Inc., *Interim Report of Winter Surveys.*

122 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

123 Bloom Biological, Inc., *Interim Report of Winter Surveys*.

124 Guthrie, *Bird Surveys along the Santa Clara River, 1997*; Guthrie, *Bird Surveys along the Santa Clara River, 1999*.

125 Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia* (1995).

126 Bloom Biological, Inc., *Interim Report of Winter Surveys.*

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status				
Scientific Name	**Federal**	**State**	**Other**	**Habitat Requirements**	**On-Site Status**
(nesting colony) *Agelaius tricolor*	USBC			riparian scrub (nesting). Grassland and agriculture (foraging).	observed on the project site during focused bird surveys. A flock of approximately 200 breeding pairs of tricolored blackbirds was observed in Castaic Junction.[127] Another flock of approximately 20 breeding pairs of tricolored blackbirds was observed next to Castaic Creek.[128] In 1995 and 1996 small flocks visited the Castaic Creek site again in April and May, but did not breed there.[129] Labinger *et al.* observed a small nesting colony within the project site[130] (specific location is not known). Migrants have also been observed within the RMDP boundaries during surveys,[131] but no breeding colonies have been observed since 1994, despite annual surveys through 2007. A flock of 20 tricolored blackbirds was observed in Potrero Canyon in 1994,[132] and a flock of 50 birds was seen on the Newhall Ranch property north of Mayo Crossing.[133]

127 Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1994).

128 Ibid.

129 Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1995*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1996.*

130 Z. J. Labinger, J. Greaves, and D. Haupt. *Preliminary Results of Avian Surveys Following the January 17, 1994, ARCO/Four Corners Oil Spill on the Santa Clara River, California* (1995).

131 Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia California, 2000*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia California, 2001*; Guthrie, *Bird Surveys along the Santa Clara River, 2006*; Dudek and Associates, Inc., *Biological Resources Technical Report for the Entrada Site.*

132 Guthrie, *Bird Surveys along the Santa Clara River, 1994*.

133 County of Los Angeles, *Revised Draft Additional Analysis to the Newhall Ranch Specific Plan and Water Reclamation Plant Final Environmental Impact Report* (Volumes 1 and 2) and *Final Additional Analysis to the Newhall Ranch Specific Plan*

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status				
Scientific Name	**Federal**	**State**	**Other**	**Habitat Requirements**	**On-Site Status**
Southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	—	WL	LC	Coastal scrub.	This species has been observed over multiple years as a fairly common resident within the Coastal scrub within NRSP and Salt Creek during annual bird surveys and has been observed foraging in upland scrub on the south side of the Santa Clara River, and in upland areas,[134] and near the Santa Clara River,[135] and nesting in 2007;[136] the project site provides suitable nesting and foraging habitat with large concentrations of coastal scrub in the northeastern portion of NRSP and southeastern portion of High Country.
Golden eagle (nesting and wintering) *Aquila chrysaetos*	BCC	WL CFP	—	Nests on cliff-walled canyons and large trees in open areas. Forage in open shrublands, agriculture, and grassland.	One pair was seen frequently in upper Potrero Canyon and a juvenile was seen once in the same area; this is likely a resident pair, but no nests have been observed to date.[137] An individual was observed over the Santa Clara River corridor in Castaic Junction area in 1993 and 1995[138] and another was flushed in a woodland west

and Water Reclamation Plant Final Environmental Impact Report (Volumes 3–7) (Project # 94087, SCH # 95011015. 7 vol., November 2002 to May 2003, Prepared by Impact Sciences, Inc. for Los Angeles County Department of Regional Planning. Agoura Hills, California: Impact Sciences, Inc., 2003).

134 Bloom Biological, Inc., *Interim Report of Winter Surveys.*

135 Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area*; Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia California, 2001*; Guthrie, *Bird Surveys along the Santa Clara River, 2002*; Guthrie, *Bird Observations for Spring 2004 in the Proposed Homestead and Chiquito Areas*; Guthrie, *Bird Observations for Spring 2004 in the Proposed Potrero Valley, Long Canyon, Oak Valley and Onion Fields Development Areas.*

136 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

137 Bloom Biological, Inc., *Interim Report of Winter Surveys.*

138 Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia* (1993); Guthrie, *Bird Surveys along the Santa Clara River, 1993*; Guthrie, *Bird Surveys along the Santa Clara River, 1995.*

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	Federal	State	Other		
					of Grapevine Mesa in the NRSP in 2000;[139] no nesting eagles have been observed on the project site but suitable nesting and foraging habitat is present within NRSP and Salt Creek. These species have also been observed along Santa Clara River east and west of the project site.[140]
Short-eared owl (nesting) *Asio flammeus*	USBC	CSC	—	Grassland, prairies, dunes, meadows, irrigated lands, saline and freshwater emergent wetlands.	This species was observed in the Salt Creek area just west of the Ventura/Los Angeles County line in the fall of 2005.[141] A freshly dead individual was found at the edge of a cultivated field just west of I-5 during the Santa Clarita Bird Count in December 2006.[142] This species is likely a winter visitor and is not known to nest in the project vicinity.
Long-eared owl (nesting) *Asio otus*	—	CSC	—	Dense, riparian and live oak thickets near meadow edges, nearby woodland and forest habitats. Also found in dense conifer stands at higher elevations. Forages in grassland and agriculture.	This species was observed within NRSP near Via Canyon in Fall 2005.[143] Some suitable nesting habitat is present along the Santa Clara River and Castaic Creek, and foraging habitat is present throughout the NRSP and Salt Creek.

139 Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development*.

140 Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia* (1993); Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1997*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2004*; Guthrie, *Bird Surveys along the Santa Clara River, 2006*; Z. Labinger, J. Greaves, and D. Haupt. *1996 Avian Survey Results following the ARCO/Four Corners Oil Spill (January 17, 1994) on the Santa Clara River, California* (Draft prepared for the U.S. Fish and Wildlife Service, Goleta, California: Labinger Biological Consulting, January 9, 1997).

141 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

142 G. Olson, Audubon California, letter containing comments on the Draft Environmental Impact Report for Landmark Village to D. Fierros (County of Los Angeles, Department of Regional Planning), January 19, 2007.

143 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
Western burrowing owl (burrowing sites) *Athene cunicularia*	BCC	CSC	—	Grasslands, open scrub, and agriculture, particularly with ground squirrel burrows.	A single individual was observed with NRSP.[144] Given the timing of the sighting (winter 2006), the observed individual may have been wintering on site or temporarily using the site during migration. Another individual was observed in December 2006 and on April 11, 2007.[145] NRSP and Salt Creek provide suitable habitat for the species; California ground squirrel burrows occur on the project site.
Oak titmouse (nesting) *Baeolophus inornatus*	USBC	***	ABC, LC, Aud	Montane hardwood-conifer, montane hardwood, blue oak, valley oak and coastal oak woodlands, montane and valley foothill riparian habitats.	This species is a common resident and nests on site in cottonwood riparian and coast live oak communities; it has been observed over multiple years in the NRSP sites. Recent observations have been in 2006[146] and 2007 and 2008. [147]
Ferruginous hawk (wintering) *Buteo regalis*	BCC	WL	NT, Aud	Grasslands, agricultural fields, and open scrublands.	This species is an infrequent seasonal migrant. Individuals of this species were observed almost every day in east alfalfa fields, Wolcott fields, and Potrero Canyon, and other agriculture fields along the Santa Clara River in winter 2008.[148] Although suitable foraging habitat is present on the project site, this species has not been documented to nest in California and is

144 Keith Babcock, Dudek, telephone call to Callie Ford, Dudek, October 2007.

145 Sherri Miller, Dudek, verbal communicaiton with Callie Ford, Dudek, November 2007.

146 Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence* (2006).

147 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*; Bloom Biological, Inc., *Interim Report of Winter Surveys.*

148 Bloom Biological, Inc., *Interim Report of Winter Surveys.*

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
					expected to forage on the site.
Costa's hummingbird (nesting) *Calypte costae*	USBC	***	—	Shrubs and arid habitats. Edges of desert riparian and valley foothill riparian, coastal scrub, desert scrub, desert succulent scrub, arid shrublands, lower elevation chaparral, and palm oasis.	This species has been observed over multiple years within the NRSP sites; it is thought to be a summer resident, although does not appear to be an abundant species within the project site based on the number of sightings each year. Recent observations have been in 2006.[149]
Lawrence's goldfinch *Carduelis lawrencei*	BCC, USBC	—	ABC, LC, Aud	Valley foothill hardwood, valley foothill hardwood-conifer; and, in Southern California, desert riparian, palm oasis, pinyon-juniper and lower montane habitats.	This species has been observed as a resident in the coastal scrub in the northern and northeastern portions of the project site, and has been observed within the riparian habitats of the Santa Clara River over multiple years within NRSP and Entrada during annual bird surveys. Recent observations have been in 2006[150] and 2007 and 2008.[151] Suitable nesting and foraging habitat is present within NRSP and Salt Creek.
Turkey vulture *Cathartes aura*	—	†	—	Rangeland, agriculture, grassland; uses cliffs and large trees for roosting, nesting and resting.	This species has been observed over multiple years within NRSP and Salt Creek; recent observations in the project site have been made in 2006;[152] nesting opportunities are also present within the project site.
Northern harrier	—	CSC	LC	Coastal salt marsh,	This species has been

[149] Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence* (2006).

[150] Ibid.

[151] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*; Bloom Biological, Inc., *Interim Report of Winter Surveys.*

[152] Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence* (2006); Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status				
Scientific Name	**Federal**	**State**	**Other**	**Habitat Requirements**	**On-Site Status**
(nesting) *Circus cyaneus*				freshwater marsh, grasslands, and agricultural fields.	observed over multiple years within NRSP in 1999 and 2000[153] and in 2007 and 2008 near the Santa Clara River in the NRSP and Entrada sites.[154] This species has also been observed within the vicinity of the project site;[155] suitable foraging and nesting habitat is present within NRSP and Salt Creek.
Western yellow-billed cuckoo (nesting) *Coccyzus americanus occidentalis*	FC BCC	CE	—	Nests along the broad, lower flood-bottoms of larger river systems. Also nests in riparian forests and riparian jungles of willow often mixed with cottonwoods, with an understory of blackberry, nettles, or wild grape.	One individual was heard at the Magic Mountain (Entrada) area in 1997 and thought to be a migrant.[156] Single individuals (thought to be migrants) were observed along the Santa Clara River east of the project site in 1997 and 1998,[157] and west of the Ventura county line;[158] none have been observed since then; species has not been observed nesting on site; suitable nesting and foraging habitat present within NRSP. This species has been observed

[153] Guthrie, *Bird Surveys in the Proposed Riverwood Project Area;* Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area*.

[154] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*; Bloom Biological, Inc., *Interim Report of Winter Surveys.*

[155] Compliance Biology, Inc., *Results of Focused Survey for Coastal California Gnatcatcher Surveys; River Park Project*; Compliance Biology, Inc., *Results of Focused Coastal California Gnatcatcher Surveys; Castaic Mesa Project.*

[156] Z. Labinger, J. Greaves, and D. Haupt. *Results of 1997 Avian Surveys and Least Bell's Vireo Monitoring: Restoration Phase of the ARCO/Four Corners January 17, 1994, Oil Spill on the Santa Clara River, California* (Draft. Prepared for the U.S. Fish and Wildlife Service, Goleta, California: Labinger Biological Consulting. November 30, 1997).

[157] Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1997*; Z. Labinger and J. Greaves *Results of 1998 Avian Surveys and Least Bell's Vireo Monitoring: Restoration Phase of the ARCO/Four Corners January 17, 1994 Oil Spill on the Santa Clara River, California* (Draft prepared for the U.S. Fish and Wildlife Service, Goleta, California: Labinger Biological Consulting, March 1, 1999).

[158] Guthrie, *Bird Surveys along the Santa Clara River, 1997.*

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	Federal	State	Other		
					historically in 1979, 1981 and 1992.[159]
Hermit warbler (nesting) *Dendroica occidentalis*	—	***		Breeds in mature ponderosa pine, montane hardwood-conifer, mixed conifer, Douglas fir, redwood, red fir and Jeffrey pines. Uses live oak woodlands and deciduous trees during migration, and valley foothill hardwood in winter.	Individuals of this species have been observed within or adjacent to the Specific Plan in 1994, 1996, and 2002.[160] All observations were thought to be migrants. The project site is within this species winter range. Suitable habitat for migration and wintering habitat occurs on site, but no suitable nesting occurs on site.
Yellow warbler (nesting) *Dendroica petechia brewsteri*	—	CSC	LC	Riparian thickets and woodlands.	This species has been observed over multiple years during annual bird surveys and nests in the riparian areas within NRSP and Salt Creek. These species have been observed both during nesting season and migration. Recent observations of these species within the project site in 2006[161] and 2007.[162]
White-tailed kite (nesting) *Elanus leucurus*	—	CFP	—	Inhabits herbaceous and open stages of most habitats, common in cismontane in California. Nests are placed near top of dense oak, willow or other tree stand; usually 6 to 20 meters (20 to 100 feet) above ground. Nest	This species has been observed successfully nesting on site and in the vicinity of the project site along the Santa Clara River over multiple years within NRSP and Salt Creek during annual bird surveys[163] and during

[159] Labinger, Greaves, and Haupt. *1996 Avian Survey Results.*

[160] Guthrie, *Bird Surveys along the Santa Clara River, 1994*; Guthrie, *Bird Surveys along the Santa Clara River, 1996*; Guthrie, *Bird Surveys along the Santa Clara River, 2002*.

[161] (Guthrie, *Bird Surveys along the Santa Clara River, 2006;* Guthrie, *Bird Surveys of The Old Road Phase III Environmental Project Study Area*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence* (2006).

[162] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

[163] Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1995*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1997*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1998*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia California, 2000*; Guthrie, *Bird Surveys of Castaic Junction*; Guthrie, *Bird Surveys of The Old*

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
				located near open foraging area.	focused survey;[164] suitable foraging and nesting habitat is present on the project site. At lease three pairs observed nesting along the River in 2007, including a pair downstream of the project site (adjacent to the Landmark Village site).[165] A small roost of about eight individuals was observed near the Castaic Confluence in 2007.[166] No roosts and three individuals were observed throughout the NRSP during the 2008 winter bird surveys.[167]
Willow flycatcher (nesting) *Empidonax traillii*	USBC	CE	—	Riparian woodlands that contain water and low willow thickets.	This species has been observed along the Santa Clara River over multiple years within the NRSP project site. The observations have usually been of individual species, thought to be migrants passing through the area based on their behavior and time of year (no observations occurred after June 22). Recent observations along the Santa Clara River within the NRSP have been made in 2005 and 2006.[168] These species have also been observed adjacent to the project site. No nesting has been observed.
Southwestern willow flycatcher (nesting)	FE, USBC	CE	—	Riparian woodlands that contain water and low	Most of the observations of the willow flycatcher have

Road Phase III Environmental Project Study Area.

164 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*; Bloom Biological, Inc., *Report on White-Tailed Kites*.

165 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

166 Bloom Biological, *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor (*Gymnogyps californianus*) on Portions of Newhall Land and Farming Company Property, Los Angeles County, California* (2007)

167 Bloom Biological, Inc., *Interim Report of Winter Surveys*.

168 Guthrie, *Bird Surveys along the Santa Clara River, 2005;* Guthrie, *Bird Surveys of The Old Road Phase III Environmental Project Study Area*.

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status				
Scientific Name	**Federal**	**State**	**Other**	**Habitat Requirements**	**On-Site Status**
Empidonax traillii extimus				willow thickets.	not identified individuals to the subspecies level. Individuals were considered to be migrating through the site as they were not located after June 22. Within the vicinity of the project site, two individuals indentified as southwestern willow flycatchers were observed in Castaic Creek in 2006.[169] These individuals, however, were not displaying any nesting behavior. Suitable nesting and foraging habitat is present within NRSP. The most recent observation of this subspecies displaying territorial behavior is downstream approximately 18 miles, near Saticoy.[170]
California horned lark *Eremophila alpestris actia*	—	WL	LC	Grasslands, disturbed areas, agriculture fields and beach areas.	This species has been observed within NRSP during annual bird surveys foraging in plowed and graded fields over multiple years. In winter 2008 flocks of 250-500 individuals were observed in the Wolcott agriculture fields and east alfalfa field on several occasions,[171] and was observed in agriculture fields in 2007;[172] this species is thought to be a resident with recent observations;[173] no

[169] Forde Biological Consultants, *Least Bell's Vireo and Southwestern Willow Flycatcher Presence-Absence Survey; Castaic Creek below Castaic Lagoon to halfway between Lake Hughes Road and Tapia Canyon Road, Castaic, Los Angeles County, California (*prepared for Compliance Biology, Inc., Camarillo, California, August 14, 2006).

[170] Labinger and Greaves, *Results of 1998 Avian Surveys and Least Bell's Vireo Monitoring*.

[171] Bloom Biological, Inc., *Interim Report of Winter Surveys.*

[172] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

[173] Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area*; Guthrie, *Bird Surveys along the Santa Clara River, 2000*; Guthrie, *Bird Surveys along the Santa Clara River, 2005*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence* (2006).

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
					nesting has been observed, but suitable foraging and nesting habitat is present on the project site.
Merlin (wintering) *Falco columbarius*	—	WL	LC	Coastlines, wetlands, woodlands, agricultural fields, and grasslands.	Several individuals observed on different occasions hunting over agriculture fields along the Santa Clara River and in Potrero Canyon.[174] A male and female were observed flying over agriculture fields bordering riparian habitat near Indian Dunes in the NRSP in March 2007.[175] Although this species does not nest in California, CDFG considers wintering birds to be of Special Concern.
Prairie falcon (nesting) *Falco mexicanus*	BCC	WL	LC	Grasslands, savannas, rangeland, agricultural fields, and desert scrub; requires sheltered cliff faces for shelter and nesting.	At least 2 individuals were observed on several occasions in Potrero Canyon; and two other individuals were observed along the Santa Clara River on single occasions.[176] Individuals observed foraging within NRSP in 2000,[177] along Castaic Creek in 2001,[178] and Salt Creek in 2005;[179] it was observed flying north over the NRSP on April 29, 2007;[180] all of these occurrences were thought to be migrants in the project site. No nesting

[174] Bloom Biological, Inc., *Interim Report of Winter Surveys.*

[175] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

[176] Bloom Biological, Inc., *Interim Report of Winter Surveys.*

[177] Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area*.

[178] Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, 2001*.

[179] Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area.*

[180] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
					individuals have been observed and available nesting habitat is marginal.
American peregrine falcon *Falco peregrinus anatum*	BCC, Delisted	CE[1] CFP	LC	Nests near wetlands, lakes, rivers, or other water bodies, on cliffs, banks, dunes, and other human-made structures.	One individual was observed on one occasion over Wolcott agriculture field.[181] An individual was observed foraging over the Santa Clara River corridor near the Grapevine Mesa area within NRSP in 2000;[182] no other occurrences of this species have been documented on site during annual bird surveys. No nesting peregrine falcons have been observed on the project site. Moderate potential for foraging within NRSP and Salt Creek. The species may nest in the Santa Susana Mountains, south of the project site.[183]
California condor *Gymnogyps californianus*	FE, USBC	CE CFP	—	Forages over wide areas of open rangelands, roosts on cliffs and in large trees and snags.	Until April 2008, California condors had not been known to nest or land within the project area within the last 25 years.[184] In April 2008, a California condor was observed feeding on a dead calf in a Potrero side canyon by wildlife biologist Chris Niemela.[185] A condor was also directly observed in January 2009 in the Potrero Canyon area,[186] and there

[181] Bloom Biological, Inc., *Interim Report of Winter Surveys.*

[182] Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development*.

[183] Ibid.

[184] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*; Bloom Biological, Inc., *Interim Report of Winter Surveys.*

[185] M. Carpenter, Newhall Land and Farming Company, personal communication reporting that a California condor was observed feeding on a dead calf in a Potrero side canyon by wildlife biologist Chris Niemela in a Potrero side canyon, 2008.

[186] C. Niemela, memo from C. Niemela (Bloom Biological) to Jesse Grantham (USFWS) regarding observations of California condor in Potrero Canyon in January 2009, March 11, 2009.

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
					have been other documented landings in the project area between April and July 2008.[187] It is a wide-ranging species that nests on remote cliffs, but forages over hundreds of square miles and is known to at least fly over the site.[188]
Yellow-breasted chat (nesting) *Icteria virens*	—	CSC	LC	Riparian thickets and riparian woodlands with a dense understory.	This species was observed nesting in riparian thickets in 2007[189] and has been observed over multiple years along the Santa Clara River within dry riparian woodland habitat in NRSP and Salt Creek during annual bird surveys. Recent observations were made within the project site in 2006;[190] suitable foraging and nesting habitat is present on the project site.
Loggerhead shrike *Lanius ludovicianus*	BCC	CSC	LC	Grasslands and open shrublands with scattered shrubs, trees, fences or other perches.	This species is a resident on site.[191] In winter 2008 it was observed regularly in Potrero Canyon, Tapo Canyon, near Magic Mountain ranch gate, and Wolcott agriculture fields.[192] Observed to be fairly common within California sagebrush scrub and grasslands in NRSP

[187] R.P. Root. "Acknowledgement of Request for Formal Consultation on the Proposed Newhall Ranch Specific Plan, Santa Clarita, Los Angeles County, California." Letter from R.P. Root (USFWS) to A.O. Allen (Corps), November 12, 2008.

[188] Bloom Biological, Inc., *Interim Report of Winter Surveys.*

[189] Bloom Biological, *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

[190] Guthrie, *Bird Surveys along the Santa Clara River, 2006*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence* (2006).

[191] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*; Bloom Biological, Inc., *Interim Report of Winter Surveys* (2006).

[192] Bloom Biological, Inc., *Interim Report of Winter Surveys.*

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	Federal	State	Other		
					and also observed within Salt Creek[193]; it was observed nesting near Potrero Canyon and near an agriculture field near the Santa Clara River in 2007;[194] it was thought to have nested within and adjacent to the Entrada site;[195] suitable nesting and foraging habitat is present on the project site.
Black-crowned night-heron (rookery) *Nycticorax nycticorax*	—	***	LC	Riparian; nests in dense-foliaged trees and dense emergent wetlands.	This species has been observed along the Santa Clara River within the NRSP, most recently in 2007,[196] and in 2006.[197] This species was observed early in the year and is thought to be a wintering or migratory species within the project site. No rookery sites have been detected on or near the site.[198] It is not known if this species has a rookery site within or adjacent to the project site.[199] Some suitable foraging and nesting habitat is present on site.
Nuttall's woodpecker (nesting) *Picoides nuttallii*	USBC	***	ABC, LC, Aud	Lower elevation riparian deciduous and oak habitats.	This species is a common, year-round resident in cottonwood and willow riparian habitat along the Santa Clara River and Castaic Creek.[200] It has

[193] Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

[194] Bloom Biological, *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

[195] Guthrie, *Bird Surveys in the Proposed Magic Mountain Entertainment Project Area*; Guthrie, *Bird Observations in the Proposed Magic Mountain Entertainment Project Area*.

[196] Bloom Biological, Inc., *Interim Report of Winter Surveys.*

[197] Guthrie, *Bird Surveys along the Santa Clara River, 2006*; Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

[198] Bloom Biological, *Interim Report of Winter Surveys.*

[199] Bloom Biological, *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

[200] (Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor;* Bloom

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
					been observed nearly every year since surveys began in 1988 (see Guthrie and Bloom Biological surveys).
Summer tanager (nesting) *Piranga rubra*	—	CSC	—	Cottonwood-willow riparian habitats, especially older, dense stands along rivers and streams.	Individuals have been observed during annual bird surveys within NRSP in 1994,[201] in Entrada in 1991 and 1993;[202] it has also been observed east of the project site in 2000 and 2003;[203] suitable nesting and foraging habitat present along the Santa Clara River and Castaic Creek within NRSP.
Coastal California gnatcatcher *Polioptila californica californica*	FT, USBC	CSC	—	Various sage scrub communities, often dominated by California sage and buckwheat; generally avoids nesting in areas with a slope of greater than 40%, and typically less than 820 feet in elevation.	Suitable nesting and/or foraging habitat types are present on site, but all at higher elevations and/or with steeper slopes than typical of this species. The species has not been observed on site during numerous annual bird surveys (including USFWS protocol surveys). Focused protocol surveys have been conducted throughout the project site in 2000[204] and 2007.[205] Focused surveys have also been conducted

Biological, Inc., *Interim Report of Winter Surveys.*

201 Guthrie, *Bird Surveys along the Santa Clara River, 1994*.

202 Guthrie, *Surveys for Least Bell's Vireo*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1993); Guthrie, *Bird Surveys along the Santa Clara River, 1993*.

203 Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2000*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003*.

204 Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area*; Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development*; Guthrie, *Bird Surveys in the Proposed Magic Mountain Entertainment Project Area*; Guthrie, *Bird Observations for Spring 2004 in the Proposed Homestead and Chiquito Areas*; Guthrie, *Bird Observations in the Commerce Center Project Site*; Guthrie, *Bird Observations for Spring 2004 in the Proposed Potrero Valley, Long Canyon, Oak Valley and Onion Fields Development Areas*; Guthrie, *Bird Observations for Spring 2004 in the Proposed Mesa East and West Development*; Guthrie, *Bird Observations in the Proposed Magic Mountain Entertainment Project Area*.

205 Priest, "Focused California Gnatcatcher Survey, Landmark Village Project."

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	Federal	State	Other		
					off site in Legacy Village[206] and other areas.[207] However, during the course of biological monitoring conducted in the VCC planning area, an individual California gnatcatcher was observed on October 5, 2007 by Dudek biologist Jeff Priest and biologist Ron Francis, a sub-consultant to Dave Crawford, Compliance Biology, Inc.[208] Given the time of year and the fact that no other California gnatcatchers have been observed within the project site (despite extensive focused and general surveys), this observation is believed to have been that of a dispersing or transient individual.
Vermilion flycatcher (nesting) *Pyrocephalus rubinus flammeus*	—	CSC	—	Breeding habitat includes riparian woodlands, riparian scrub, and freshwater marshes.	A single individual was observed along the Santa Clara River in 1993;[209] suitable breeding and foraging habitat present on site along the Santa Clara River in the NRSP; some suitable habitat exists in Salt Creek.
Allen's/Rufous hummingbird (nesting) *Selasphorus sasin/rufus*	USBC/ USBC, BCC	***	ABC, LC, Aud	Breeds in coastal scrub, valley foothill hardwood, and valley foothill riparian habitats. Migrates	This species has been observed along the Santa Clara River within and adjacent to the NRSP.[210]

[206] Guthrie, *Bird Observations in the Stevenson Ranch*; Impact Sciences, Inc., "Results of Focused Surveys for the Coastal California Gnatcatcher"; SAIC, "Results of Focused Coastal California Gnatcatcher Surveys."

[207] Compliance Biology, Inc., *Results of Focused Coastal California Gnatcatcher Surveys; Prospective Water Tank Locations, River Park Project*; Compliance Biology, Inc., *Results of Focused Survey for Coastal California Gnatcatcher Surveys; River Park Project*; Compliance Biology, Inc., *Results of Focused Coastal California Gnatcatcher Surveys; Castaic Mesa Project*; PCR, "Results of Focused California Gnatcatcher Surveys for the West Creek/East Creek Project Site."

[208] Jeff Priest, Dudek, "Documentation of California Gnatcatcher Observation at Newhall, Valencia Commerce Center Project on 10/5/07" (memorandum from J. Priest, Dudek, to D. Crawford and R. Francis, Compliance Biology, Inc., October 8, 2007).

[209] Guthrie, *Bird Surveys along the Santa Clara River, 1993*.

[210] Bloom Biological, Inc., *Interim Report of Winter Surveys*; Guthrie, *Bird Surveys along the Santa Clara River, 1998*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1998*; Guthrie, *Bird Surveys along a*

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status				
Scientific Name	**Federal**	**State**	**Other**	**Habitat Requirements**	**On-Site Status**
				in woodland and scrub habitats.	These observations were thought to be of migrants. The project site provides suitable foraging, nesting, and migrating habitat throughout the NRSP. The project site is within this species' year-long range.
Chipping sparrow (nesting) *Spizella passerina*	—	***	LC	Open woodlands with sparse or low shrubs.	This species has been observed as a common migrant in the project site;[211] additional observations are within and adjacent to the NRSP near the Santa Clara River,[212] near Grapevine Mesa[213] and Homestead Canyon.[214] Suitable habitat occurs on site, mostly in High Country with some open woodland areas in Potrero Canyon as well. The project site is within this species' year-long range.
Least Bell's vireo (nesting) *Vireo bellii pusillus*	FE, USBC, BCC	CE	ABC, NT, Aud	Riparian vegetation with extensive willows below 2,000 ft.	This species has been observed almost every year along the Santa Clara River within the NRSP. It has been observed nesting within NRSP during annual bird surveys; on-site nesting sites in willow riparian habitats associated with the Santa Clara River and Castaic Creek. Suitable nesting and foraging habitat present with NRSP.
Yellow-headed	—	CSC	LC	Nests in freshwater marsh	This species has been

Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2004.

211 Bloom Biological, *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

212 Guthrie, *Bird Surveys along the Santa Clara River, 1994;* Guthrie, *Bird Surveys along the Santa Clara River, 1997;* Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California,* 2002.

213 Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development.*

214 Guthrie, *Bird Observations for Spring 2004 in the Proposed Homestead and Chiquito Areas.*

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
blackbird *Xanthocephalus xanthocephalus*				and forages in annual grassland, native grassland and agriculture.	observed within the NRSP.[215] All observations were thought to be migrants. While suitable nesting and foraging habitat occurs on the project site, this species is expected to occur very rarely on site.
MAMMALS					
Pallid bat *Antrozous pallidus*	—	CSC	WBWG High, LC	Arid habitats, including grasslands, shrublands, woodlands and forests; prefers rocky outcrops, cliffs and crevices with access to open habitats for foraging.	This species was detected within NRSP during ANABAT surveys[216] and in 2006; on-site habitats and structures (*e.g.*, oak woodlands, buildings, SR-126 bridge) provide suitable roosting habitat within NRSP and Salt Creek.
Western mastiff bat *Eumops perotis*	—	CSC	LC, WBWG High	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub and urban.	This species was not detected within NRSP during Anabat surveys,[217] but it was observed in 2006 within the NRSP;[218] suitable roosting and foraging habitat is present within the project site.
Western red bat *Lasiurus blossevillii*	—	CSC	WBWG High	Occurs in a wide variety of habitats, including scrub, grassland, woodland, and riparian areas.	There were three acoustic detections of the western red bat in the project area. Two 2004 detections[219] were in willow riparian habitat, and the 2006 detection was under The Old Road Bridge.[220] Suitable roosting and foraging habitat is present throughout the project site.
San Diego black-tailed	—	CSC	—	Open chaparral and	Observed at mouth of

[215] Guthrie, *Bird Surveys along the Santa Clara River, 1996*; Guthrie, *Bird Surveys along the Santa Clara River, 1997;* Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*; Guthrie, *Bird Surveys along the Santa Clara River, 2001*.

[216] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

[217] Ibid.

[218] H.L. Johnson, "Bat Survey; August 7–10, 2006 for the Newhall Ranch, Valencia, California."

[219] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

[220] Johnson, "Bat Survey; August 7–10, 2006 for the Newhall Ranch, Valencia, California."

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
jackrabbit *Lepus californicus bennettii*				California sagebrush scrub, grassland and agriculture.	Potrero Canyon within NRSP.[221] Suitable habitat is present within California sagebrush scrub and chaparral habitats within NRSP, Salt Creek, and High Country.
Fringed myotis *Myotis thysanodes*	—	***	—	Occurs in a wide variety of habitats. Optimal habitats include pinyon–juniper, valley foothill hardwood and hardwood-conifer woodlands. Forms maternity colonies and roosts in caves, mines, buildings and crevices.	This species was detected within NRSP in coast live oak habitat during ANABAT surveys;[222] suitable roosting and foraging habitat is present within the project site in oak woodlands scattered throughout NRSP and larger concentrations in High Country.
Yuma myotis *Myotis yumanensis*	—	***	—	Inhabits open forests and woodlands with sources of water. Species is closely tied to bodies of water, over which it feeds. Forms maternity colonies in caves, mines, buildings, or crevices.	This species was not detected within NRSP during ANABAT surveys,[223] but it was observed in 2006 within the NRSP;[224] suitable roosting and foraging habitat is present within the project site.
San Diego desert woodrat *Neotoma lepida intermedia*	—	CSC	—	Open chaparral, California sagebrush scrub, cactus patches and the understory of tree thickets.	A species of desert woodrat was observed during 2004 small mammal surveys within NRSP.[225] Single woodrat midden was observed within High Country.[226] Moderate potential to occur within Salt Creek. Based on the known range of this species, it is assumed that the animals observed were the San Diego (*intermedia*) subspecies.

[221] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

[222] Ibid.

[223] Ibid.

[224] Johnson, "Bat Survey; August 7–10, 2006 for the Newhall Ranch, Valencia, California."

[225] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

[226] Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
Pocketed free-tailed bat *Nyctinomops femorosaccus*	—	CSC	WBWG Medium	Occurs in a wide variety of habitats, including scrub, grassland, woodland, and riparian areas.	The pocketed free-tailed bat was acoustically detected in 2006 in lower Potrero Creek.[227] It roosts in crevices in cliffs and forages in open air in all habitats. The project area is at the extreme northwestern part of pocketed free-tailed bat range in California and does not contain the desert habitats typically used by this species. Though present on site, it is probably and occasional visitor.
Mule deer *Odocoileus hemionus*	—	†	—	Variety of habitats including forests, woodlands, brush, meadows and standing waters.	This species has been observed during surveys within Entrada,[228] NRSP,[229] and High Country and Salt Creek.[230] Suitable habitat exists throughout the project site.
Mountain lion *Puma concolor*	—	✦	—	Occurs in a variety of scrub and forested habitats.	This species has been observed within NRSP,[231] and High Country and Salt Creek;[232] the project site is expected to host transient individuals and to be part of local lion(s)' home range.
American badger *Taxidea taxus*	—	CSC	—	Grasslands, agriculture, drier open stages of shrub, forest, and herbaceous habitats with	Observed during small mammal surveys within NRSP.[233] Suitable habitat

[227] Johnson, "Bat Survey; August 7–10, 2006 for the Newhall Ranch, Valencia, California."

[228] Dudek and Associates, Inc., *Biological Resources Technical Report for the Entrada Site*.

[229] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

[230] Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

[231] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

[232] Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

[233] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

Table 4.3-5 (Continued)
Special-Status Wildlife Species Observed on or Adjacent to the Project Site

Common Name	Status			Habitat Requirements	On-Site Status
Scientific Name	**Federal**	**State**	**Other**		
				friable soils.	exists within central portions of NRSP.
Black bear *Ursus americanus*	—	†	—	Dense forests; forages in brush forests, valley foothill riparian and wet meadows.	Observed within High Country in 2005.[234] Some suitable habitat occurs within the southern portion of High Country.

STATUS KEY:
Federal:
FE: Federally Endangered
FT: Federally Threatened
BCC: Bird of Conservation Concern
USBC: United States Bird Conservation Watch List

State:
CE: California Endangered
CFP: California Fully Protected
CSC: California Species of Special Concern
WL: Watch List
****: Special Animal*

Other:
LC = Least Concern (IUCN)
NT = Near Threatened (IUCN)
Aud = Audubon Watch List
ABC = American Bird Conservancy Green List
WBWG = Western Bat Working Group
†: Trust resource

234 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

(2) Special-Status Wildlife Species Not Observed but with Potential to Occur on the Project Site

Fifteen special-status wildlife species have been identified as having the *potential* to occur on the site, based on the presence of suitable habitat and known occurrences in the area, despite the fact that they have not been observed during general or focused surveys of the project site. **Table 4.3-6, Special-Status Wildlife Species with Potential to Occur on the Project Site**, identifies these species and provides the species' listing status, habitat requirements, and an explanation of why the species has the potential to occur on the site as a resident, over-wintering, nesting, or roosting species.

Table 4.3-6
Special-Status Wildlife Species Not Observed but with *Potential* to Occur on the Project Site

Common Name *Scientific Name*	Status		Habitat Requirements	Habitat Suitability
	Federal	State		
MOLLUSKS				
Trask shoulderband snail (*Helminthoglypta traskii traskii*)	—	***	The ecology and distribution of terrestrial land snails, including shoulderband snails in most of Southern California, are poorly understood. The available literature indicates that Trask shoulderband snail occurs in areas supporting coastal scrub, riparian, and chaparral communities.	Surveys were conducted in the project area for this species from November 2009 to January 2010. Although surveys were negative for this terrestrial mollusk species, the presence of suitable microhabitats, such as a woodrat nests, decaying yucca, downed tree limbs and branches, and two other non-special-status shoulderband snail species—Southern California shoulderband snail and Vasquez rocks shoulderband snail—indicate that the Trask shoulderband potentially occurs in the project area.[235]
FISH				
Southern steelhead *Oncorhynchus mykiss*	FE	—	As juveniles and for spawning: relatively cool freshwater streams, well oxygenated water with adequate depth and cover in the way of gravel, cobble, boulder, undercut banks, large and small woody debris, and overhanging vegetation. As non-spawning adults: Pacific Ocean.	Within the Santa Clara River drainage, southern steelhead historically inhabited Piru Creek, Sespe Creek, Santa Paula Creek, Hopper Creek, and possibly Pole Creek.[236] Presently, southern steelhead occur downstream of the proposed project in the Santa Clara River watershed in Piru Creek between the confluence with the Santa Clara River and Santa Felicia Dam, in Sespe Creek, in Santa Paula Creek,

[235] C. Huntley, "Re: Snail Methods, etc." Email from C. Huntley (Aspen) to P. Behrends (Dudek), A.C. Lynch (Sohagi Law Group), D. Bedford (CDFG), K. Drewe (CDFG), S. White (Aspen), M. Carpenter (Newhall Land), S. Rojas (Newhall Land), and S. Miller (Dudek), March 12, 2010.

[236] R.G. Titus, D.C. Erman, and W.M. Snider. *History and Status of Steelhead in California Coastal Drainages South of San Francisco Bay*. Forthcoming.

Table 4.3-6 (Continued)
Special-Status Wildlife Species Not Observed but with *Potential* to Occur on the Project Site

Common Name *Scientific Name*	Status		Habitat Requirements	Habitat Suitability
	Federal	State		
				and possibly in Hopper and Pole Creeks.[237] Although reconnaissance surveys conducted along the Santa Clara River and tributary drainages within the Specific Plan area of the RMDP were negative in 2004 and 2005,[238] this species was included in this category (Potential to Occur on Site) due to potential downstream effects of the proposed project.
AMPHIBIANS				
California red-legged frog *Rana aurora draytonii*	FT	CSC	Water sources such as ponds, lakes, reservoirs, streams and adjacent riparian woodlands.	Field investigations indicate that potential breeding or summer habitat is generally absent from the portion of the Santa Clara River within NRSP;[239] the species generally avoids large river channels with widely fluctuating flows because such habitat does not permit successful reproductive activity.[240] Not documented in the Santa Clara River in 1995[241] and 2001[242] with negative results. The species has been documented within the Piru Creek and San Francisquito Creek tributaries to the River; given the occurrence of California red-legged frog in nearby upstream and downstream tributaries, non-breeding frogs could occur within the portion of the Santa Clara River (and other drainages) on the project site. Additionally, the stock ponds on the NRSP provide suitable habitat and could support breeding frogs, although none have been found there.

[237] M. Stoeker and E. Kelly. *Santa Clara River Steelhead Trout: Assessment and Recovery Opportunities (*prepared for The Nature Conservancy and The Santa Clara River Trustee Council).

[238] ENTRIX, Inc., *Focused Special-Status Fish Species Habitat Assessment*.

[239] Ibid.

[240] M.P. Hayes and M.R. Jennings, "Habitat Correlates of Distribution of the California Red-Legged Frog (*Rana aurora draytonii*) and the Foothill Yellow-Legged Frog (*Rana boylii*): Implications for Management," in *Proceedings of the Symposium on the Management of Amphibians, Reptiles, and Small Mammals in North America*, technical coordinators R. Sarzo, K.E. Severson, and D.R. Patton, U.S. Forest Service, 144–158)

[241] SMEA, *Sensitive Aquatic Species Survey*.

[242] Sandburg, "Field Summary of Santa Clara River Surveys for *Bufo californicus* and *Rana aurora draytonii*."

Table 4.3-6 (Continued)
Special-Status Wildlife Species Not Observed but with *Potential* to Occur on the Project Site

Common Name *Scientific Name*	Status		Habitat Requirements	Habitat Suitability
	Federal	State		
REPTILES				
Rosy boa *Charina trivirgata* ssp. *roseofusca*	—	***	Inhabits desert and chaparral habitats with rocky soils in coastal canyons and hillsides, desert canyons, washes and mountains.	Suitable scrub and chaparral habitat occurs within the project site with large concentrations in the northeastern portion of High Country, and some in Potrero Canyon; riverbank habitat occurs on site along the Santa Clara River and Castaic Creek; oak woodlands are sparsely scattered throughout the NRSP with larger concentrations in High Country; this species is known to occur in the project region and is presumed to occur on site.
San Bernardino ringneck snake *Diadophis punctatus modestus*	—-	***	Inhabits open, relatively rocky areas, often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous vegetation.	Suitable habitat occurs within the project site in association with oak woodland and riverbank habitats; riverbank habitat occurs on site along the Santa Clara River and Castaic Creek; oak woodlands are sparsely scattered throughout the NRSP with larger concentrations in High Country; species is known to occur in the project region and is presumed to occur on site.
Coast patch-nosed snake *Salvadora hexalepis virgultea*	—	CSC	Inhabits brushy or shrubby vegetation. Requires small mammal burrows for refuge and overwintering sites.	Suitable habitat occurs throughout the project site in association with shrub habitats (upland and riparian scrub, chaparral and riverwash); California ground squirrel and Botta's pocket gopher burrows occur on site; species is known to occur in the project region and is presumed to occur on site.
South coast garter snake *Thamnophis sirtalis* spp.	—	CSC	Inhabits scrub, chaparral, annual and native grassland, freshwater marsh, and agriculture.	Suitable habitat occurs throughout the project site in association with scrub, chaparral, grassland, and agriculture habitats.
BIRDS				
Grasshopper sparrow *Ammodramus savannarum*	—	***	Dense, dry or well-drained annual and native grasslands with mix of grasses and forbs. May occur in fallow agricultural fields, especially those periodically planted in oats and barley.	The project site is just south of the southern edge of the portion of this species' summer range which occurs at approximately the Los Angeles/Kern County boundary. There is at least moderate potential for this species to breed/forage in grasslands and some agricultural areas which occur mostly in the central portion of NRSP, San Martinez Grande, along portions of the Santa Clara River and Castaic Creek.
Bell's sage sparrow (nesting)	BCC	WL	Coastal scrub and chaparral.	This species has been observed off site in Castaic Mesa,[243] near Soledad

[243] Compliance Biology, Inc., *Results of Focused Coastal California Gnatcatcher Surveys; Castaic Mesa Project*.

Table 4.3-6 (Continued)
Special-Status Wildlife Species Not Observed but with *Potential* to Occur on the Project Site

Common Name *Scientific Name*	Status Federal	Status State	Habitat Requirements	Habitat Suitability
Amphispiza belli belli				Canyon in 2002,[244] and in the Legacy Village project site, adjacent to the NRSP and Salt Creek area.[245] Suitable nesting and foraging habitat present on the project site with concentrations of coastal scrub and chaparral in the northeastern portion of the NRSP and southeastern portion of High Country.
Black-chinned sparrow (nesting) *Spizella atrogularis*	BCC, USBC	***	Chaparral and sagebrush scrub.	Suitable habitat occurs within project site in association with chaparral and coastal scrub habitats which are concentrated in the northeastern portion of the NRSP and the southeastern portion of High Country.
MAMMALS				
Ringtail *Bassariscus astutus*	—	CFP	Mixture of forest and shrubland in close association with rocky areas and riparian habitats; uses hollow trees, snags, and logs for cover and reproduction.	This species was surveyed for during the mammal surveys in 2004.[246] Cameras, scent/track stations and spotlight survey techniques were used to detect these species. Low potential to occur based on lack of suitable habitat, such as hollow trees, logs, snags and abundant rocky areas. In addition, these species are not usually found more than 1 kilometer away from permanent water; therefore these species would most likely have been detected during the numerous studies performed near the Santa Clara River and its tributaries.[247]
Townsend's big-eared bat *Corynorhinus townsendii*	—	CSC	Utilizes a variety of communities, including conifer and oak woodlands and forests, arid grasslands and deserts and high-	This species was not detected on the project site during ANABAT surveys.[248] Suitable roosting and foraging habitat is present on the site.

[244] Compliance Biology, Inc., *Results of Focused Survey for Coastal California Gnatcatcher Surveys; River Park Project*.

[245] Guthrie, *Bird Observations in the Stevenson Ranch*.

[246] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

[247] Haglund and Baskin, *Fish and Wildlife Survey and Habitat Assessment*; Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *Biological Resources Technical Report for the Valencia Commerce Center*; Dudek and Associates, Inc., *Biological Resources Technical Report for the Entrada Site*.

[248] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

Table 4.3-6 (Continued)
Special-Status Wildlife Species Not Observed but with *Potential* to Occur on the Project Site

Common Name *Scientific Name*	Status		Habitat Requirements	Habitat Suitability
	Federal	State		
			elevation forests and meadows. Requires appropriate roosting, maternity and hibernacula sites free from human disturbance.	
Western small-footed myotis *Myotis ciliolabrum*	—	CSC	Occurs in a wide variety of habitats, including scrub, grassland, woodland, and riparian areas. Requires appropriate roosting, maternity and hibernacula sites free from human disturbance.	Impact Sciences identified the 40 kHz frequency range species in 2004 as the western small-footed myotis,[249] but without additional information (*e.g.*, longer time-series recording or capture), this identification could not be confirmed because this frequency is characteristic of at least two other species that could occur on site: long-legged myotis and little brown bat. In 2006, 40 kHz bat species were recorded in all three survey locations along Potrero Creek, along the Santa Clara River at Walcott Road, and at the plant nursery site in upper Long Canyon. Without definitive presence/absence information, for the purpose of this analysis, it is assumed that the western small-footed myotis occurs in the project area.
Long-legged myotis *Myotis volans*	—	CSC	Occurs in a wide variety of habitats, including scrub, grassland, woodland, and riparian areas. Requires appropriate roosting, maternity and hibernacula sites free from human disturbance.	The presence of the long-legged myotis was not confirmed in the project area during the acoustic and mist netting surveys conducted in 2004 and 2006.[250] However, bats with acoustic signatures in the 40 kHz range, which is the range for the long-legged myotis, were detected on site in 2004 and 2006. Impact Sciences identified the 40 kHz frequency-range species in 2004 as the western small-footed myotis,[251] but without additional information (*e.g.*, longer time-series recording or capture), this identification could not be confirmed. Based on the frequency data alone, the 40 kHz species could be western small-footed myotis, long-legged myotis, or little brown bat; therefore, all three species should be considered

[249] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

[250] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*; Johnson, "Bat Survey; August 7–10, 2006 for the Newhall Ranch, Valencia, California."

[251] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

Table 4.3-6 (Continued)
Special-Status Wildlife Species Not Observed but with *Potential* to Occur on the Project Site

Common Name *Scientific Name*	Status		Habitat Requirements	Habitat Suitability
	Federal	State		
				to be potentially present on site. In 2006, 40 kHz bat species were recorded in all three survey locations along Potrero Creek, along the Santa Clara River at Walcott Road, and at the plant nursery site in upper Long Canyon.
Southern grasshopper mouse *Onychomys torridus ramona*	—	CSC	Inhabits desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	This species has not been detected within the NRSP during small mammal trapping.[252] This species has potential to occur at least in low densities on site within coastal scrub and grassland vegetation communities; it is not expected to occur within other habitats on the project site.

STATUS KEY:
Federal
FE: Federally Endangered
FT: Federally Threatened
FC: Federal Candidate for listing as Threatened or Endangered
BCC: Bird of Conservation Concern
USBC: United States Bird Conservation Watch List

State
CE: California Endangered
CT: California Threatened
CFP: California Fully Protected
CSC: California Species of Special Concern
***: Over wintering (or roosting) sites should be protected, butterfly probably not at risk currently*
****: Special Animal*

252 Ibid.

(3) Special-Status Wildlife Species Not Expected or Rarely Occurring on the Project Site

The project site lacks suitable habitat to support the species addressed in **Table 4.3-7, Special-Status Wildlife Species Not Expected or Rarely Occurring on the Project Site**, as a resident or nesting species or is expected to support the species only on rare occasions, such as during migration. **Table 4.3-7** provides the species' regulatory status, habitat requirements, and an explanation of why the species is not expected to reside on or substantially utilize the project site. As these species are not expected to breed, nest, or otherwise reside on or substantially utilize the project site, they are not discussed further in this document.

Table 4.3-7
Special-Status Wildlife Species Not Expected or Rarely Occuring on the Project Site

Common Name	Status			
Scientific Name	**Federal**	**State**	**Habitat Requirements**	**Habitat Suitability**
INVERTEBRATES				
Crustacea Order Anostraca (fairy shrimp)				
Vernal pool fairy shrimp *Branchinecta lynchi*	FT	—	Vernal pools.	Wet season vernal pool surveys were conducted in December 2007 to March 2008 in five previously identified depressions associated with western spadefoot surveys, including three in Potrero Canyon, one between Grapevine Mesa and Lion Canyon, and one east of Lion Canyon[253]. Two of the five pools retained adequate water for testing, and results were negative. One depression located between Grapevine Mesa and Lion Canyon was a detention basin, and the other depression in Potrero Canyon was located on an oil well pad and storage area where water collected next to a bermed area. Neither of these depressions exhibited typical fairy shrimp habitat characteristics. No discernable depressions that could collect water were found at the other three previously identified locations, and water was not retained at these sites. All three were on dirt access roads. There is no indication of vernal or other seasonal pools on site that are suitable for fairy shrimp. The nearest documented vernal pools in relation to the project area that could be source populations for fairy shrimp include at
San Diego fairy shrimp *Branchinecta sandiegonensis*	FE	—	Vernal pools.	
Riverside fairy shrimp *Streptocephalus woottoni*	FE	—	Vernal pools.	

[253] Compliance Biology, Inc., *Results of the Focused Western Spadefoot Toad Surveys on the Mission Village Project Site*; Dave Crawford, Compliance Biology, Inc., telephone call to Sherri Miller (Dudek), November 2007.

Table 4.3-7 (Continued)
Special-Status Wildlife Species Not Expected or Rarely Occuring on the Project Site

Common Name	Status			
Scientific Name	**Federal**	**State**	**Habitat Requirements**	**Habitat Suitability**
				least two vernal pools located in the Plum Canyon area of Los Angeles County (Cruzan Mesa), approximately 10 miles from the project area, and the Carlsberg vernal pools in Moorpark in Ventura County, approximately 15 miles from the project Area[254]. Both the Carlsberg and Cruzan Mesa pools support the vernal pool fairy shrimp[255]. The USFWS is in concurrence that the project is not likely to adversely affect listed fairy shrimp because these species are not known to occur in the project area and suitable habitat is not known to occur in the project area[256].
Insecta Order Lepidoptera (butterflies and moths)				
Quino checkerspot butterfly (Wright's *Euphydryas)* *Euphydryas editha quino*	FE	—	Occurs in localized colonies, always closely associated with the larval foodplant dot-seed plantain (*Plantago erecta*) and clay or cryptobiotic soils.	Based on a focused habitat assessment, it was concluded that the primary larval food plant (*Plantago erecta*) does not occur on the site[257]. This butterfly was last documented in the Santa Susana Mountains, approximately 10 miles south and southwest of the project site in 1954.
AMPHIBIANS				
Sierra Madre (Mountain) yellow-legged frog *Rana muscosa*	FE	CSC	Southern California, populations are restricted to streams in ponderosa pine, montane hardwood-conifer, and montane riparian habitats at elevations above 1,200 feet.	Does not occur in the project area. project site is outside its range and does not support montane habitats.
Coast range newt *Taricha torosa torosa*	—	CSC	Often occurs in areas where streams and ponds dry up in the summer. Occurs beneath logs, boards, rocks, and in rodent burrows, but adults must return to water to breed. May be found in drier habitats, such as oak forests, chaparral, and rolling grasslands. Commonly	While suitable habitat occurs in the project area, this species is not known to occur in the project area. The nearest current occurrences range from 20 to 25 miles from the project site, in the Santa Monica Mountains. Other Southern California occurrences are in the Angeles National Forest in the San Gabriel Mountains, the Coast Ranges in Santa Barbara County, and the

254 R.P. Root, "Acknowledgement of Request for Formal Consultation on the Proposed Newhall Ranch Specific Plan, Santa Clarita, Los Angeles County, California" (letter from R.P. Root, USFWS, to A.O. Allen, Corps, November 12, 2008).

255 USFWS. *Vernal Pools of Southern California Recovery Plan* (Portland, Oregon: USFWS, 1998).

256 Root, "Acknowledgement of Request ."

257 Compliance Biology, Inc., *Results of Butterfly Surveys on the Newhall Ranch Project Site;* Compliance Biology, Inc. *Results of Butterfly Surveys on Magic Mountain Entertainment Site.*

Table 4.3-7 (Continued)
Special-Status Wildlife Species Not Expected or Rarely Occuring on the Project Site

Common Name	Status			
Scientific Name	**Federal**	**State**	**Habitat Requirements**	**Habitat Suitability**
			found in or near ditches, ponds, lakes, and streams; however, a permanent water source is not necessary. Stream-breeding populations typically breed in slow moving or stagnant pools in streams.	Cuyamaca Range in San Diego County.
BIRDS				
Coastal (San Diego) cactus wren *Campylorhynchus brunneicapillus sandiegensis*	BCC	CSC	Southern cactus scrub, maritime succulent scrub, cactus thickets in coastal sage scrub**.**	No observations of cactus wrens have been made in the project area, and the coastal (San Diego) cactus wren subspecies is not expected to occur on site based on its range. There are no large concentrations of cactus thickets on site that provide the necessary habitat constituent for nest sites.
Great egret (rookery) *Ardea alba*	—	***	Nests colonially in large trees. Rookery sites are typically located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Individuals commonly observed over multiple years foraging within the Santa Clara River in NRSP; moderate potential for foraging within Salt Creek. Recent observations were made in 2006[258]. No rookery sites have been observed on the project site during annual bird surveys.
Great blue heron (rookery) *Ardea herodias*	—	***	Nests colonially in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites are usually in close proximity to foraging areas such as marshes, lake margins, tide-flats, wet meadows, rivers, and streams.	Individuals commonly observed over multiple years foraging within the Santa Clara River within NRSP; moderate potential for foraging within Salt Creek. Recent observations were made in 2006.[259] No rookery sites have been observed on the project site during annual bird surveys.
Swainson's hawk *Buteo swainsoni*	BCC, USBC	CT	Open grassland, shrublands, croplands.	This species is a seasonal migrant. One individual (thought to be a migrant) was observed in 2000 in the NRSP.[260] Another observation was made within the vicinity of the project site east of Old Road bridge.[261] Although suitable foraging habitat is present on the project site, this species has not been documented to nest in Southern

[258] Guthrie, *Bird Surveys along the Santa Clara River, 2006*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2006).

[259] Guthrie, *Bird Surveys along the Santa Clara River, 2006*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2006).

[260] Guthrie, *Bird Surveys along the Santa Clara River, 2000*.

[261] Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1997*.

Table 4.3-7 (Continued)
Special-Status Wildlife Species Not Expected or Rarely Occuring on the Project Site

Common Name	Status			
Scientific Name	**Federal**	**State**	**Habitat Requirements**	**Habitat Suitability**
				California and is expected to rarely forage over the site.
Mountain plover *Charadrius montanus*	BCC, USBC	CSC	Nests in open, shortgrass prairies or grasslands; winters in shortgrass plains, plowed fields, open sagebrush, and sandy deserts.	Some suitable habitat exists on site in agriculture and California annual grassland communities, which primarily are located in the central portion of the NRSP, San Martinez Grande, and adjacent to the Santa Clara River riparian areas. These communities have marginal habitat quality on site to support this species. This species only winters in Southern California and only rarely occurs. It is not expected to breed on the project site.
Bald eagle *Haliaeetus leucocephalus*	Delisted	CE, CFP	Seacoasts, rivers, swamps, large lakes; winters at large bodies of water in lowlands and mountains.	No suitable lake habitat exists on the project site and no records of nesting on the project site. There are no large bodies of water, large rivers, or seacoasts within the vicinity of the project site.
Least bittern (nesting) *Ixobrychus exilis*	—	CSC	Dense emergent wetlands of cattails and tules are essential.	Cattails and tules occur within the Santa Clara River corridor; however, these areas do not contain the dense emergent vegetation characteristic of nesting habitat of this species.
Long-billed curlew (nesting) *Numenius americanus*	BCC, USBC	WL	Nests in grazed, mixed grass and short-grass prairies. Localized nesting along the California coast. Coastal estuaries, mudflats, open grasslands and croplands are used in winter for foraging.	Some suitable habitat exists on site in agriculture and California annual grassland communities, which primarily are located in the central portion of the NRSP, San Martinez Grande, and adjacent to the Santa Clara River riparian areas. This species may occur rarely in the winter in the project vicinity, but the project site is outside its nesting range.
Osprey (nesting) *Pandion haliaetus*	—	WL	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast.	Ospreys need areas that support fish for long periods of time. There are no large bodies of water on site or adjacent to the project site that could support fish for long periods of time. One individual was observed on March 31[262] and was probably in migration.
Double-crested cormorant *Phalacrocorax auritus*	—	WL	Lakes, rivers, reservoirs, estuaries, ocean; nests in tall trees, rock ledges on cliffs, rugged slopes.	No suitable lake habitat exists on the project site and no records of nesting on the project site. There are no large bodies of water, large rivers, estuaries or seacoasts within the vicinity of the project site.
White-faced ibis (rookery site)	—	WL	Nests in dense emergent wetlands and marshes;	Very little marsh habitat exists on site, and is primarily located south of the

[262] Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development.*

Table 4.3-7 (Continued)
Special-Status Wildlife Species Not Expected or Rarely Occuring on the Project Site

Common Name	Status			
Scientific Name	**Federal**	**State**	**Habitat Requirements**	**Habitat Suitability**
Plegadis chihi			winter foraging in shallow lacustrine waters, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields and estuaries.	Santa Clara River in Potrero Canyon. This species is not known to regularly breed in California anymore, and there is not enough suitable habitat on the project site to support rookery sites.
Purple martin (nesting) *Progne subis*	—	CSC	Nests in tall sycamores, pines, oak woodlands, coniferous forest; forages over riparian, forest and woodland.	This species may occasionally forage in the project vicinity, but the site is outside its nesting range. There is limited suitable nesting habitat because there are no tall sycamores, pines, or coniferous forest communities on the project site, and this species is not expected to nest on site. One individual was observed within NRSP.[263]
Bank swallow (nesting) *Riparia riparia*	—	CT	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes or the ocean to dig a nesting hole.	The project site is not within this species' range. The required nesting habitat does exist on the project site, and no recent records of nesting in the area. Typically these species nest in areas such as the Sacramento and Feather rivers.
California spotted owl *Strix occidentalis occidentalis*	BCC, USBC	CSC	Old growth oak and oak–conifer habitats.	The project site is within the species' yearlong range. However, this species generally requires dense, old growth forest areas for foraging and cover; breeds in mature, multi-layered forest stands and nests generally in a tree or snag cavity. No conifer habitats occur on site. Oak woodlands exist on site, but are generally more open and often occur as oak savannahs. Dense, mature coast live oak woodlands exist within canyons in High Country and Salt Creek that may be suitable habitat for these species; however in the Angeles National Forest (east of the project site), these species have been documented using canyon live oak habitats with co-dominant conifer species.[264] In the Cleveland National Forest in San Diego, they have been documented in woodlands dominated by both coast and canyon live oak, but

[263] Guthrie, *Bird Surveys along the Santa Clara River, 1994*.

[264] Stephenson, John, *Spotted Owl Surveys on the National Forests of Southern California: A Status Report and Recommendations for the Future* (1991).

Table 4.3-7 (Continued)
Special-Status Wildlife Species Not Expected or Rarely Occuring on the Project Site

Common Name	Status			
Scientific Name	**Federal**	**State**	**Habitat Requirements**	**Habitat Suitability**
				also with co-dominant conifer species.[265] Overall, there is limited dense oak woodland on site to support this species.
MAMMALS				
Mexican long-tongued bat *Choeronycteris mexicana*	—	CSC	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon–juniper woodland. Roosts in caves, mines, and buildings.	The project site is not within this species' range. The closest range (and only known range in California) is in coastal San Diego County, approximately 100 miles southwest. This species requires habitats associated with desert habitats, and these are not found within the project site.
Spotted bat *Euderma maculatum*	—	CSC	Occupies a wide variety of habitats from arid deserts and grasslands, to mixed conifer forests. Feeds over water and along washes. Needs rock crevices in cliffs or caves for roosting.	The project site is within the species' yearlong range. This species was not detected within NRSP during ANABAT surveys conducted in 2004[266] or in 2006[267]). There are no cliffs or caves on site; therefore, there is limited suitable roosting habitat on or bordering the project site. Some suitable foraging habitat may occur in grasslands on site; however no desert or mixed conifer habitats occur on site or near the project site. Only rare to occasional spotted bat sightings have been recorded in the project vicinity.
Lodgepole chipmunk *Neotamias speciosus speciosus*	—	***	Southern California population occurs in mountains in open-canopy forests of mixed conifer, Jeffrey pine, lodgepole and limber pine, and occasionally in chaparral at elevations above 6,400 feet.	Does not occur in the project area. project site is outside its range and does not support montane habitats.
Los Angeles pocket mouse *Perognathus longimembris brevinasus*	—	CSC	Inhabits lower elevation grasslands and California sagebrush communities on open ground with fine sandy soils. May not dig extensive burrows, hiding instead under weeds and dead leaves.	This species has not been detected within NRSP during small mammal trapping.[268] Some suitable habitat may exist on site in grasslands; however there are no fine sandy soils associated with grassland or coastal scrub communities on site. The coastal scrub communities may be too in high elevation for the species. This species is not expected to occur on other

[265] Stephenson, *Spotted Owl Surveys*.

[266] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

[267] Johnson, "Bat Survey; August 7–10, 2006 for the Newhall Ranch, Valencia, California."

[268] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

Table 4.3-7 (Continued)
Special-Status Wildlife Species Not Expected or Rarely Occuring on the Project Site

Common Name	Status			
Scientific Name	**Federal**	**State**	**Habitat Requirements**	**Habitat Suitability**
				portions of the project site because the known range is south of project site.
Big free-tailed bat *Nyctinomops macrotis*	—	CSC	Rugged, rocky canyons.	This species has not been observed during wildlife surveys within the project site. The closest range is in southwest San Diego County and is rare in California. This species is not expected to occur on site due to the distance from its known range.

STATUS KEY:
Federal
FE: Federally listed as Endangered
FT: Federally listed as Threatened
FC = Federal Candidate for listing as Threatened or Endangered
BCC = Bird of Conservation Concern
USBC = United States Bird Conservation Watch List

State
CE: California-listed as Endangered
CT: California-listed as Threatened
CFP: California Fully Protected
CSC: California Species of Special Concern
WL: Watch List
****: Special Animal*

e. Jurisdictional Wetlands and Drainages

(1) U.S. Army Corps of Engineers Jurisdiction

Wetlands, creeks, streams, and permanent and intermittent drainages are generally subject to the jurisdiction of the Corps under Section 404 of the federal Clean Water Act. The Corps has jurisdiction up to the "ordinary high water mark" of rivers, creeks, and streams that are considered "waters of the U.S." as defined by the Clean Water Act. If adjacent wetlands occur, the limits of jurisdiction extend beyond the ordinary high water mark to the outer edge of the wetlands. Wetlands are defined by the Corps as "those areas that are inundated or saturated by surface or groundwater at a frequency or duration to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."[269] The presence and extent of wetland areas are normally determined by examination of the vegetation, soils, and hydrology of a site. The Corps definition of wetlands requires that all three wetland identification parameters be met.

In 2003, URS staff completed field investigations and conducted a delineation of waters of the United States and CDFG jurisdictional streams present within the RMDP site, which encompasses the Mission Village project site. The 2003 delineation was conducted using sub-meter accurate GPS units and the data were transferred into a GIS database. The URS December 2003 Jurisdictional Delineation report is found in **Appendix 4.3** of this EIR. The corps' letter, dated February 4, 2004, concurring with the URS delineation also is attached in **Appendix 4.3** of this EIR. Between 2004 and 2009, URS completed multiple delineation efforts on the RMDP and Entrada sites in

[269] U.S. Army Corps of Engineers (Corps), *Corps of Engineers Wetlands Delineation Manual*, 1987.

support of the EIS/EIR process for the RMDP/SCP project. These efforts resulted in subsequent mapping refinements to the jurisdictional boundaries (discussed below).

URS staff delineated Corps jurisdictional wetlands in 2007, which had not been delineated previously. The extent of wetlands within the site was determined through a combination of fieldwork and analysis of high-resolution (6" pixels) aerial photography. Wetlands were identified within the Santa Clara River corridor and in the Potrero Canyon and Salt Creek drainages, as well as in a spring complex near the mouth of Middle Canyon. Where fieldwork was conducted, the wetland delineation was performed in accordance with the Corps' Wetland Delineation Manual (Environmental Laboratory, 1987) and the Arid West Regional Supplement (Corps, 2006).

In 2008, Glenn Lukos Associates conducted a field delineation of the limits of waters of the United States, Corps jurisdictional wetlands, and CDFG jurisdictional streams within the Entrada planning area. In addition to the Entrada planning area, the Glenn Lukos Associates study delineated jurisdictional drainages within the footprint of the extension of Magic Mountain Parkway. The Lukos delineation letter report, dated October 18, 2006 (as revised September 15, 2008), is attached in **Appendix 4.3** of this EIR.

In 2009, URS prepared a preliminary jurisdictional determination encompassing the entire RMDP site and Entrada planning area. This report combined the results of previous studies conducted in 2003, 2006, 2007, and 2008 to produce a comprehensive, planning-level delineation. **Appendix 4.3** of this EIR contains the URS preliminary jurisdictional determination, dated April 8, 2009. In addition, as part of the Draft EIS/EIR, URS compiled a "Composite Wetland Delineation" for the RMDP and Entrada sites; this composite delineation is also attached in **Appendix 4.3**.

Subsequent to release of the Draft EIS/EIR in April 2009, the Corps and CDFG received comments from the public regarding the boundary of a riparian area along the Santa Clara River mainstem near the proposed site for the Potrero Canyon Bridge. In the 2009 preliminary composite wetlands delineation, this area had been previously surveyed for wetlands by interpreting aerial photographs. To address these comments, additional wetland delineation field work was performed in this location. In addition, the boundaries of waters of the United States and wetlands at some other locations were refined to reflect the most recent data available (generally, 2006 data replacing 2004 data). A revised preliminary Jurisdictional Determination was submitted to the Corps on June 7, 2010. This Jurisdictional Determination is found in **Appendix 4.3** of this EIR.

The URS preliminary Jurisdictional Determination identified a total of 180.6 acres on the project site as falling under the jurisdiction of the Corps. As shown in **Figure 4.3-7, Jurisdictional Resources**, within the project boundaries Corps jurisdiction includes the Santa Clara River and Castaic Creek, an agricultural ditch, three unnamed seasonal drainages, and seasonal drainages within Middle Canyon, Exxon Canyon, Lion Canyon, Magic Mountain Canyon, Dead-End Canyon, and Mid-Martinez Canyon.

(2) CDFG Jurisdiction

Streambeds within the project site are subject to regulation by CDFG under Section 1602 of the California Fish and Game Code. A stream is defined under these regulations as a body of water that (1) flows at least periodically or intermittently through a bed or channel having banks, and (2) supports fish or other aquatic life. CDFG's jurisdiction typically overlaps substantially with the Corps jurisdiction, but also includes all riparian vegetation associated with creeks, drainages, and rivers.

The jurisdictional delineation conducted by URS also identified areas under the jurisdiction of CDFG (see **Figure 4.3-7**). CDFG jurisdiction on the project site encompasses the 180.6 acres under Corps jurisdiction (as discussed above), plus an additional 53.4 acres of riparian vegetation on the site.

(3) RMDP/SCP Project

As noted in **Section 1.0**, **Project Description**, certain permits and approvals from agencies other than the County are needed to implement various project components. These agencies include the USACE and CDFG, the Regional Water Quality Control Board and U.S. Fish and Wildlife Service. Many of these additional approvals are part of the project applicant's Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan (RMDP/SCP) project and related joint EIS/EIR (discussed below).

The RMDP/SCP is a separate but related project that encompasses the Newhall Ranch Specific Plan area (including Mission Village) and two planning areas in the Specific Plan's immediate vicinity, the Valencia Commerce Center (VCC) and Entrada. The RMDP/SCP Project consists of two components. The first is the proposed RMDP, which is a conservation, mitigation, and permitting plan for sensitive biological resources within the previously approved Newhall Ranch Specific Plan area. The RMDP would be relied upon to obtain federal and state permits to implement infrastructure improvements required to facilitate buildout of the approved Specific Plan. The RMDP is intended to direct both resource management and development on the Specific Plan site. The second component is the SCP, which is a conservation and management plan to permanently protect and manage a system of preserves designed to maximize the long-term existence of the San Fernando Valley spineflower (*Chorizanthe parryi* ssp. *fernandina*; spineflower or SFVS), a federal candidate and a state-listed endangered plant species. The SCP would address known spineflower located within the Specific Plan area and the two planning areas, VCC and a portion of Entrada.

The joint EIS/EIR has been prepared to assess the environmental implications of implementing the RMDP/SCP project, with the USACE acting as the lead agency under the NEPA and the CDFG acting as the lead agency under CEQA. The joint EIS/EIR is available for public review at CDFG's website: http://www.dfg.ca.gov/regions/5/newhall/docs/.

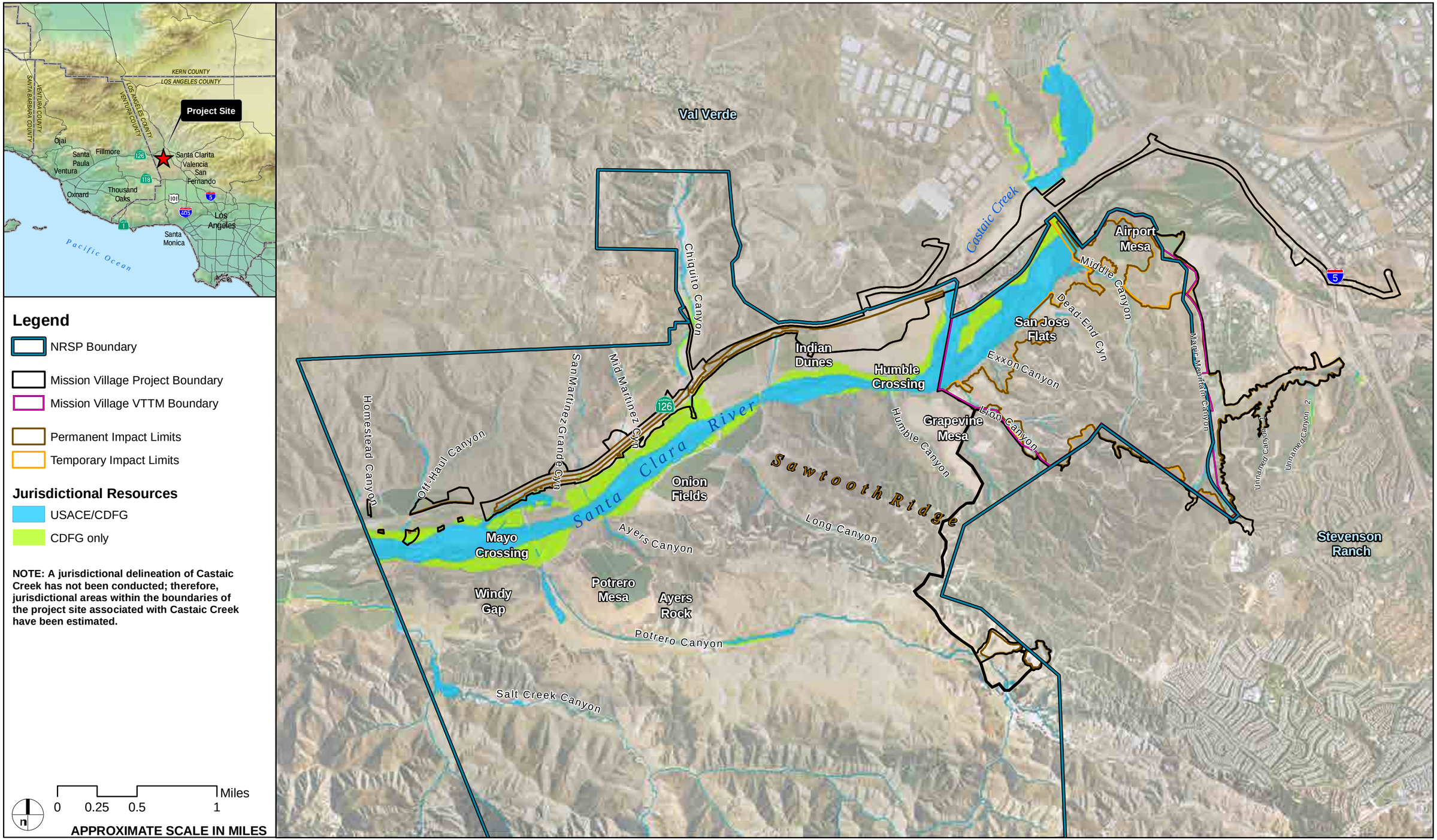

IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-7

Mission Village EIR

Jurisdictional Resources

DUDEK

The Draft EIS/EIR for the RMDP/SCP project was publicly circulated by the USACE and CDFG on April 27, 2009, and the public comment period closed on August 25, 2009 (after an extension). The Final EIS/EIR for the RMDP/SCP project was released for additional public review/comment on June 18, 2010. This additional review period for the Final EIS/EIR began on June 19, 2010 and ended on August 3, 2010 (after an extension). The total public review period on the Final EIS/EIR was 45 days. County staff has been monitoring, and will continue to monitor, the processing of the Mission Village proposed project, as well as the RMDP/SCP project.

f. Characteristics of Surrounding Areas

Plant communities in the immediate vicinity of the Mission Village project site include coastal scrub, coast live oak woodland, valley oak/grass, undifferentiated chaparral, big sagebrush scrub, alluvial scrub, California annual grassland, southern cottonwood-willow riparian, southern willow scrub, and mulefat scrub.

Similar to those on the project site, the surrounding riparian plant communities are of high biological value and provide suitable habitat for numerous common and special-status wildlife species. The latter include the Santa Ana sucker, unarmored threespine stickleback, arroyo chub, southwestern pond turtle, two-striped garter snake, least Bell's vireo, Cooper's hawk, Lawrence's goldfinch, yellow warbler, white-tailed kite, and yellow-breasted chat. (See **Tables 4.3-5 and 4.3-6.**) Additionally, the portion of the Santa Clara River (and associated riparian habitats) that is located on and borders the project site is an important migration and genetic dispersion corridor for many wildlife species, including aquatic taxa, riparian obligate species (resident and migratory) and larger, more mobile terrestrial animals.

The upland habitats surrounding the project site also provide suitable habitat for numerous common and special-status wildlife species, including the silvery legless lizard, coastal western whiptail, coast horned lizard, southern rufous-crowned sparrow, northern harrier, California horned lark, loggerhead shrike, pallid bat, western mastiff bat, pocketed free-tail bat, and San Diego desert woodrat. **(Tables 4.3-5** and **4.3-6.)** The upland habitats surrounding the project site also support populations of San Fernando Valley spineflower, slender mariposa lily, and Peirson's morning glory.

8. PROPOSED PROJECT IMPROVEMENTS

The Mission Village project is proposed on 1,261.8 acres of land, located within the boundaries of the approved Specific Plan. At buildout, the project would contain 4,412 dwelling units, 1,555,100 square feet of commercial space, 9.5-acre elementary school, library, fire station, 25.5 acres of Community and Neighborhood Parks, three private recreation facilities, open space, and trails. To facilitate development of this site, several off-site, project-related components would be implemented within an additional 592.8 acres of land located beyond the tract map site. These off-site improvements include a 396-acre underground utility corridor proposed along State Route (SR)-126 extending from the Valencia Water Reclamation Plan (WRP) (Plant 32) on the east to the proposed Newhall

Ranch WRP on the west, which would extend utility services to the tract map site and ultimately the Newhall Ranch Specific Plan development.

Project-related off-site components include:

- Magic Mountain Parkway and related improvements would be extended west from the parkway's present terminus to a location within the tract map site.
- Three water tanks are proposed. A portion of two tank sites lie on site.
- Two power substation site options are proposed within the Potrero portion of the Newhall Ranch Specific Plan and Legacy Village.
- A Water Quality Basin is proposed to the northeast of the tract map site. A small portion of the water quality basin and a portion of the access road to the site are located within the tract map site. Most of the basin would be located outside of the tentative tract boundary.
- Two debris basins located south of the site.
- Additional proposed off-site activities include: (1) work associated with Lion Canyon drainage, (2) grading associated with construction of the northerly extension of Westridge Parkway and southerly extension of Commerce Center Drive, and (3) miscellaneous earthwork to tie proposed grades into natural grades.

For the purposes of this report, the "tract map site" refers only to the proposed location of the Mission Village development itself, and the "project site" includes the tract map site, plus the off-site components discussed above.

9. PROJECT IMPACTS

a. Significance Threshold Criteria

The significance criteria listed below derive from Appendix G of the State CEQA Guidelines but have been modified to better suit the proposed project. The lead agencies for the Newhall Ranch RMDP-SCP EIS/EIR applied these criteria when determining the significance of the RMDP/SCP project's impacts on biological resources. Biological impacts would be significant if implementation of the proposed Mission Village project or its alternatives would:

- Have a substantial adverse effect, either directly or via habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or

regulations, or by the CDFG or USFWS, or violate any federal, state, or local law which protects biological resources;

- Have a substantial adverse effect on any riparian habitat or other special-status natural community identified by federal, local, or state agencies;
- Substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) or substantial change to state-protected streambeds through direct removal, filling, hydrological interruption, loss of functions or services, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local plans, policies, or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Cause scouring of the riverbed to the point of removing a substantial amount of aquatic, wetland, or riparian habitats from the river channel;
- Have the potential to substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species**;** or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

These significance criteria are applied to the proposed project.

b. Impact Analysis

Direct impacts represent the physical alteration (i.e., typically habitat degradation or loss) of biological resources that occur on site as a result of project implementation. Indirect impacts are those reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources. The significance of this alteration, with respect to CEQA, is determined by evaluating the impact in terms of each of the significance threshold criteria defined above. For example, if habitat alteration results in a direct or indirect loss or causes an otherwise substantial adverse effect on a species identified as a "candidate, sensitive, or special-status species in local or regional plans,

policies, or regulations or by the CDFG or USFWS," the impacts would be considered significant, assuming appropriate compensatory or other mitigation is not available or feasible. Similarly, if the alteration of habitat results in a substantial adverse effect on a natural community identified as sensitive "…in local or regional plans, policies, or regulations, or by the CDFG or USFWS," then this alteration would be considered a significant impact.

When evaluating whether an impact on biological resources would be "substantial," and, therefore, a significant impact, this Draft EIR must consider both the resource itself and the significance threshold criteria that apply. For example, because most plant and animal species are dependent on native habitats to satisfy various life cycle requirements, a habitat-based approach that addresses the overall biological value of a particular vegetation community or habitat area is appropriate when determining whether alteration of that habitat will "substantially" affect special-status species, sensitive habitats, wetlands, or movement corridors. The relative biological value of a particular habitat area can be determined by such factors as disturbance history, biological diversity, its importance to particular plant and wildlife species, its uniqueness or sensitivity status, the surrounding environment and the presence or absence of special-status resources.

However, direct impacts to specific plant and wildlife resources (e.g., active nests and individual plants and animals) are also evaluated and discussed when impacts to these resources, in and of themselves, could be considered significant or in conflict with local, state, and federal statutes or regulations. The significance of direct impacts on individuals or populations of plant and animal species takes into consideration the number of individual plants or animals potentially affected, how common or uncommon the species is both on the project site and within the region, and the species' sensitivity status according to resource agencies. These factors are evaluated based on the results of on-site biological surveys and studies, results of literature and database reviews, discussions with biological experts, and recognized theories and assumptions within the fields of ecology and biodiversity.

(1) Direct Impacts

The following section focuses on the direct effects of proposed project implementation on plant communities, common and special-status plant and wildlife species, special-status habitats, and wildlife movement corridors. The calculation of impacts to plant communities includes required fire/fuel management areas. **Table 4.3-8, Plant Community/Land Use Impact Summary**, shows the acreage of each plant community/land use that would be developed and/or temporarily disturbed during construction of the proposed project.

An analysis of the "significance" of project impacts on biological resources is provided below. In addition, each impact discussion notes whether the findings of this analysis are consistent with the findings of the previously certified Newhall Ranch Specific Plan Program EIR. If approved, the Mission Village project would be subject to the mitigation measures/conditions of approval contained in the RMP of the Newhall Ranch Specific Plan and the Newhall Ranch Specific Plan Program EIR. These mitigation measures and conditions were adopted by the County

Board of Supervisors in association with approval of the Newhall Ranch Specific Plan and WRP (May 27, 2003). These adopted measures, as well as additional mitigation measures proposed to further mitigate significant impacts, are included in **Section 10.0, Project Mitigation Measures**.

Table 4.3-8
Plant Community/Land Use Impact Summary

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	Total Acres Present	Acres Developed	Acres Temporarily Disturbed[1]	Total Acres Developed/Disturbed	Percent Acres Developed or Disturbed
Grass and Herb Dominated Communities (40.000.00)	Non-Native Grassland (42.000.00)	California annual grassland (42.040.00)	Not mapped to association level	82.4	53.3	12.8	66.1	80%
Scrub and Chaparral (30.000.00)	Coastal Scrub (32.000.00)	California sagebrush scrub (32.010.00)	Not mapped to association level	517.2	379.1	34.3	413.4	80%
			California sagebrush–*Artemesia* (32.010.01)	16.1	14.8	1.3	16.1	100%
			California sagebrush–purple sage (32.010.04)	132.9	124.7	2.2	127.0	96%
		California sagebrush–black sage scrub (32.120.00)	California sagebrush–black sage (32.120.01)	12.9	11.9	1.1	12.9	100%
		California sagebrush–California buckwheat scrub (32.110.00)	Not mapped to association level	84.7	73.2	10.0	83.2	98%
		California Sagebrush –Undifferentiated Chaparral (32.300.00)	Not mapped to association level	15.5	12.6	1.3	13.9	90%
		Disturbed California sagebrush scrub	Not mapped to association level	0.1	0	0.1	0.1	100%
	Undifferentiated Chaparral Scrubs (37.000.00)	Not mapped to alliance level	Not mapped to association level	35.9	31.3	3.0	34.3	96%
	Chamise with	Chamise Chaparral	Not mapped to	2.6	2.5	0.1	2.6	100%

Table 4.3-8 (Continued)
Plant Community/Land Use Impact Summary

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	Total Acres Present	Acres Developed	Acres Temporarily Disturbed[1]	Total Acres Developed/Disturbed	Percent Acres Developed or Disturbed
	Chaparral (37.100.00)	(37.101.00)	association level					
		Chamise–hoaryleaf ceanothus chaparral (37.107.00)	Not mapped to association level	1.8	1.5	0.4	1.8	100%
	Other Scrubs	Eriodictyon Scrub	Not mapped to association level	0.6	0.6	0	0.6	100%
Broad Leafed Upland Tree Dominated (70.000.00)	Oak Woodland and Forest (71.000.00)	Coast live oak forest and woodland (71.060.00)	Coast live oak woodland (71.060.19)	31.7	4.4	3.4	7.8	25%
		Valley oak forest and woodland (71.040.00)	Valley oak woodland (71.040.08)	2.3	0	0	0	0%
			Valley oak/grass (71.040.05)	3.3	1.9	0	1.9	58%
Riparian and Bottomland Habitat (60.000.00)	Other Riparian/Wetland	Herbaceous wetland	Not mapped to association level	4.0	0.4	1.2	1.6	40%
		River wash	Not mapped to association level	115.1	9.7	10.0	19.7	17%
		Alluvial scrub	Not mapped to association level	0.5	0	0.5	0.5	100%
		Big sagebrush scrub (35.110.00)	Not mapped to association level	24.6	15.8	6.5	22.3	91%
		Giant reed (42.080.00)	Not mapped to association level	5.6	0	0.1	0.1	2%
	Low to High Elevation Riparian Scrub (63.000.00)	Arrow weed scrub (63.710.00)	Not mapped to association level	7.6	4.9	2.0	6.9	91%
		Mexican elderberry scrub (63.410.00)	Not mapped to association level	5.8	5.3	0.3	5.6	97%
		Mulefat scrub (63.510.00)	Not mapped to association level	1.8	0.5	1.2	1.8	100%
		Disturbed mulefat scrub	Not mapped to association level	1.1	0	1.1	1.1	100%

Table 4.3-8 (Continued)
Plant Community/Land Use Impact Summary

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	Total Acres Present	Acres Developed	Acres Temporarily Disturbed[1]	Total Acres Developed/Disturbed	Percent Acres Developed or Disturbed
	Riparian Forest and Woodland (61.000.00)	Southern willow scrub (61.208.00)	Not mapped to association level	1.5	0.7	0.1	0.7	47%
		Tamarisk scrub and woodland (63.810.00)	Shrub tamarisk (63.810.02)	1.1	0	0	0	0%
		Fremont cottonwood riparian forest and woodland (61.130.00)	Southern cottonwood–willow riparian (61.130.02)	109.2	6.4	22.4	28.8	26%
Man-Made Land Cover Types		Agriculture	NA	224.4	172.0	48.0	219.9	98%
		Developed Land	NA	8.1	1.0	7.0	8.0	99%
		Disturbed Land	NA	404.3	225.2	169.1	394.3	98%
			Total:	**1,854.5**	**1,153.4**	**339.7**	**1,493.1**	**81%**

[1] *Temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated to native vegetation following completion of construction.*

(a) Common Plant Communities and Land Covers

Grass and Herb Dominated Communities (40.000.00)

Non-Native Grassland (42.000.00)

California Annual Grassland *(42.040.00).* The project site contains 82.4 acres of California grassland, of which 53.3 acres would be permanently developed and 12.8 acres would be temporarily disturbed by bank stabilization and/or haul roads (but would be revegetated following completion of construction). Given that this plant community already exists in an altered condition and is not considered a sensitive natural community by resource agencies, the loss of California grassland would be a less than significant impact. The Newhall Ranch Specific Plan Program EIR included the loss of this plant community as part of the analysis of the overall loss of wildlife habitat (~~**subsection**~~**Subsection b, Wildlife Habitat Loss**, below).

Scrub and Chaparral (30.000.00)

Coastal Scrub (32.000.00)

California Sagebrush Scrub (32.010.00). The project site contains 517.2 acres of California sagebrush scrub, of which 379.1 acres would be permanently developed and 34.3 acres would be temporarily disturbed by bank stabilization and/or haul roads (but would be revegetated as coastal sage scrub following completion of construction). Of the total acreage present within the boundaries of the SMA/SEA 23, 4.8 acres would be developed and 0.7 acre would be temporarily disturbed.

California Sagebrush–*Artemesia* (32.010.01): The project site contains 16.1 acres of California sagebrush–*Artemesia*, of which 14.8 acres would be permanently developed and 1.3 acres would be temporarily converted**.**

California Sagebrush–Purple Sage (32.010.04): The project site contains 132.9 acres of California sagebrush–purple sage, of which 124.7 acres would be permanently developed and 2.2 acres would be temporarily converted**.**

California Sagebrush–Black Sage Scrub (32.120.00): The project site contains 12.9 acres of California sagebrush–black sage scrub, of which 11.9 acres would be permanently developed and 1.1 acres would be temporarily converted**.**

California Sagebrush–California Buckwheat Scrub *(*32.110.00). The project site contains 84.7 acres of California sagebrush–California buckwheat scrub, of which 73.2 acres would be permanently developed and 10.0 acres would be temporarily converted. Of the total acreage present within the boundaries of the River Corridor SMA/SEA 23, 0.1 acre would be temporarily converted.

California Sagebrush–Undifferentiated Chaparral *(*32.300.00). The project site contains 15.5 acres of California sagebrush–undifferentiated chaparral, of which 12.6 acres would be permanently developed and 1.3 acres would be temporarily converted.

Disturbed California Sagebrush Scrub. The project site contains 0.1 acre of disturbed California sagebrush scrub, of which 0.1 acre would be temporarily converted.

Given the acreage that would be developed (616.3 acres of the 779.4 acres on site) and the habitat value this plant community provides for common and special-status plant and wildlife species, the loss of coastal scrub would be a significant impact. Additionally, the Newhall Ranch Specific Plan Program EIR previously identified a significant unavoidable impact to coastal sage scrub habitat. The magnitude of impacts to this plant community would be reduced by:

Implementation of Specific Plan Mitigation Measures **SP-4.6 37** through **SP 4.6 42** (which would protect 1,311 acres of California sagebrush scrub in the High Country SMA/SEA 20); and

Implementation of additional proposed Mitigation Measures **MV[270] 4.3-24** (preservation of 616.3 acres of coastal scrub off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village), ~~and~~**MV 4.3-82** (restoration/enhancement of coastal scrub in the High County SMA, Salt Creek area, and River Corridor SMA) and t~~T~~he protection of the Salt Creek Area (which contains 631 acres of this habitat type).

These mitigation measures will reduce impacts to this vegetation type to a level that is less than significant.

Undifferentiated Chaparral Scrub (37.000.00).

The project site contains 35.9 acres of undifferentiated chaparral, of which 31.3 acres would be permanently developed and 3.0 acres would be temporarily disturbed by bank stabilization and/or haul roads (but would be revegetated to native vegetation following completion of construction). This plant community is a common natural vegetation type in the region and is not considered sensitive by resource agencies. Given the small amount of undifferentiated chaparral scrub that would be removed, and the common nature of this plant community in the project region, the impact would be less than significant. The Newhall Ranch Specific Plan Program EIR included the loss of undifferentiated chaparral scrub as part of the analysis of the overall loss of wildlife habitat (**~~subsection~~Subsection b, Wildlife Habitat Loss,** below).

270 Mitigation measures specific to the Mission Village project are denoted by the abbreviation "MV."

Chamise with Chaparral (37.100.00)

Chamise Chaparral (37.101.00). The project site contains 2.6 acres of chamise chaparral, of which 2.5 acres would be permanently developed and 0.1 acre would be temporarily converted. This plant community is a common natural vegetation type in the region and is not considered sensitive by resource agencies. Given the small amount of chamise chaparral that would be removed by the project, and the common nature of this plant community in the project region, the impact would be less than significant. The Newhall Ranch Specific Plan Program EIR included the impacts to chamise with chaparral as part of the analysis of the overall loss of wildlife habitat (~~**subsection**~~**Subsection b, Wildlife Habitat Loss**, below).

Chamise–hoaryleaf ceanothus chaparral (37.107.00). The project site contains 1.8 acres of chamise–hoaryleaf ceanothus chaparral, of which 1.5 acres would be permanently developed and 0.4 acre would be temporarily converted. This plant community is a common natural vegetation type in the region and is not considered sensitive by resource agencies. Given the small amount of chamise-hoaryleaf ceanothus chaparral that would be removed by the project, and the common nature of this plant community in the project region, the impact would be less than significant. The Newhall Ranch Specific Plan Program EIR included the impacts to chaparral as part of the analysis of the overall loss of wildlife habitat ~~(**subsection**~~ (**Subsection b, Wildlife Habitat Loss**, below).

Other Scrubs

Eriodictyon Scrub. The project site contains 0.6 acre of eriodictyon scrub, all of which would be permanently developed. This plant community is a subset of a common natural vegetation type in the region and is not considered sensitive by resource agencies. Given the small amount of other scrub that would be removed by the project, and the common nature of this plant community in the project region, the impact would be less than significant. The Newhall Ranch Specific Plan Program EIR included the impacts to this plant community as part of the analysis of the overall loss of wildlife habitat (~~**subsection**~~**Subsection b, Wildlife Habitat Loss,** below).

Broad Leafed Upland Tree Dominated (70.000.00)

Oak Woodland and Forest (71.000.00)

Coast Live Oak Forest and Woodland (71.060.00). The project site contains 31.7 acres of coast live oak forest and woodland. For purposes of this EIR, oak woodland is defined as areas with 20% to 50% cover by oak trees. Oak/grass includes areas where oak trees comprise less than 20% of the total cover. The proposed project would result in permanent impacts to 4.4 acres and the temporary conversion of 3.4 acres. Of the total acreage present within the boundaries of the River Corridor SMA/SEA 23, 0.7 acre would be developed and 0.6 acre would be temporarily disturbed. Coast live oak woodlands (71.060.19) are a significant biological resource because they provide nesting and roosting habitat for a number of *special-status* species (including raptors), nesting habitat and

food sources for a number of *common* wildlife species, and provide general cover for a number of larger *mammal* species. For these reasons, the removal of coast live oak woodland is considered a significant impact. Implementation of proposed Mitigation Measures **MV 4.3-22** (protective fencing around oaks during clearing and grading activities) and **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation) would reduce impacts on coast live oak woodland to a less than significant level. The Newhall Ranch Specific Plan Program EIR included the impacts to this plant community as part of its analysis of the overall loss of wildlife habitat (**~~subsection~~Subsection b, Wildlife Habitat Loss**, below).

Valley Oak Forest and Woodland (71.040.00). The project site contains 5.6 acres of valley oak forest and woodland, consisting of the valley oak woodland and valley oak/grass alliances, of which 1.9 acres would be permanently developed and 0 acres would be temporarily converted. Valley oak forest and woodland are significant biological resources because they provide nesting and roosting habitat for a number of *special-status* species (including raptors), nesting habitat and food sources for a number of *common* wildlife species, and provide general cover for a number of larger *mammal* species. For these reasons, the removal of valley oak forest and woodland is considered to be a significant impact. Implementation of proposed Mitigation Measures **MV 4.3-22** (protective fencing around oaks during clearing and grading activities) and **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation) would reduce impacts to coast live oak woodland to a less than singificant level. The Newhall Ranch Specific Plan Program EIR included the impacts to this plant community as part of its analysis of the overall loss of wildlife habitat (**~~subsection~~Subsection b, Wildlife Habitat Loss,** below).

Man-Made Land Cover Types

Agriculture. The project site contains 224.4 acres of agricultural land, of which 172.0 acres would be permanently developed and 48.0 acres would be temporarily disturbed by bank stabilization and/or haul roads (but would be revegetated to native vegetation following completion of construction**).** Of the total acreage of agricultural land present within the boundaries of the River Corridor SMA/SEA 23, 17.1 acres would be developed and 9.9 acres would be temporarily disturbed. Given that the agricultural land is already disturbed, and that this habitat type is not considered a natural community by resource agencies, the loss of agricultural land would be a less than significant impact. The Newhall Ranch Specific Plan Program EIR included the loss of this plant community as part of the analysis of the overall loss of wildlife habitat (**~~subsection~~Subsection b, Wildlife Habitat Loss**, below).

Developed Land. The project site contains 8.1 acres of developed land, of which 1.0 acre would be permanently developed and 7.0 acres would be temporarily disturbed by bank stabilization and/or haul roads (but would be revegetated to native vegetation following completion of construction**).** Because developed land provides little, if any, wildlife habitat value, the permanent and temporary conversion of 8.0 acres of developed land would be a less than significant impact.

Disturbed Land. The project site contains 404.3 acres of disturbed land, of which 225.2 acres would be permanently developed and 169.1 acres would be temporarily disturbed by bank stabilization and/or haul roads (but would be revegetated to native vegetation following completion of construction**).** Of the total acreage present within the boundaries of the River Corridor SMA/SEA 23, 9.6 acres would be developed and 7.0 acres would be temporarily disturbed. Given that these lands are already disturbed, and that this habitat type is not considered a natural community by resource agencies, the loss of disturbed land would be a less than significant impact. The Newhall Ranch Specific Plan Program EIR included the loss of this plant community as part of the analysis of the overall loss of wildlife habitat (**~~subsection~~Subsection, Wildlife Habitat Loss**, below).

(b) Wildlife Habitat Loss

(1) Riparian Habitat

The proposed project would result in the permanent conversion of 43.6 acres of riparian habitat, including 9.7 acres of river wash, 0.4 acre of herbaceous wetland, 15.8 acres of big sagebrush scrub, 4.9 acres of arrow weed scrub, 5.3 acres of Mexican elderberry scrub, 0.5 acre of mulefat scrub, 0.7 acre of southern willow scrub, and 6.4 acres of southern cottonwood–willow riparian. An additional 48.6 acres of riparian habitat would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated with native plants following completion of construction activities. As summarized in **Table 4.3-8**, the riparian habitat on the Mission Village project site (and the greater Newhall Ranch Specific Plan area) provides habitat for numerous special-status wildlife species, and is designated critical habitat for least Bell's vireo~~,~~ and arroyo toad. Given the amount of riparian habitat to be developed or temporarily disturbed, the loss of habitat for riparian-associated wildlife species would be a significant impact absent mitigation. Implementation of the following mitigation measures would replace any riparian vegetation temporarily or permanently removed:

- RMP Mitigation Measures **SP 4.6-1** through **SP 4.6-16** (habitat restoration/enhancement in the River Corridor SMA/SEA 23);
- RMP Mitigation Measure **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23);
- RMP Mitigation Measures **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23);
- RMP Mitigation Measure **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23); and
- RMP Mitigation Measures **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23).

Additional proposed mitigation measures include:

- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas)***;***
- **MV 4.3-23** (development of a conceptual wetlands mitigation plan)**;**
- **MV 4.3-29** (monitoring and control of invasive, non-native aquatic wildlife species for up to 5 years);
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation); and
- **MV 4.3-31** through **MV 4.3-~~41~~43** and **MV 4.3-80** (wetlands mitigation plan and riparian restoration activities on the project site).

Further, the River Corridor SMA/SEA 23 (totaling 977.5 acres) would be protected in perpetuity. Combined, these measures would reduce the project impacts on riparian habitat to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Final Additional Analysis (May 2003).

(2) Upland Habitat

The proposed project would permanently convert ~~1,~~1,110.0 acres of upland wildlife habitat into developed uses, including 53.3 acres of California annual grassland, 616.3 acres of coastal scrub alliances and associations, 31.3 acres of undifferentiated chaparral scrubs, 2.5 acres of chamise chaparral, 1.5 acres of chamise-hoaryleaf ceanothus chaparral, 0.6 acre of eriodictyon scrub, 4.4 acres of coast live oak woodland, 1.9 acres of valley oak/grass, 172.0 acres of agricultural land, 1.0 acre of developed land, and 225.2 acres of disturbed land (see ~~**subsection**~~**Subsection 9.b.(1)(a), Common Plant Communities,** and **9.b.(1)(i) Sensitive Plant Communities**). An additional 294.1 acres of upland habitat would be temporarily disturbed during construction but would be revegetated with native plants following completion of construction activities. While these upland plant communities vary in botanical value, each provides habitat for a multitude of wildlife species. When viewed in isolation, the impacts on a single plant community within the project site does not represent a substantial loss of wildlife habitat. However, as most wildlife species depend on a variety of habitat types to meet various ecological and life history requirements (i.e., food, shelter, nesting), the project's impact on the habitat provided by these upland plant communities, when considered as a whole, is substantial. To address this potential impact, the Newhall Ranch Specific Plan Program EIR and this EIR recommend mitigation measures which, when implemented, will result in a large, permanent open space system that will conserve habitat for numerous upland-associated common and special-status wildlife species, including silvery legless lizard, rosy boa, San Bernardino ringneck snake, coast horned lizard, coast patch-nosed snake, northern harrier, white-tailed kite, southern rufous-crowned sparrow, Bell's sage sparrow, western burrowing owl, San Diego desert woodrat, pallid bat, and San Diego black-tailed jackrabbit. (See ~~**subsection**~~**Subsection 9.b.(1)(h),**

Special-Status Wildlife Species, for a discussion of direct impacts to these species.) A total of 6,113 acres of potential habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Therefore, after mitigation, the loss of 1,110 acres of currently undeveloped upland habitat would be adverse but not significant.

This finding is not consistent with the findings of the Newhall Ranch Specific Plan Program EIR, which identified the loss of wildlife habitat as a significant unavoidable impact; however, the mitigation required by the Newhall Ranch Specific Plan Program EIR was not as extensive as that recommended in this EIR. Additional mitigation measures proposed in this EIR are set forth below:

- The Newhall Ranch Specific Plan Program EIR identified several mitigation measures that would mitigate permanent and temporary impacts to habitat for general wildlife. The following previously incorporated mitigation measures will reduce impacts to wildlife habitat: **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23); **SP 4.6-27** (removal of grazing and enhancement of riparian habitat in the High Country SMA/SEA 20); **SP 4.6-28** (mitigation banking for various habitat types in the High Country SMA/SEA 20); **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23); **SP 4.6-29** (recreational usage and access restrictions within the High Country SMA/SEA 20); **SP 4.6-33** (protection of transition areas along the High Country SMA/SEA 20, including planting palettes and FMZs); **SP 4.6-20**, **SP 4.6-34**, and **SP 4.6-35** (guidelines for grading activities in the River Corridor SMA/SEA 23 and the High Country SMA/SEA 20); **SP 4.6-36** through **SP 4.6-42** (open space dedication of the High Country SMA/SEA 20); **SP 4.6-43** (Open Area use for mitigation of riparian or oak resources or elderberry scrub); and **SP 4.6-48** (restoration and enhancement of oak resources in the High Country SMA/SEA 20 and Open Area).

- This EIR recommends additional mitigation measures that would help reduce significant impacts to general wildlife individuals and upland habitat: **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village) and **MV 4.3-85** (dedication to the public of at least 1,900 acres of Open Area through out the Specific Plan area (including the Mission Village project site) to a NLMO); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation).

- This EIR recommends a mitigation measure that ensures that impacts to nesting birds, including adults, nests, eggs, nestlings, and fledglings, do not occur during construction activities, in accordance with the Migratory Bird Treaty Act (MBTA): **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests).

Implementation of these mitigation measures would reduce impacts to upland habitat to a level that is adverse but not significant.

(c) Buffers/Setbacks from Riparian Resources

Due to their structural diversity, the various riparian and aquatic vegetation communities in the Santa Clara River drainage provide habitat for a large variety of wildlife species, including a number of special-status bird species. Each of these species has a different home range and differing natural history requirements. While some species are riparian-obligate (i.e., satisfy their forage, cover, and breeding habitat needs almost entirely within riparian vegetation communities), other species utilize the riparian habitat as well as adjacent upland vegetation as part of their home range. A number of studies have found that even the more riparian-dependent wildlife species also require adjacent upland habitats to meet home range foraging and breeding requirements.[271]

However, the characteristics, quality, and extent of upland habitat that is necessary to protect the wildlife species dependent upon riparian habitat may differ depending on the geographic region and the particular requirements of the riparian species of concern. A study conducted by Impact Sciences[272] along the Santa Clara River recommended preserving (and restoring, if necessary) a buffer or setback of at least 100 feet of high-quality upland habitat (upland preserve zone), as measured from the outer edge of the riparian habitat associated with the Santa Clara River (("resource line)"). This upland preserve zone would provide adequate forage and breeding habitat for riparian-associated bird and small mammal species, and would help maintain species diversity within the riparian ecosystem, inclusive of the riparian/upland ecotone. The conclusions of this study were partially based on focused bird surveys (1,100 man-hours over a 62-calendar-day period) and small-mammal trapping (a total of 1,210 cumulative trap-nights were conducted).

Note also that the proposed 100-foot upland preserve zone is consistent with CDFG (Northern California-North Coast [Region 1]) buffer criteria for avoiding significant impacts to riparian species and habitats adjacent to urban development.[273;274] In developing the buffer criteria, CDFG stated that "[d]epartment biologists have relied on

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271 A.T. Doyle, "Use of Riparian and Upland Habitats by Small Mammals," (1990); J.M. Schaefer and M.T. Brown, "Designing and Protecting River Corridors for Wildlife," (1992).

272 Impact Sciences, Inc., *North Valencia Annexation Buffer Study*.

273 CDFG, *Recommendations to Help Avoid Significant Fish, Wildlife, and Native Plant Resource Impacts for the California Environmental Quality Act (CEQA) Projects in Del Norte, Humboldt, Trinity, Siskiyou, Shasta, Tehama, Lassen, and Modoc*

scientific research and literature and professional experience to develop the following recommendations to protect the public's fish, wildlife and native plant resources." For example, CDFG recommended a 75-foot buffer from the outside edge of the riparian habitat for the Sacramento River, a 50-foot buffer for main tributaries, and a 25-foot buffer for secondary tributaries. CDFG also stated that "[i]f development restrictions related to mandatory requirements do not allow a project to completely avoid the area of the buffer zone outside the riparian vegetation, the project proponent may average the setback distance along the riparian habitat for the length of the project." Therefore, there is some flexibility in the minimum buffer width as long as the average width criteria are met.

In addition, the buffer between the Santa Clara River and development was addressed and heavily debated during the Newhall Ranch Specific Plan environmental review and approval process. Prior to final Specific Plan approval, the County Board of Supervisors required that the Specific Plan design be revised to incorporate a 100-foot-wide setback to protect riparian habitat and special-status species within the River Corridor SMA/SEA 23 boundaries. The Board of Supervisors arrived at this conclusion after evaluating the potential impacts of the proposed land uses along the entire length of the River, in light of the existing habitat protection and enhancement provisions contained in the Specific Plan's Resource Management Plan and Design Guidelines. The overall buffer area is comprised of the following five components: (1) the Salt Creek wildlife corridor connection and the High Country 0.5-mile-wide buffer at the westerly end of the Specific Plan on the south side of the River; (2) native upland habitats in the Open Area along the south side of the River; (3) disturbed areas in the River corridor that will be restored or enhanced as riparian habitat; (4) buried bank stabilization that will be revegetated with native riparian and upland plant species; and (5) landscaped open space areas such as community parks, the Regional River Trail, and community trails.

In approving the Specific Plan and Conditional Use Permit No. 94-087-(5), the Board of Supervisors found that the Specific Plan contained sufficient natural vegetative cover and open space to buffer critical resources in the River Corridor SMA/SEA 23 from the development shown in the Specific Plan. The Board of Supervisors further found that the Specific Plan incorporated extensive buffer areas to protect critical resources within the Santa Clara River. The Specific Plan's adopted Resource Management Plan requires a minimum 100-foot-wide setback adjacent to the Santa Clara River between ~~(a)~~ the river side of the top of bank stabilization and ~~(b)~~ development within certain specified land use designations (including those of the Mission Village project site). This requirement may be modified if the Planning Director, in consultation with the County staff biologist, determines that a smaller buffer would adequately protect the riparian resources within the River Corridor SMA/SEA 23, or that a 100-foot-wide setback is infeasible for physical infrastructure planning. Again, these buffer criteria are consistent with the Buffer Study[275] and CDFG recommendations described above.

Counties (2001).

[274] Please see Appendix A of this Final EIR for the CDFG (Northern California-North Coast, Region 1) buffer criteria.

[275] Impact Sciences, Inc., *North Valencia Annexation Buffer Study*.

This buffer analysis does not presume that the project's indirect effects on sensitive biological resources in the river corridor will be avoided completely. Therefore, in combination with the 100-foot setback, the Specific Plan's Resource Management Plan provides standards by which biological resources will be managed during construction and for the life of the community, including provisions for (1) restoration and enhancement of disturbed areas; (2) restrictions on pedestrian and vehicular access to the river corridor; (3) design standards for transition areas between development and the river; (4) conveyance of conservation easements; and (5) preparation of a financial plan and the long-term management of the riparian resources by the Center for Natural Lands Management.

As stated above, the Mission Village project would maintain a 100-foot setback between the top of the bank and proposed residential, mixed-use, and commercial development. Based on the site-specific analysis conducted, the Mission Village buffer is consistent with the approved Specific Plan. Again, however, the 100-foot-wide buffer will not eliminate the potential for indirect effects. Specific to the Mission Village project, potential long-term indirect effects are analyzed below, including (1) increased use of pesticides, herbicides, and pollutants; (2) increased lighting and glare; (3) increased potential for introduction of non-native plant and wildlife species; and (4) increased human and domestic pet activity. The Project Design Features (PDFs) and mitigation measures to reduce these potential indirect impacts are also discussed below.

PDFs to address urban runoff from irrigation and stormwater include site design, source control, treatment control, and hydromodification control Best Management Practices (BMPs). Stormwater runoff from all urban areas within the Mission Village project will be routed to bioretention areas, vegetated swales, and/or extended detention basin treatment controls BMPs. The effectiveness of these water quality PDFs was analyzed by GeoSyntec Consultants.[276]

The mitigation measures to address the other identified potential indirect effects include previously incorporated measures from the Newhall Ranch Specific Plan Program EIR, and additional measures recommended by this EIR. Significant impacts related to buffers and edge effects and mitigation measures to reduce the level of impact include the following:

- Restriction of Wildlife Habitat Linkages – mitigated by previously incorporated Mitigation Measure **SP 4.6-18** (provision of transition areas adjacent to the River Corridor SMA/SEA 20).
- Increased Light and Glare – mitigated by previously incorporated Mitigation Measure **SP 4.6-56** (downcast lighting design along the boundaries of natural areas).

[276] GeoSyntec Consultants. September 2006. *Landmark Village Water Quality Technical Report* (see Draft EIR, Appendix 4.3).

- Increase in Populations of Non-Native Plant and Wildlife Species – mitigated by this EIR's Mitigation Measures **MV 4.3-21** (installation of waste and recycling receptacles that discourage wildlife foraging in common areas/parks), **MV 4.3-57** (review of plant palettes and inspection of container plants for use within 200 feet of native vegetation for pests and disease; restrictions on invasive plants and irrigation), and **MV 4.3-45** (develop an integrated pest management plan that addresses pesticide use).

- Increased Human and Domestic Animal Presence Within River Corridor SMA/SEA 23 – mitigated by previously incorporated Mitigation Measures **SP 4.6-17** through **SP 4.6-19** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23; transition areas along the River Corridor SMA/SEA 23) and ~~EIR this~~ this EIR's Mitigation Measures **MV 4.3-46** (trash and debris removal from riparian habitats) and **MV 4.3-47** (control of pet, stray, and feral cats and dogs in or near open space areas).

In regard to the adequacy of the buffer/setback for particular special-status wildlife species, arroyo toads generally burrow within (1) sand or loam substrates with no associated canopy cover, (2) mulefat scrub, (3) willow patches, (4) under woody debris left by fallen, dead willows, or (5) woodrat nests.[277] Should arroyo toad occur on the project site, most would be expected to burrow within the preserved riparian habitats. Arroyo toads have been found in agricultural fields[278] and can occur within portions of the site outside of the proposed riparian setback zone. However, agricultural fields may constitute "sinks" (areas where mortality rates are higher than reproduction rates) over the long term, due to tilling, pesticide and fertilizer applications, and heavy equipment use, especially during the winter aestivation period.[279] Consequently, the agricultural portions of the project site under existing conditions would not be expected to contribute to the species' persistence on the site.

With regard to western spadefoot, the species rarely moves extensively between breeding ponds and upland areas used for burrowing.[280] Accordingly, should western spadefoot breed in seasonal pools located within the riparian zone, the proposed riparian setbacks should preserve associated burrow habitat.

As shown in **Figure 4.3-8, Riparian Habitat Buffer**, below, the proposed project generally maintains a 100-foot setback between top of bank and proposed residential, mixed-use, and commercial development, and up to a 600-

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[277] R. Ramirez, *Arroyo toad (*Bufo californicus*) Radio Telemetry Study, San Juan Creek, Orange County, California, Final Report* (prepared for Rancho Mission Viejo, Orange County, California, October 2003).

[278] P.C. Griffin, "*Bufo californicus*, Arroyo Toad Movement Patterns and Habitat Preferences" (Master's thesis, University of California, San Diego, 1999).

[279] P.C. Griffin, and T. Case. "Terrestrial Habitat Preferences of Adult Arroyo Southwestern Toads," *Journal of Wildlife Management* 65 (2001), 633–644.

[280] CDFG, "California Wildlife Habitat Relationships System," http://www.dfg.ca.gov/biogeodata/cwhr/morecwhr.asp. 2002.

foot buffer between top of bank and toe of slope (e.g., riparian resources). One area of reduced buffer width (90 feet) is characterized by disturbed sandy soils and areas of sparse, disturbed riparian vegetation. This area is located south of SR-126 and to the north of the cottonwood-willow riparian forest associated with the confluence of Chiquito Canyon Creek and the Santa Clara River.

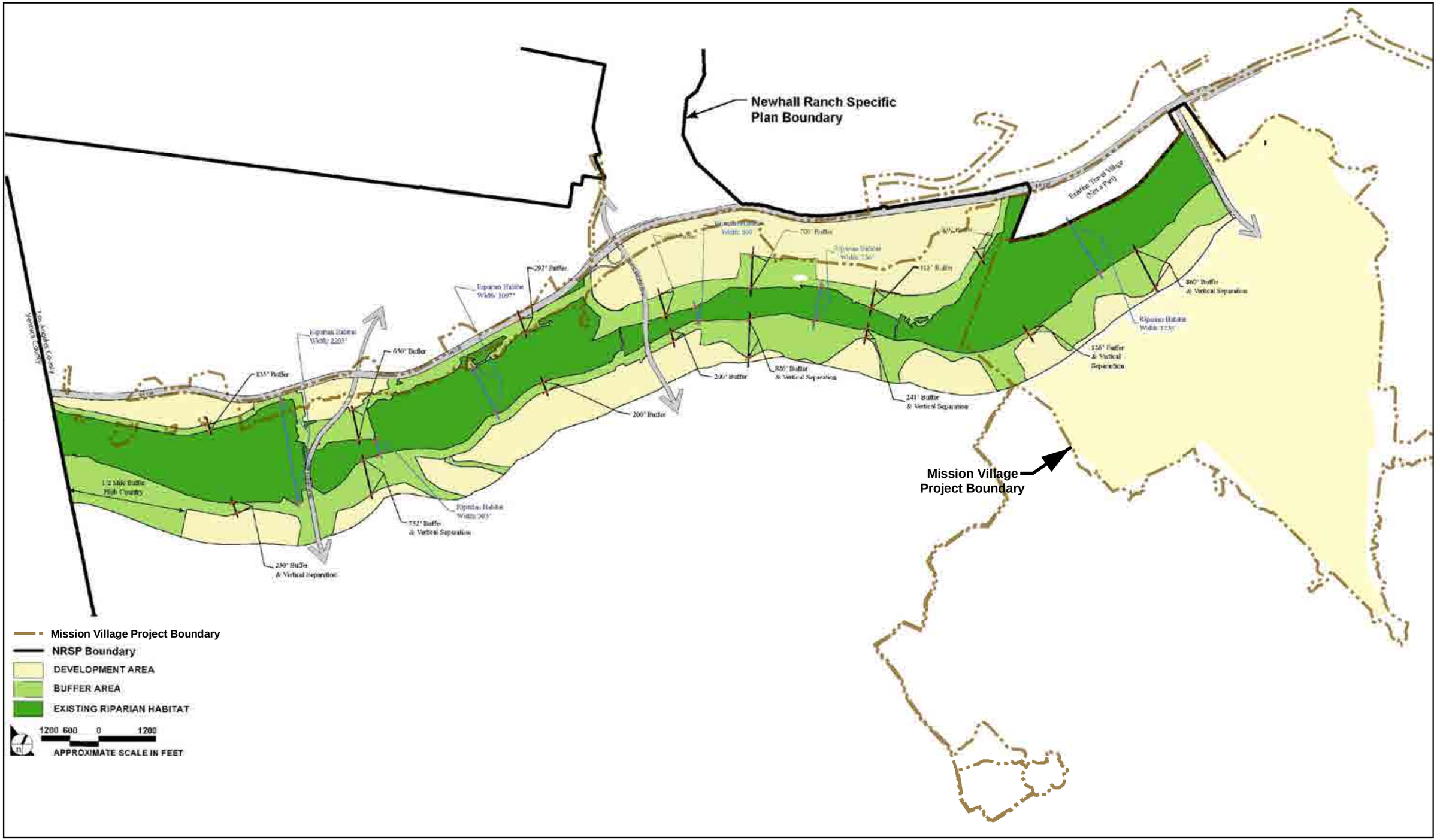
Given the proximity of the reduced buffer area to SR-126, and the disturbed condition and limited extent of riparian habitat present, current use of the reduced-buffer area by special-status bird or other wildlife species is expected to be limited. A minimum 100-foot buffer is present along all other portions of the tract map site and in all areas bordering mature cottonwood-willow riparian forest and willow scrub habitats. Furthermore, the vegetation within portions of the setback or buffer area will be restored and/or enhanced to increase habitat values when compared to existing conditions.

Given the above, the proposed riparian buffers are sufficient to maintain the functions and values of the adjacent riparian habitat and to protect the diversity of riparian-associated wildlife species occurring within these areas. This finding is consistent with the findings of the Newhall Ranch Final Additional Analysis (May 2003) that concluded the proposed land use plan and other design features were sufficient to maintain the function and values of the riparian habitat within the River Corridor SMA/SEA 23.

(d) Impacts to Common Wildlife

In addition to the impacts to vegetation and wildlife habitat, construction and grading activities associated with the proposed project would directly disturb common wildlife species on the project site. In particular, species of low mobility (particularly small mammals, amphibians, reptiles, and gastropods) would be eliminated during site preparation and construction. In addition, some wildlife species may emigrate from the project site and become vulnerable to mortality by predation, auto collisions, and unsuccessful competition for food and territory.

Because of the common nature of wildlife species that would be affected by construction activities, project implementation is not expected to reduce regional populations to below self-sustaining levels. Consequently, impacts to common fish, mammal, amphibian, and reptile species would be less than significant. Nonetheless, implementation of **MV 4.3-7** (surveys to capture and relocate special-status reptiles) would provide more mobile wildlife species the opportunity to move from the disturbance area into adjacent undisturbed habitat. The Newhall Ranch Specific Plan Program EIR did not address the construction-related loss of common wildlife as an individual topic, but did include an analysis of the overall loss of wildlife habitat (**~~subsection~~Subsection 9.b.1.(b), Wildlife Habitat Loss**).



RIPARIAN HABITAT BUFFER SOURCE: Forma Systems 2001

FIGURE 4.3-8

DUDEK

Mission Village EIR

Riparian Habitat Buffer

Construction activities also could result in the direct loss or abandonment of active nests by adult birds of common bird species. These species include several birds that were identified by Los Angeles Audubon Society as Los Angeles County's Sensitive Bird Species.[281] Although the local Audubon Society considers these birds at risk locally, they are not otherwise designated by federal, state, or local agencies as special-status species. For this reason, the EIR treats these birds as common wildlife species. The Migratory Bird Treaty Act and the California Fish and Game Code protect active nests of native bird species.[282] Therefore, any construction-related loss of active nests of common bird species would conflict with these federal and state laws and would constitute a significant impact. Implementation of **Mitigation Measure MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) would ensure compliance with state and federal laws protecting active bird nests and would eliminate this potential impact.

(e) Wildlife Habitat Linkages

The proposed project design would *preserve the integrity of the Santa Clara River as a wildlife movement corridor* and minimize impacts on regional wildlife movement by maintaining nearly all of the Santa Clara River as open space with a minimum width of about 1,000 feet. The River corridor will retain sufficient dimensions to convey a variety of larger, mobile wildlife species, such as mule deer, coyote, gray fox, bobcat, and mountain lion, as well as allow for dispersal of many smaller and less mobile species, including birds, small mammals, reptiles, and amphibians that live in the river.

The Specific Plan RMP includes mitigation measures that will minimize impacts to riparian vegetation and replace any vegetation temporarily or permanently removed. These include the following:

- Mitigation Measures **SP 4.6-1** through **SP 4.6-16** (habitat restoration/enhancement in the River Corridor SMA/SEA 23),
- Mitigation Measure **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- Mitigation Measures **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23), **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23), and

[281] Los Angeles Audubon, Los Angeles County's Sensitive Bird Species (2009).

- Mitigation Measures **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23).

This impact would also be reduced through the implementation of the following:

- Mitigation Measures **MV 4.3-81** (dedication of the Salt Creek area to the public and enhancement of existing agricultural undercrossing at SR-126) and **MV 4.3-84** (preparation and implementation of a wildlife movement corridor plan and signage indicating potential wildlife crossings).

With these mitigation measures in place, the project's impacts on riparian vegetation will not substantially affect the long-term ability of resident and non-resident species to use the river as a movement corridor. When confronted with bridges or overpasses along a preferred movement corridor, wildlife, particularly larger mammals, will generally move under these structures as long as there is adequate vertical and horizontal spacing, a natural (dirt, sand, vegetation) substrate on which to travel while under the structure, and an "openness" effect that allows the animal to detect light, open space and habitat at the exiting end of the structure. Specific Plan measures SP 4.6-37 through SP 4.6-42 would protect a large area of habitat south of the River Corridor SMA/SEA 23 (i.e., the High Country SMA/SEA 20), which would be linked to the River Corridor SMA/SEA 23 by the preservation of the Salt Creek Area. Additionally, the Specific Plan RMP (Mitigation Measure SP 4.6-18) requires a transition area between the River Corridor SMA/SEA 23 and adjacent development to reduce adverse affects to wildlife use of the river corridor.

The Commerce Center Drive Bridge is proposed to be approximately 1,300 feet in length and a maximum of 129 feet in width. It will range from approximately 11 to 22 feet in height above the riverbed with an estimated 12 vertical support columns or piers extending into the riverbed. The piers will be approximately 100 feet apart from one another. This design should prevent the bridge from obstructing or deterring wildlife movement along the riverbed. In combination with measure **SP-4.6-56**, the proposed bridge will adequately meet these requirements and is not expected to significantly alter wildlife movement along the river corridor.

Further, the conceptual regional open space connectivity identified by Penrod et al.[283] that provides for landscape-scale habitat connectivity between the Santa Susana Mountains to the south and the Los Padres National Forest to the north (see ~~**subsection**~~**Subsection 4.3.9.b.1.e**) encompasses the High Country SMA/SEA 20 and the Salt Creek area and the Santa Clara River. The High Country SMA/SEA 20 and Salt Creek area comprise an important part of the least cost path linkage design identified by Penrod et al.[284] They provide a key part of the east–west linkage that crosses I-5 and connects to the Angeles National Forest in the San Gabriel Mountains to the

[283] Penrod et al., *South Coast Missing Linkages Project*.
[284] Penrod et al., *South Coast Missing Linkages Project*.

east and to Ventura County SOAR open space to the southwest. They also provide a significant part of the north–south linkage between the Santa Susana Mountains and the "Fillmore Greenbelt" to the northwest that further links to the Los Padres National Forest and the Angeles National Forest to the north.

Development of the proposed project would preclude wildlife movement between the Santa Clara River and undeveloped lands to the south. Dead-End Canyon, Middle Canyon, and Magic Mountain Canyon would be developed and eliminated as potential wildlife movement corridors. Lion Canyon and portions of Exxon Canyon would not be developed, but would become dead-ends, thus preventing movement between large habitat areas. Although the Mission Village portion of the Specific Plan area would be developed and preclude wildlife movement, regional habitat connectivity would not be significantly affected provided the mitigation measures adopted with the Newhall Ranch Specific Plan are applied. The conceptual regional open space connectivity identified by Penrod et al.[285] that provides for landscape-scale habitat connectivity between the Santa Susana Mountains to the south and the Los Padres National Forest to the north (see **Figure 4.3-9, South Coast Wildlands Open Space Connectivity and Linkage**) encompass the High Country SMA/SEA 20 and the Salt Creek area and the Santa Clara River west of Mission Village, as shown in **Figure 4.3-1**. The High Country SMA/SEA 20 and Salt Creek area comprise an important part of the least cost path linkage design identified by Penrod et al.[286] They provide a key part of the east–west linkage that crosses I-5 and connects to the Angeles National Forest in the San Gabriel Mountains to the east and to Ventura County SOAR open space to the southwest. They also provide a significant part of the north–south linkage between the Santa Susana Mountains and the "Fillmore Greenbelt" to the northwest that further links to the Los Padres National Forest and the Angeles National Forest to the north.

In light of the above, impacts to regional and local wildlife movement would be less than significant.

(f) Special-Status Plant Species

As shown in **Table 4.3-4**, above, the following special-status plant species were eliminated from further consideration because they were not observed on or adjacent to the project site during focused plant surveys conducted on the site in 2001, 2002, 2004, and 2005: marsh sandwort, Braunton's milk-vetch, Coulter's saltbrush, Davidson's saltscale, Malibu baccharis, Nevin's barberry, thread-leaved brodiaea, Plummer's mariposa lily, late-flowering mariposa lily, southern tarplant, island mountain-mahogany, Santa Susana tarplant, slender-horned spineflower, Blochman's dudleya, marcescent dudleya, Santa Monica Mountains dudleya, many-stemmed dudleya, Conejo dudleya, round-leaved filaree, Palmer's grappling hook, Los Angeles sunflower, mesa horkelia, southwestern spiny rush, Davidson's bush mallow, California muhly, mud nama, spreading navarretia, chaparral nolina, short-joint beavertail, California orcutt grass, Lyon's pentachaeta, Pringle's yampah, Gambel's watercress, rayless ragwort, salt spring checkerbloom, and Sonoran maiden fern. Given the thoroughness of the previous survey

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285 Penrod et al., *South Coast Missing Linkages Project*.
286 Ibid.

efforts (**Table 4.3-2**), it is unlikely that any of these species are present on the site and, therefore, no significant impacts to these plant species are expected to occur.

Special-status plant species that were observed on the project site during the focused special-status plant surveys include San Fernando Valley spineflower, slender mariposa lily, mainland cherry, Parish's sagebrush, island mountain-mahogany, southwestern spiny rush, Peirson's morning-glory, Newhall sunflower, and undescribed everlasting. Given the low sensitivity status of mainland cherry, Parish's sagebrush, island mountain-mahogany, Peirson's morning-glory, and southwestern spiny rush, observations were not mapped. Impacts to these species are discussed below.

San Fernando Valley spineflower is a federal candidate plant species, is state-listed as endangered, and is a CNPS List 1B species. San Fernando Valley spineflower has been observed in the Airport Mesa area within the Specific Plan area. This species has also been observed on the Entrada and VCC planning areas. Within the Mission Village project area, most of the plants were found on slopes with a south-facing aspect within openings in sparsely vegetated habitat characterized as open California sagebrush scrub and associations, California annual grasslands, or at the edge of agricultural fields on mesas. Most of the observed San Fernando Valley spineflower within the Specific Plan area, Entrada, and VCC were found on soils mapped by the USDA as slightly eroded to eroded Castaic-Balcom silty clay loam (30 to 50 percent slopes) or Terrace Escarpments.[287] Within the Mission Village project site, spineflower is associated with Castaic-Balcom silty clay loams (30 percent to 50 percent slopes), terrace escarpments, and Hanford sandy loam (2 percent to 9 percent slopes). Vegetative cover in the area of San Fernando Valley spineflower occurrences ranged from 2 to 60 percent, but was most commonly between 35 and 40 percent.[288] Elevations at San Fernando Valley spineflower locations on site range from approximately 1,000 to 1,300 feet AMSL. Based on spineflower occurrence data collected annually from 2002 through 2007, the mapped acreage of this plant species on the project site has varied from a low of 0.42 acre up to 7.14 acres, with a cumulative spineflower footprint of 8.57 acres. The acreage of spineflower on site varies considerably from year to year (see **~~subsection~~Subsection 7.a.(1)**), most likely based on precipitation levels; therefore, potential impacts to this species are evaluated in terms of loss of occupied habitat, rather than number of individual plants. Based on the 2002–2007 survey data, the proposed project would result in the loss of 3.29 acres of occupied cumulative spineflower footprint. Given the rarity of San Fernando Valley spineflower, without mitigation, the project-related loss of the species would be a significant impact.

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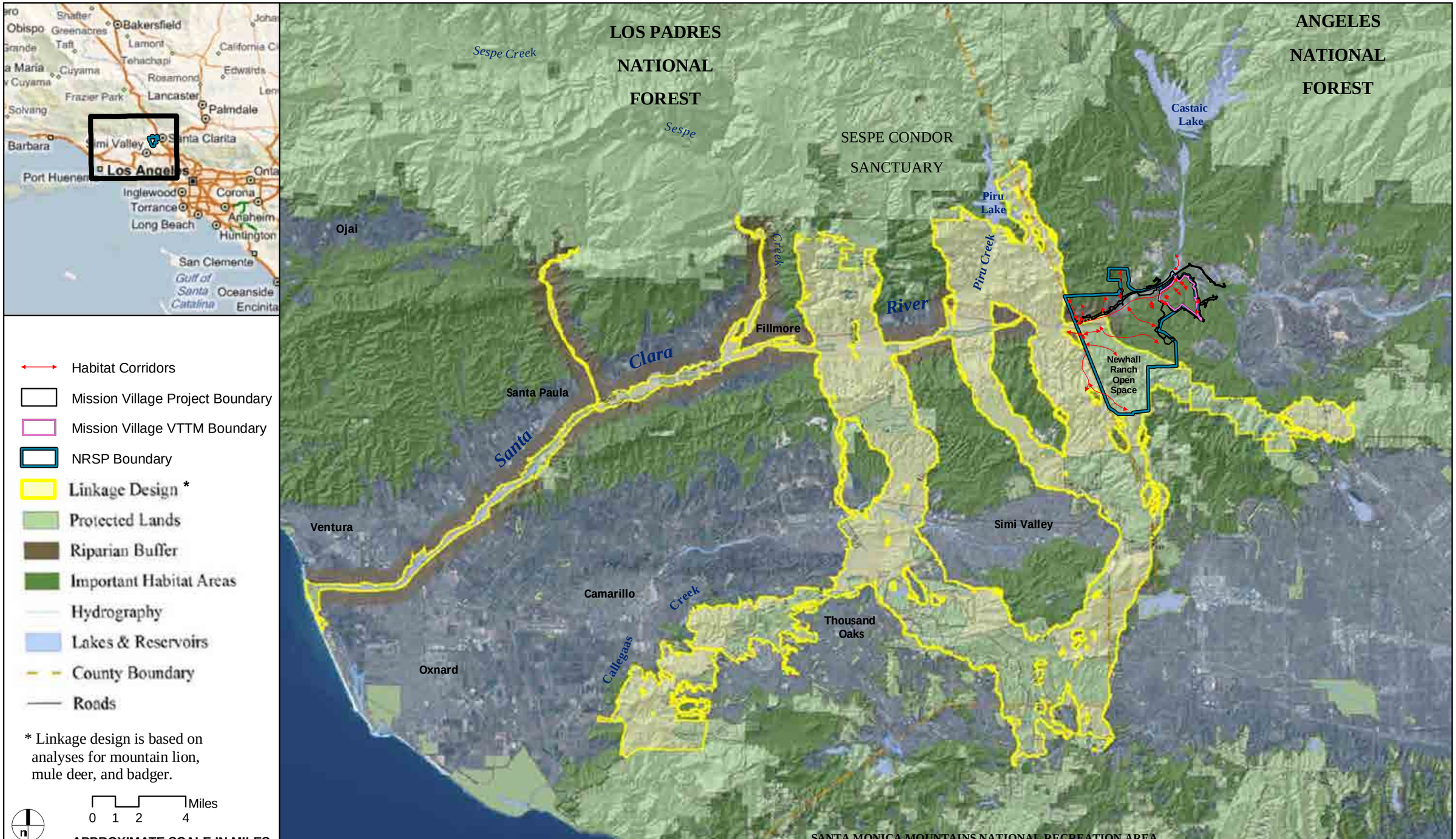
[287] USDA, *Soil Survey*.

[288] Dudek, *2007 Sensitive Plant Survey Results for the Entrada Site, Los Angeles County, California* (2007).



SOURCE: South Coast Wildlands, 2006

FIGURE 4.3-9

Mission Village EIR

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South Coast Wildlands Open Space Connectivity and Linkage

When the County of Los Angeles approved the Specific Plan, it adopted a Spineflower Special Study Mitigation Overlay and Preserve Program. To implement this program, the applicant has prepared a Spineflower Conservation Plan (SCP) which ensures the long-term survival of spineflower populations on the project site and greater NRSP. The SCP is included in its entirety in **Appendix 4.3** and is summarized below. The SCP establishes five San Fernando spineflower preserves, four within the Newhall Ranch Specific Plan site and one within a portion of the Entrada planning area. Of these preserves, the Airport Mesa Preserve is located on the Mission Village project site. The locations of the preserves are shown in **Figure 1.0-18, Spineflower Preserves**. As described in the SCP, the five proposed preserves would encompass a total of 164.8 acres of land. The preserve areas have been designed to accommodate natural spineflower population fluctuations and include 13.26 acres of occupied spineflower habitat and 152.6 acres of buffer area (unoccupied spineflower habitat). In total, the five proposed preserves encompass 68.6 percent of the cumulative occupied spineflower habitat within the SCP area. No urban development would be permitted within the preserve areas and mitigation funds would be provided for the management and monitoring of the preserves. Each preserve area and incorporated buffer will be placed into a permanent conservation easement to ensure its long-term protection. The conservation easement will be to CDFG and will contain appropriate restrictions to ensure that the preserve land remains in a natural condition in perpetuity. It should be noted that the SCP describes spineflower preserves proposed under Newhall Ranch RMDP-SCP EIS/EIR Alternative 2, which would create greater impacts than the proposed Mission Village project. The Mission Village project includes the proposed Airport Mesa preserve; the Mission Village Airport Mesa preserve as proposed would be larger than the Airport Mesa preserve described in the SCP. The Mission Village Airport Mesa preserve would occupy 65.62 acres, including 5.28 acres of occupied spineflower habitat, 24.39 acres of core expansion area (unoccupied spineflower habitat), and 35.96 acres of buffer area (unoccupied spineflower habitat) (see **Figure 4.3-10, Airport Mesa Preserve Core Population**). It is unknown if any of the unoccupied open space included in the preserves is suitable for spineflowers. The proposed Airport Mesa preserve was designed to conserve the areas of greatest concentration of spineflower within the general Airport Mesa occurrence.

The proposed preserves would provide habitat for potential spineflower pollinators and dispersal agents. The management of the preserves would include restoration of degraded and/or damaged spineflower habitats and the establishment of site-specific buffers (which are included in the above acreages) aimed at neutralizing and controlling adverse edge effects (including Argentine ants) from adjacent changes in land use. A spineflower preserve manager would be contracted with and funded by the Applicant to perform environmental monitoring, oversee the proposed spineflower preserve areas, and ensure the monitoring and management activities outlined in the proposed SCP are implemented.

In the Draft SCP and this EIR, buffer areas are defined as land within proposed spineflower preserves, between the spineflower cumulative occupied habitat areas and the preserve boundaries. That is, the buffer areas are preserve

lands that "buffer" the rare plants from adverse effects of surrounding land uses. Adjacent land uses such as roads, trails, or fuel modification zones were not considered buffer areas.

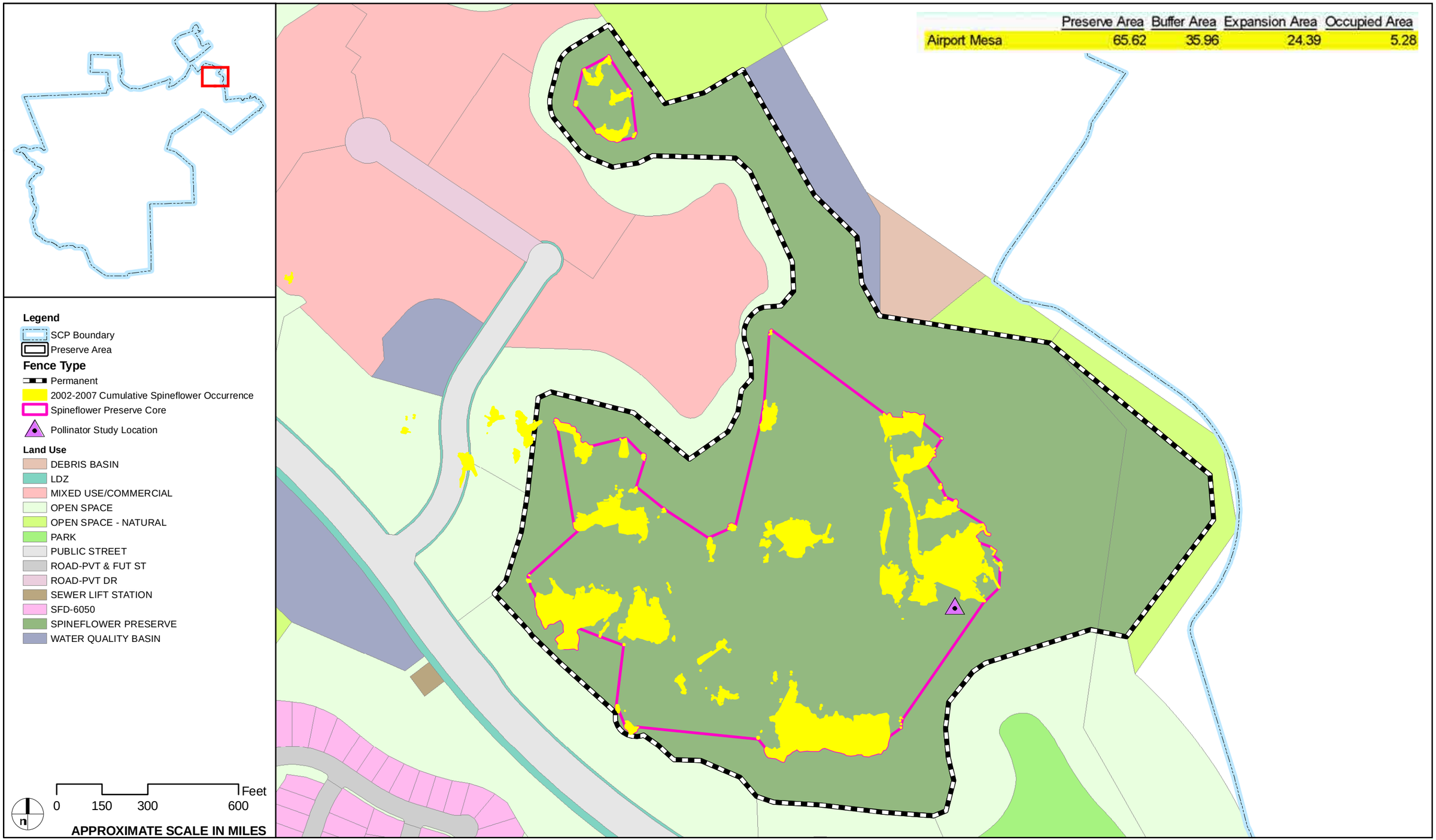
Based on the professional judgment of staff and consultants with relevant expertise, buffer widths of 80 to 100 feet, in combination with active management activities and other mitigation measures (**SP-4.6-53, SP-4.6-59, SP-4.6-65** through **SP-4.6-80**, **MV 4.3-58** through **MV 4.3-64, MV 4.3-66** through **MV 4.3-72**, and **MV 4.3-48**), were determined to be effective in buffering spineflower from most adverse edge effects, such as: invasion by newly introduced non-native landscaping plants into cumulatively occupied spineflower habitat, adverse effects of adjacent vegetation clearing for fuel modification, trampling or crushing, and overspray of landscaping chemicals from surrounding areas.

Further, in order to expand the effective buffer distance between cumulative occupied spineflower habitat and adverse edge effects of surrounding land uses, the mitigation measures included in this EIR restrict adjacent land uses, including: restrictions on landscape palettes; irrigation; drainage/runoff control; and use of herbicides, pesticides, and fertilizers. These measures are also described in Section 9 of the Draft SCP.

This EIR also includes management actions within the proposed spineflower preserves, such as fencing and signage at the boundaries to prohibit trespass, control of weeds, native habitat restoration, prohibitions against alterations to existing hydrology, excluding fuel modification zones within preserves and preparation of a fire management plan and post-fire rehabilitation plan. These measures are also described in Section 9 of the Draft SCP.

Applicable mitigation measures include the following:

- Mitigation Measures **SP 4.6-53** and **SP 4.6-59** (requires current, updated, site-specific surveys for special-status species in consultation with CDFG),
- Mitigation Measure **SP 4.6-65** (requiring subdivision maps responsive to spineflower characteristics),
- Mitigation Measure **SP 4.6-66** (guidelines for the design, establishment, and management of spineflower preserves),
- Mitigation Measure **SP 4.6-67** (open space connections and setbacks for spineflower preserves; prohibition of disturbance within spineflower preserves or buffers; revegetation requirements),
- Mitigation Measure **SP 4.6-68** (temporary fencing and signage around the spineflower preserve(s), open space connections, and buffer areas; permanent fencing and signage along the spineflower preserve boundary),



AERIAL SOURCE: Digital Global, 2007

FIGURE 4.3-10

Mission Village EIR

Airport Mesa Preserve Core Population

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- Mitigation Measure **SP 4.6-69** (storm drain system requirements for spineflower preserve areas),
- Mitigation Measure **SP 4.6-70** (road construction requirements to reduce or avoid impacts to spineflowers),
- Mitigation Measure **SP 4.6-71** (engineering, design, and grading modifications around spineflower preserves),
- Mitigation Measure **SP 4.6-72** (fire management plan to avoid and minimize impacts to the spineflower),
- Mitigation Measure **SP 4.6-73** (minimization of changes in surface water flows to spineflower preserves),
- Mitigation Measure **SP 4.6-74** (biweekly biological monitoring of grading and fence/utility installation activities; submission of monthly monitoring reports),
- Mitigation Measure **SP 4.6-75** (water control and stormwater flow redirection during construction activities)
- Mitigation Measure **SP 4.6-76** (reassessment of impacts to spineflower populations)
- Mitigation Measure **SP 4.6-77** (spineflower monitoring and management plan),
- Mitigation Measure **SP 4.6-78** (spineflower translocation and reintroduction program),
- Mitigation Measure **SP 4.6-79** (consultation with the County and CDFG regarding ongoing agricultural operations), and
- Mitigation Measure **SP 4.6-80** (San Martinez Grande spineflower preserve area).

This impact would also be reduced through the implementation of the following:

- Mitigation Measures **MV 4.3-58** and **MV 4.3-59** (spineflower preserve establishment and management),
- Mitigation Measures **MV 4.3-60, MV 4.3-61, MV 4.3-62, MV 4.3-64**, and **MV 4.3-66** (spineflower preserve temporary fencing requirements and education of construction workers),

- Mitigation Measures **MV 4.3 60, MV 4.3-62, MV 4.3-65**, and **MV 4.3-66** (control of construction-related dust, erosion, and water quality within spineflower preserve, and quarterly monitoring for Argentine ants along the construction–open space interface),

- Mitigation Measures **MV 4.3-68** through **MV 4.3-70** (restricting access to spineflower preserves through fencing and signage),

- Mitigation Measures **MV 4.3-71** and **MV 4.3-72** (restrictions on storm drains within spineflower preserves),

- Mitigation Measure **MV 4.3-63** (pre-construction review of construction plans and specifications),

- Mitigation Measure **MV 4.3-67** (review of plant palettes used within 200 feet of spineflower preserves and inspection of all container plants within 200 feet for disease and pests),

- Mitigation Measure **MV 4.3-73** (guidelines for restoration and enhancement of degraded and/or damaged spineflower habitat), and

- Mitigation Measure **MV 4.3-74** (emergency fire response plan and response strategies for wildfire or mass movement (*e.g.*, landslides, slope sloughing, or other geologic events) within the spineflower preserves).

Given the preservation and protection measures outlined in the SCP (see **Mitigation Measures MV 4.3-58** through **Mitigation Measures MV 4.3-74**), and implementation of Specific Plan RMP Measures **SP 4.6-53, SP 4.6-59,** and **SP 4.6-65** through **4.6-80**, all of which are consistent with the Spineflower Overlay and Mitigation Program, impacts to San Fernando Valley spineflower would be reduced to below a level of significance. Additionally, the project would be required to comply with all requirements of the associated Incidental Take Permit under CESA Section 2081. The finding that impacts to San Fernando Valley spineflower can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and Additional Analysis.

Slender mariposa lily has no state or federal status, but is a CNPS List 1B (S1.1) plant. This species is typically found in chaparral, coastal scrub, and grasslands, often on clay and/or rocky soils. The proposed project would result in the loss of 15.3 acres of the 17.4 acres of cumulative occupied slender mariposa lily habitat on site (see **Figure 4.3-6**). Given the sensitivity of this species, these impacts would be significant. The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan[289] is attached in Appendix 4.3. A Mission Village Slender Mariposa Lily

[289] Dudek, *Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan* (2007).

Mitigation and Monitoring Plan will be prepared and submitted to CDFG and the County for review and approval prior to ground disturbance to occupied habitat. Upon approval, the plan will be implemented by the applicant or its designee. The approved plan will demonstrate the feasibility of enhancing or restoring slender mariposa lily habitat in selected areas to be managed as natural open space (i.e., the Salt Creek area or High Country SMA/SEA 20, spineflower preserves, or River Corridor SMA/SEA 23) without conflicting with other resource management objectives. Habitat replacement/enhancement will be at a 1:1 ratio (acres restored/enhanced to acres impacted). In addition, the applicant would implement a number of mitigation measures designed to avoid and minimize construction-related indirect impacts to the slender mariposa lily. Applicable mitigation measures include the following:

- Mitigation Measure **SP 4.6-27** (enhancement of habitat values within the High Country SMA/SEA 20),
- Mitigation Measures **SP 4.6-29** through **SP 4.6-32** (recreation and access restrictions within the High Country SMA/SEA 20),
- Mitigation Measure **SP 4.6-33** (protection of transition areas between the development edge and the High Country SMA/SEA 20),
- Mitigation Measure **SP 4.6-34** (clear marking of grading perimeters within or adjacent to the High Country SMA/SEA 20),
- Mitigation Measures **SP 4.6-37** through **SP 4.6-42** (long-term management of the High Country SMA/SEA 20), and
- Mitigation Measures **SP 4.6-53** and **SP 4.6-59** (requires current, updated, site-specific surveys for special-status species in consultation with CDFG).

This impact would also be reduced through the implementation of the following:

- Mitigation Measure **MV 4.3-27** (implementation of an approved slender mariposa lily mitigation plan) to be implemented by the applicant. The plan shall be subject to the approval of the County prior to the issuance of a grading permit.
- Mitigation Measure **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities).

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and Additional Analysis.

Mainland cherry. The mainland cherry has no state or federal sensitivity status, but it is locally protected through the County of Los Angeles. On site, this species is found as an occasional component of undifferentiated chaparral, big sagebrush scrub, and river wash. Given the low sensitivity status of the species, observations were not mapped. Implementation of the proposed project would result in the permanent loss of approximately 25 acres (18%) and temporary disturbance of approximately 17 acres (12%) of habitat for this species within the Mission Village project site. Approximately 98 acres (70%) of suitable habitat on site would not be impacted and approximately 249 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Because the loss of mainland cherry shrubs and trees would conflict with local policies and ordinances protecting biological resources, the project's impacts on this species would be significant absent mitigation.

In order to reduce direct impacts to this species (loss of individual mainland cherry trees and shrubs), the applicant would implement a series of mitigation measures designed to replace impacted mainland cherry trees and shrubs, and restore, enhance, and maintain natural woodland communities in perpetuity, consistent with the Newhall Ranch Specific Plan Oak Resources Replacement Program.[290] Applicable mitigation measures include the following previously incorporated measures:

- Mitigation Measures **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-21** through **SP 4.6-26** (habitat restoration, enhancement, and preservation of the River Corridor SMA/SEA 23);
- Mitigation Measure **SP 4.6-17** (restrictions on human and pet access to the River Corridor SMA/SEA 23);
- Mitigation Measures **SP 4.6-18** and **SP 4.6-19** (establishment of transition areas between the River Corridor SMA/SEA 23 and development);
- Mitigation Measure **SP 4.6-28** (mitigation banking for riparian habitats);
- Mitigation Measures **SP 4.6-29** through **SP 4.6.32** (recreation and access restrictions within the High Country SMA/SEA 20);
- Mitigation Measure **SP 4.6-33** (protection of transition areas between the development edge and the High Country SMA/SEA 20);

[290] County of Los Angeles. *Newhall Ranch Specific Plan* (2003).

- Mitigation Measures **SP 4.6-34** and **SP 4.6-35** (clear marking of grading perimeters and avoidance of inadvertent impacts to biological resources outside the grading area within or adjacent to the High Country SMA/SEA 20);

- Mitigation Measures **SP 4.6-37** through **SP 4.6-42** (long-term management of the High Country SMA/SEA 20);

- Mitigation Measures **SP 4.6-43** through **SP 4.6-47** (acceptable uses of and long-term management of the Open Area);

- Mitigation Measure **SP 4.6-48** (standards for the restoration and enhancement of mainland cherry resources); and

- Mitigation Measure **SP 4.6-61** (site-specific survey for mainland cherry at County request).

This impact would also be reduced through the implementation of the following:

- Mitigation Measure **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas);

- Mitigation Measure **MV 4.3-23** (development of a conceptual wetlands mitigation plan);

- Mitigation Measure **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village);

- Mitigation Measure **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities);

- Mitigation Measure **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation);

- Mitigation Measures **MV 4.3-31** through **MV 4.3-43** (wetlands mitigation plan and riparian restoration activities on the project site); and

- Mitigation Measure **MV 4.3-50** (replacement of mainland cherry trees or shrubs outside riparian areas).

Implementation of these mitigation measures would reduce project impacts to mainland cherry trees to a level that is adverse but not significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Island mountain-mahogany. The island mountain-mahogany is a CNPS List 4 (S3.3) plant, but it has no federal status. Within the project site, island mountain-mahogany occurs is an occasional component of chaparral communities at the base of north-facing slopes. Given the low sensitivity status of the species, observations were not mapped. Implementation of the proposed project would result in the permanent loss of approximately 48 acres (86%) and temporary disturbance of approximately 5 acres (9%) of habitat for this species within the Mission Village project site. Approximately 3 acres (6%) of suitable habitat on site would not be impacted and approximately 1,496 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Because of the common occurrence of island mountain-mahogany within the Newhall Ranch Specific Plan area, and because CNPS List 4 plants are not considered Rare from a statewide perspective, are not defined as Rare, Threatened or Endangered, and at this time face low-level threats on a statewide basis,[291] the loss of island mountain-mahogany would not be considered a substantial adverse effect on a special-status species. Nor would it be expected to reduce regional populations of the species to below self-sustaining numbers. Therefore, impacts to island mountain-mahogany (loss of individual island mountain-mahogany shrubs), would be less than significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and Additional Analysis, which found that impacts to this species would not be significant assuming implementation of Specific Plan Mitigation Measures **SP 4.6-27** (removal of grazing and enhancement of riparian habitat in the High Country SMA/SEA 20), **SP 4.6-34** (marking and inspection of grading perimeters prior to impacts within or adjacent to the High Country SMA/SEA 20), **SP 4.6-35** (avoidance of inadvertent impacts to biological resources within or adjacent to the High Country SMA/SEA 20), and **SP 4.6-53** (updated site-specific surveys for rare, threatened, or endangered plant or animal species at County request).

Parish's sagebrush is considered special status by the County of Los Angeles, but it has no federal, state, or CNPS status. This species grows intermixed with the big sagebrush scrub community within the Salt Creek watershed,[292] co-occurring with the more common big sagebrush (*Artemisia tridentata* ssp. *tridentata*). Given the low sensitivity status of the species, observations were not mapped. Implementation of the proposed project would result in the permanent loss of 15.8 (63%) of the 24.6 acres of big sagebrush scrub on site, including the loss of individual Parish's sagebrush shrubs, as well as the temporary disturbance of approximately 7 acres (28%) of habitat for this

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291 CNPS, CNPS Vegetation Committee, "California Native Plant Society Relevé Protocol," http://www.cnps.org/cnps/vegetation/pdf/Releve_protocol.pdf. 2004.

292 Dudek and Associates, Inc., *Sensitive Plant Survey Results for the Salt Creek Site*.

species within the Mission Village project site. Approximately 2 acres (9%) of suitable habitat on site would not be impacted and approximately 11 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This impact would (1) constitute a substantial direct adverse effect on this species, (2) conflict with local policies and ordinances protecting biological resources, and (3) substantially reduce the number and range of this species. Thus, this impact is significant, absent mitigation. The project applicant would implement a series of mitigation measures designed to reduce the impact to a level that is adverse but not significant. These mitigation measures include the following previously incorporated measures:

- Mitigation Measures **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-21** through **SP 4.6-26** (habitat restoration, enhancement, and preservation of the River Corridor SMA/SEA 23); and
- Mitigation Measure **SP 4.6-28** (mitigation banking for riparian habitats).

This impact would also be reduced through the implementation of the following:

- Mitigation Measure **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas);
- Mitigation Measure **MV 4.3-23** (development of a conceptual wetlands mitigation plan);
- Mitigation Measure **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village);
- Mitigation Measure **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities); and
- Mitigation Measures **MV 4.3-31** through **MV 4.3-43** (wetlands mitigation plan and riparian restoration activities on the project site).

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the plant was identified after that environmental documentation was certified.

Southwestern spiny rush. The southwestern spiny rush is a CNPS List 4 (S3.2) plant, but it has no federal status. Within the Specific Plan area, southwestern spiny rush individuals were observed annually from 2001 through 2006 in mesic riparian areas along the Santa Clara River. Given the low sensitivity status of the species, individual plants have not been mapped. Implementation of the proposed project would not result in the permanent loss of potential

habitat for this species but would result in the temporary disturbance of approximately 2 acres (50%) of habitat for this species within the Mission Village project site. Approximately 2 acres (50%) of suitable habitat on site would not be impacted and approximately 183 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The loss of individual spiny rush plants is not considered a significant impact for the following reasons: the species has a scattered distribution along the Santa Clara River floodplain within the Newhall Ranch Specific Plan area; CNPS List 4 plants are not considered Rare from a statewide perspective, are not defined as Rare, Threatened, or Endangered pursuant to the California Endangered Species Act, and are not eligible for state listing as Threatened or Endangered; and the species faces only low-level threats on a statewide basis.[293] Nor would the impact be expected to reduce regional populations of the species to below self-sustaining numbers. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the plant was identified after that environmental documentation was certified.

Peirson's morning-glory has no state or federal status, but is a CNPS List 4 (S3.2) plant. This species is typically found in chaparral, coastal scrub, chenopod scrub, cismontane woodland, lower montane coniferous forest, and grasslands. Given the low sensitivity status of the species, observations were not mapped. The proposed project would result in the loss of Peirson's morning-glory from the project site. While never abundant, Peirson's morning-glory occurs throughout the Newhall Ranch Specific Plan area on virtually all ridges and slopes, weakly climbing over chaparral, coastal scrub, and grasslands, including throughout the Mission Village project site.[294] Given the low sensitivity status of the species, observations were not mapped. Implementation of the proposed project would result in the permanent loss of approximately 705 acres (78%) and temporary disturbance of approximately 67 acres (7%) of habitat for this species within the Mission Village project site. Approximately 131acres (15%) of suitable habitat on site would not be impacted and approximately 4,136 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The loss of individual Peirson's morning-glory plants is not considered a significant impact for the following reasons: the species has a common occurrence within the Newhall Ranch Specific Plan area; CNPS List 4 plants are not considered Rare from a statewide perspective, are not defined as Rare, Threatened, or Endangered pursuant to the California Endangered Species Act, and are not eligible for state listing as Threatened or Endangered; and the species faces only low-level threats on a statewide basis.[295] Nor would the impact be expected to reduce regional

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[293] CNPS, "California Native Plant Society Relevé Protocol."

[294] Dudek and Associates, Inc., *2002 Sensitive Plant Survey Results for Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *2003 Sensitive Plant Survey Results for Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *2004 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *2005 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *2006 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area*; Dudek, *2007 Sensitive Plant Survey Results for the Newhall Ranch Specific Plan Area*.

[295] CNPS, "California Native Plant Society Relevé Protocol."

populations of the species to below self-sustaining numbers. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and Additional Analysis, which found that impacts to this species would not be significant assuming implementation of Specific Plan Mitigation Measures **SP 4.6-27** (removal of grazing and enhancement of riparian habitat in the High Country SMA/SEA 20), **SP 4.6-34** (marking and inspection of grading perimeters prior to impacts within or adjacent to the High Country SMA/SEA 20), **SP 4.6-35** (avoidance of inadvertent impacts to biological resources within or adjacent to the High Country SMA/SEA 20), and **SP 4.6-53** (updated site-specific surveys for rare, threatened, or endangered plant or animal species at County request).

Newhall sunflower. The Newhall sunflower is a CNPS List 1B.1 plant (S1), but has no federal status. This EIR considers it a special-status species. Approximately 10 individuals of the Newhall sunflower occur at Middle Canyon Spring, on the south side of the Santa Clara River between Middle Canyon and San Jose Flats within the Specific Plan site. Although the spring will be avoided, potential indirect impacts to the Newhall sunflower as a result of implementation of the proposed project (accidental clearing, trampling, and grading; runoff, sedimentation, erosion, and chemical and toxic compound pollution; and exposure to fugitive dust, as well as from hydrologic alterations and water quality impacts), would (1) constitute a substantial direct adverse effect on this species, (2) conflict with local policies and ordinances protecting biological resources, and (3) substantially reduce the number and range of this species. Thus, this impact is significant, absent mitigation. In order to reduce direct impacts to this species, the applicant would implement a series of mitigation measures designed to avoid or minimize the impact of project implementation on Parish's sagebrush to a level that is adverse but not significant. Applicable mitigation measures include the following previously incorporated measures:

- Mitigation Measures **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-21** through **SP 4.6-26** (habitat restoration, enhancement, and preservation of the River Corridor SMA/SEA 23); and

- Mitigation Measure **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23)**, SP 4.6-18**(provision of transition areas adjacent to the River Corridor SMA/SEA 23)**,** and **SP 4.6-19** (requirements for transition areas adjacent to the River Corridor SMA/SEA 23).

This impact would also be reduced through the implementation of the following:

- Mitigation Measure **MV 4.3-11** (regulating stream diversion bypass channels and dewatering);

- Mitigation Measure **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities);

- Mitigation Measures **MV 4.3-52 (**project design features, construction notes, erosion and dust control, and SWPPP BMPs to ensure protection of vegetation communities and special-status

species) and **MV 4.3-53** (dust control measures to protect vegetation communities and special-status aquatic wildlife species);

- Mitigation Measure **MV 4.3-57 (**review of plant palettes and inspection of container plants for use within 200 feet of native vegetation for pests and disease; restrictions on invasive plants and irrigation), **MV 4.3-54** (permanent fencing along trails in the River Corridor SMA/SEA 23), and **MV 4.3-55** (fencing and signage around the Middle Canyon Spring); and

- Mitigation Measure **MV 4.3-56 (**Middle Canyon Spring Habitat Management Plan (Dudek 2007), which prescribes monitoring and management related to water quality and water quantity) and **MV 4.3-51** (bridges of the Santa Clara River will be designed to minimize impacts to natural areas and riparian resources from associated lighting and stormwater runoff).

Implementation of these mitigation measures would reduce project impacts to the Newhall sunflower to a level that is adverse but not significant. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the plant was identified after that environmental documentation was certified.

Undescribed everlasting. Because this plant is undescribed (a physical description of the plant with known distribution and species name has not been published in a peer-reviewed publication) and its extent and distribution are unknown, this EIR considers it a special-status species. The undescribed everlasting was documented within the Specific Plan area during the 2003, 2004, 2005, and 2007 field seasons. Two main populations of this undescribed species, totaling about 530 individuals, were documented in 2003 in the Santa Clara River corridor near the mouth of Long Canyon and in Castaic Creek south of SR-126 within the Specific Plan area. During the 2004 surveys, these two occurrences were noted again with about 700 plants. In addition, a population of about 250 individuals was observed in the portion of Castaic Creek west of the I-5 Bridge and east of Commerce Center Drive within the VCC planning area. In 2005, the two Specific Plan area occurrences consisted of approximately 800 individuals and five individuals, while the VCC occurrences consisted of approximately 65 individuals. During 2007 surveys, the VCC occurrence was estimated at approximately 350 individuals; one main occurrence and a number of smaller occurrences were documented within the Specific Plan area, totaling approximately 85 individuals. These occurrences are primarily on secondary alluvial benches. The vegetation around these plants consists of sparsely vegetated open river wash. Implementation of the proposed project would result in temporary impacts at the location were 8 individuals were mapped in 2004 and 3 individuals were mapped in 2007.

Impacts to this species would be reduced through implementation of the following:

- **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities);

- **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation);
- **MV 4.3-75** (surveys in undescribed everlasting habitat prior to grading/construction activities); and
- **MV 4.3-76** (undescribed everlasting mitigation and monitoring plan).

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the plant was identified after that environmental documentation was certified.

(g) Protected Oaks and Live Oak Woodland

As previously discussed (**~~subsection~~Subsection 7.b., Oaks**), CLAOTO protects any species in the genus *Quercus* that are at least 8 inches in diameter or has a combined trunk circumference of any two trunks of at least 38 inches (12 inches in diameter), as measured 4.5 feet above the mean natural grade. A heritage oak, as defined by CLAOTO, is an oak tree that measures 36 inches or more in diameter as measured 4.5 feet above natural ground, or any oak of 36 inches or greater in diameter having a significant historical or cultural importance to the community. CLAOTO requires that all potential impacts to oak trees be preceded by an application to the County that includes a detailed oak tree report, and that loss of or damage to protected oaks be mitigated at a minimum 2:1 ratio.

With respect to oak woodlands, vegetation community and land cover classifications used in this EIR generally follow the Vegetation Classification and Mapping Program "List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database" system.[296] Community classifications were selected based on site factors, descriptions, distribution, and characteristic species present within an area.

Public Resources Code section 21083.4 addresses oak woodlands conservation, and requires counties to mitigate impacts to oak woodlands that would be significant under CEQA. Under this Section, an "oak" is defined as a "native tree species in the genus *Quercus*, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height." Although, the statute does not provide a definition of "oak woodland," Public Resources Code ~~Section~~§ 12220(g) provides helpful guidance. It defines "forest land" – which would include oak

[296] CDFG, "List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database," (2003), updated by CDFG, "Vegetation Classification and Mapping Program, List of California Vegetation Alliances" (2007).

woodland -- as any "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

Using Section 12220(g) as a guide, this EIR defines "oak woodland" as an area with at least 10% cover by oak trees with an understory of non-grass vegetation and at least 20 percent cover by oak trees with an understory of grass vegetation. Oak/grass includes areas where oak trees comprise between 10 percent and 20 percent of the total cover with an understory of grass vegetation. As part of this EIR's Vegetation Communities analysis, biologists surveyed the site and identified all oak woodlands meeting this definition. Note that these surveys not only captured the oak woodland habitat, but also the entire range of oak trees in terms of size and maturity, including all trees with trunk diameters of five (5) inches or more, measured at breast height, as required under Public Resources Code 21083.4(a). These surveys indicate that the project site supports 37.3 acres of oak woodland, as defined.

Based on the proposed grading plan, 7.8 acres of coast live oak woodland would be developed (including permanent and temporary impacts) and 1.9 acres of valley oak/grass would be developed (including permanent and temporary impacts), for a total of 9.7 acres of impact. This is considered a potentially significant effect under CEQA, thus triggering the mitigation requirements set forth in Public Resources Code ~~Section~~§ 21083.4.

In addition, the project will remove 12 "heritage" and 131 non-heritage oak trees. Under CLAOTO, an Oak Tree permit will be required to encroach upon and/or remove the 12 heritage oaks and 40 of the non-heritage oaks. However, 214 oak trees (of which 29 are considered heritage) occur within 200 feet from the grading limit line and will be preserved. Given the biological value of oak woodlands and savannah, the project's impacts to oak trees and oak woodlands are considered a significant impact under CLAOTO.

As discussed in the Newhall Ranch Specific Plan, 2.6 Resource Management Plan, an estimated 13,660 oak trees would be protected within the SMA, particularly in the High Country SMA/SEA 20. Further, as discussed in the *Draft Newhall Ranch Mitigation Feasibility Study*,[297] Dudek has identified the opportunity of creating 11 acres of coast live oak woodland and planting an additional 189 oak trees within the High Country SMA/SEA 20 and Salt Creek area (see Appendix A). The actual number of trees to be planted would correspond to that necessary to (1) comply with the Oak Tree Permit issued by the County pursuant to CLAOTO, and (2) provide adequate mitigation acreage for losses to oak woodland per Section 21083.4. Note that Section 21083.4 provides counties and project applicants with a number of mitigation alternatives, including the preservation of oak woodlands under conservation easements and the planting of oak trees to replace those lost or damaged. (Pub.Res.Code ~~Section~~§ 21083.4(b)(1) and (2).)

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[297] Dudek, *Draft Middle Canyon Spring Survey and Status Report.*

In order to reduce direct impacts to oak resources, the project applicant would implement a series of mitigation measures designed to replace impacted oak trees in accordance with CLAOTO; restore, enhance, and maintain natural woodland communities in perpetuity; and create new woodlands in areas that supported oaks and oak woodlands prior to development, as required under Public Resources Code section 21083.4. Applicable mitigation measures include the following previously incorporated measures:

- Mitigation Measures **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-21** through **SP 4.6-26** (habitat restoration, enhancement, and preservation of the River Corridor SMA/SEA 23);
- Mitigation Measure **SP 4.6-17** (restrictions on human and pet access to the River Corridor SMA/SEA 23);
- Mitigation Measures **SP 4.6-18** and **SP 4.6-19** (establishment of transition areas between the River Corridor SMA/SEA 23 and development);
- Mitigation Measure **SP 4.6-27** (habitat enhancement of the High Country SMA/SEA 20);
- Mitigation Measure **SP 4.6-28** (mitigation banking for oak resources);
- Mitigation Measures **SP 4.6-29** through **SP 4.6-32** (recreation and access restrictions within the High Country SMA/SEA 20);
- Mitigation Measure **SP 4.6-33** (protection of transition areas between the development edge and the High Country SMA/SEA 20);
- Mitigation Measures **SP 4.6-34** and **SP 4.6-35** (clear marking of grading perimeters and avoidance of inadvertent impacts to biological resources outside of the grading area within or adjacent to the High Country SMA/SEA 20);
- Mitigation Measures **SP 4.6-37** through **SP 4.6-42** (long-term management of the High Country SMA/SEA 20);
- Mitigation Measures **SP 4.6-43** through **SP 4.6-47** (acceptable uses of and long-term management of Open Area);
- Mitigation Measure **SP 4.6-48** (standards for the restoration and enhancement of oak resources); and
- Mitigation Measure **SP 4.6-62** (any changes to an approved oak tree permit would require that the oak tree report for that oak tree permit be amended for the area of change).

This impact would also be reduced through the implementation of the following:

- Mitigation Measure **MV 4.3-22** (protective fencing around oaks during clearing and grading activities);
- Mitigation Measure **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities); and
- Mitigation Measure **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation).

Compliance with the permit conditions and implementation of Specific Plan Mitigation Measure **SP 4.6-48**, as well as the Mitigation Measures proposed above, would reduce project impacts to oak trees and oak woodlands to below a level of significance, thereby meeting the requirements of both CLAOTO and Public Resources Code ~~Section~~§ 21083.4. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

For discussion of the temporary loss of carbon sequestration through vegetation removal, including removal of oak woodlands, please see **Section 4.23, Global Climate Change,** of this EIR.

(h) Special-Status Wildlife Species

Certain special-status wildlife species known to occur in the project region were eliminated from further consideration in this analysis because the project site lacks suitable habitat to support them or because surveys have established that the species in question is not expected to utilize the project site. As shown in **Table 4.3-7**, these species include the following: vernal pool fairy shrimp, San Diego fairy shrimp, Riverside fairy shrimp, quino checkerspot butterfly, coast range newt, coastal (San Diego) cactus wren, great egret, great blue heron, Swainson's hawk, mountain plover, bald eagle, least bittern, long-billed curlew, osprey, double-crested cormorant, white-faced ibis, purple martin, bank swallow, California spotted owl, Mexican long-tongued bat, spotted bat, Los Angeles pocket mouse, and big free-tailed bat.

As noted in **Table 4.3-5**, above, the following special-status wildlife species were observed during the course of various field surveys conducted on or adjacent to the project site: monarch butterfly, San Emigdio blue butterfly, *Pyrgulopsis castaicensis* n. sp., Santa Ana sucker, unarmored threespine stickleback, arroyo chub, arroyo toad, western spadefoot toad, silvery legless lizard, coastal western whiptail, southwestern pond turtle, coast horned lizard, two-striped garter snake, Cooper's hawk, sharp-shinned hawk, tricolored blackbird, Southern California rufous-crowned sparrow, golden eagle, short-eared owl, long-eared owl, western burrowing owl, oak titmouse, ferruginous hawk, Costa's hummingbird, Lawrence's goldfinch, turkey vulture, northern harrier, western yellow-billed cuckoo, hermit warbler, yellow warbler, white-tailed kite, willow flycatcher, southwestern willow flycatcher,

California horned lark, merlin, prairie falcon, American peregrine falcon, California condor, yellow-breasted chat, loggerhead shrike, black-crowned night-heron, Nuttall's woodpecker, summer tanager, coastal California gnatcatcher, vermilion flycatcher, Allen's/Rufous hummingbird, chipping sparrow, least Bell's vireo, yellow-headed blackbird, pallid bat, western mastiff bat, western red bat, San Diego black-tailed jackrabbit, fringed myotis, Yuma myotis, San Diego desert woodrat, pocketed free-tailed bat, mule deer, mountain lion, American badger, and black bear.

Based on the presence of suitable habitat on the project site, it is reasonable to conclude that certain special-status species could potentially occur on site prior to grading or construction activities associated with project implementation. As noted in **Table 4.3-6**, above, although not observed during surveys, the following species could occur on the project site: Trask shoulderband snail, southern steelhead, California red-legged frog, rosy boa, San Bernardino ringneck snake, coast patch-nosed snake, south coast garter snake, grasshopper sparrow, Bell's sage sparrow, black-chinned sparrow, ringtail, Townsend's big-eared bat, western small-footed myotis, long-legged myotis, and southern grasshopper mouse. For the purposes of the following analysis, these species are presumed to occur on the project site.

Impacts to Species Observed On or Adjacent to the Mission Village Site

Monarch butterfly (*Danaus plexippus*). The monarch butterfly is a listed ***California Special Animal***. The species' distribution is controlled by the distribution of its larval host plants (*i.e.*, various milkweeds, genus *Asclepias*). Individual monarch butterflies were observed during surveys conducted in April and May of 2004 and 2005 as well as during various other wildlife and plant surveys. However, no wintering sites were observed, and, due to the site's distance from the coast, it is unlikely that the project area would be used by large numbers of overwintering adults.[298] Further, the proposed project does not include any development or construction-related activities that would affect a wintering site. Therefore, impacts to this species would be less than significant. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the species was identified after that environmental documentation was certified.

San Emigdio blue butterfly (*Plebulina emigdionis*). The San Emigdio blue butterfly is designated by CDFG as a ***California Special Animal***. This butterfly can be locally abundant in association with its primary host plant, four-wing saltbush (*Atriplex canescens*), but has also been observed in association with quail brush (*A. lentiformis*).[299] During the 2004 surveys, San Emigdio blue butterfly was documented within the Specific Plan area in the west-central edge of Potrero Canyon. During the 2005 surveys, five adult San Emigdio blue butterflies were again

[298] Compliance Biology, Inc., *Results of Butterfly Surveys on the Newhall Ranch Project Site*.

[299] Compliance Biology, Inc., *Results of Butterfly Surveys on Magic Mountain Entertainment Site*; Compliance Biology, Inc., *Results of Butterfly Surveys on Newhall Salt Canyon Habitat Preservation Area*.

observed at this location. One San Emigdio blue butterfly was also observed in the High Country SMA/SEA 20 at the northwestern edge of Salt Canyon during the 2005 surveys; however, no additional observations of the species were made at this location or other portions of Salt Canyon during the 2005 surveys.[300] The proposed project does not include any development or construction-related activities that would affect a population or a concentration of the host plant. ~~Therefore,~~ Although the impacts to the host plant will be avoided, potential direct and indirect impacts to San Emigdio blue butterfly may result from the implementation of the proposed project if quail brush was found to occur within the project footprint. In order to reduce direct impacts to this species, the project applicant would ~~be less than significant.~~implement a series of mitigation measures designed to avoid or minimize the impact of project implementation on San Emigdio blue butterfly to a level that is adverse but not significant. These mitigation measures include the following:

- Mitigation Measures **SP-4.6 21** through **SP-4.6 26** (open space dedication of the River Corridor SMA);
- Mitigation Measures **SP 4.6-36** through **SP-4.6-42** (open space dedication of the High Country SMA);
- Mitigation Measure **MV 4.3-86** (preventing the removal of quail brush plants while San Emigdio blue butterfly eggs or larvae are present);
- Mitigation Measure **MV 4.3-87** (preventing the removal of quail brush plants while San Emigdio blue butterfly eggs or larvae are present);
- Mitigation Measure **MV 4.3-88** (replacement of quail brush plants within the San Emigdio blue butterfly colony); and
- Mitigation Measure **MV 4.3-90** (monitoring and habitat creation for San Emigdio blue butterfly).

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the species was identified after that environmental documentation was certified.

***Pyrgulopsis castaicensis* n. sp.** In 2010, the undescribed species of snail was formally described as *Pyrgulopsis castaicensis* n. sp.[301] and is referred to by its new scientific name herein. The *Pyrgulopsis castaicensis* n. sp. has no current status. In addition, the snail's habitat requirements are unknown, and a comprehensive distribution survey has not yet been attempted. In 2006, the snail was observed within portions of the Middle Canyon Spring within the Mission Village project site. The species was first observed within Middle Canyon Spring by USFWS biologists in

[300] Compliance Biology, Inc., *Results of Butterfly Surveys on Newhall Salt Canyon Habitat Preservation Area*.
[301] Hershler and Liu, *Pyrgulopsis* (Gastropoda: Hydrobiidae).

2006. In 2007, Dudek biologists observed over 100 snails (these snails were not identified to genus or species, and it is not known whether they were the *Pyrgulopsis castaicensis* n. sp. or another freshwater snail) in Middle Canyon Spring and the lower-most reach of the Middle Canyon drainage, and immediately below the river terrace where the spring discharges into the upper river floodplain. At the time the unidentified snails were observed in the mouth of the Middle Canyon drainage (non-spring area), agricultural runoff from irrigated fields in the lower valley of Middle Canyon supported flow in the lower portion of the drainage.[302] Although the spring will be avoided, potential indirect impacts to *Pyrgulopsis castaicensis* n. sp. as a result of implementation of the proposed project (accidental clearing, trampling, and grading; runoff, sedimentation, erosion, and chemical and toxic compound pollution; and exposure to fugitive dust, as well as from hydrologic alterations and water quality impacts), would (1) constitute a substantial direct adverse effect on this species, (2) conflict with local policies and ordinances protecting biological resources, and (3) substantially reduce the number and range of this species. Thus, this impact is significant, absent mitigation. In order to reduce direct impacts to this species, the project applicant would implement a series of mitigation measures designed to avoid or minimize the impact of project implementation on *Pyrgulopsis castaicensis* n. sp. to a level that is adverse but not significant. Applicable mitigation measures include the following previously incorporated measures:

- Mitigation Measures **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-21** through **SP 4.6-26** (habitat restoration, enhancement, and preservation of the River Corridor SMA/SEA 23); and

- Mitigation Measure **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23)**, SP 4.6-18**(provision of transition areas adjacent to the River Corridor SMA/SEA 23)**, SP 4.6-19** (requirements for transition areas adjacent to the River Corridor SMA/SEA 23).

This impact would also be reduced through the implementation of the following:

- Mitigation Measure **MV 4.3-11** (regulating stream diversion bypass channels and dewatering);

- Mitigation Measure **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities);

- Mitigation Measures **MV 4.3-52 (**project design features, construction notes, erosion and dust control, and SWPPP BMPs to ensure protection of vegetation communities and special-status species) and **MV 4.3-53** (dust control measures to protect vegetation communities and special-status aquatic wildlife species);

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[302] Dudek, *Draft Middle Canyon Spring Survey and Status Report.*

- **MV 4.3-54** (permanent fencing along trails in the River Corridor SMA/SEA 23) and Mitigation Measure **MV 4.3-55** (fencing and signage around the Middle Canyon Spring);

- Mitigation Measure **MV 4.3-57 (**review of plant palettes and inspection of container plants for use within 200 feet of native vegetation for pests and disease; restrictions on invasive plants and irrigation);

- Mitigation Measure **MV 4.3-56 (**Middle Canyon Spring Habitat Management Plan (Dudek 2007), which prescribes monitoring and management related to water quality and water quantity) and **MV 4.3-51** (bridges of the Santa Clara River will be designed to minimize impacts to natural areas and riparian resources from associated lighting and stormwater runoff).

- Mitigation Measure **MV 4.3-44** (pre-construction surveys and relocation of the spring snail (*Pyrgulopsis castaicensis* n. sp.))

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the snail was identified after that environmental documentation was certified.

Santa Ana sucker (*Catostomus santaanae*). The Santa Ana sucker is listed as a ***California Species of Special Concern*** throughout its range. Outside of the Newhall Ranch Specific Plan area, populations within the species' natural historic range, including the Los Angeles, San Gabriel, and Santa Ana River basins, are listed federally as threatened. It is also considered sensitive by the U.S. Forest Service, critically imperiled by the Natural Heritage Program, and vulnerable by the IUCN World Conservation Union. The fish are most abundant in cool, shallow streams with good water quality and with streamside riparian vegetation that can provide refuge during seasonal floods and repopulation after flooding.[303] This species has been documented within the Specific Plan area throughout the Santa Clara River. Potential habitat for fish was not quantified because the fish are confined to the wetted channel of the Santa Clara River, the surface area of which is variable (i.e., may expand during the winter rainy season and become more confined during the dry summer season). In their collections within the Specific Plan area of the NRSP Project site, ENTRIX found that the Santa Ana sucker was common.[304] Surveys conducted on June 3 and July 14, 2000, found this species within 500 meters upstream and downstream of the I-5 Bridge over the Santa Clara River.[305] This species is not expected to occur in Salt Creek. Construction activities associated with the

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303 D.G. Buth and C.B. Crabtree, "Genetic Variability and Population Structure of *Catostomus santaanae* in the Santa Clara Drainage," *Copeia* 2 (1982), 439–444; NatureServe, NatureServe Explorer: An Online Encyclopedia of Life, Version 6.2, http://www.natureserve.org/explorer. 2007.

304 ENTRIX, Inc., *Focused Special-Status Fish Species Habitat Assessment*.

305 (Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish*

proposed Commerce Center Drive Bridge, bridge, and abutments could result in the loss of individual fish. The location of the proposed bank stabilization features is set back beyond the existing riparian corridor and would not interface with the active stream channel. Nevertheless, some impacts may occur to the fish. Depending on the number and extent of this species that may be disturbed or removed during construction of the bridge, the loss of Santa Ana sucker would be a significant impact. Mitigation measures to reduce these impacts below significant levels include the following:

- **SP 4.6-53** (surveys for special-status species),
- **SP 4.6-57** (exclusion/removal of fish from areas of proposed bridge construction),
- **SP 4.6-58** (require compliance with water quality permits), and
- **SP 4.6-59** (surveys for special-status species).
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas)**,**
- **MV 4.3-2** (pre-construction surveys and coordination with Corps and CDFG for unarmored threespine stickleback, arroyo chub, and Santa Ana sucker),
- **MV 4.3-8** (patrol for stranded fish and aquatic organisms),
- **MV 4.3-9** (development of a Stream Crossing and Diversion Plan),
- **MV 4.3-10** (installation of structures within the riverbed not to impair movement of aquatic life),
- **MV 4.3-11** (regulating stream diversion bypass channels and dewatering)**,**
- **MV 4.3-12** (creation of habitat for special-status fish during construction),
- **MV 4.3-13** (prevention of mud and pollutants from entering streams and storm flows), and
- **MV 4.3-53** (dust control measures to protect vegetation communities and special-status plant and aquatic wildlife species).

These mitigation measures would reduce direct impacts to the Santa Ana sucker to less than significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Species; Newhall Ranch; Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species; Natural River Management Plan Area*; Haglund and Baskin, *Fish and Wildlife Survey and Habitat Assessment.*

Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*). The unarmored threespine stickleback is listed as both state and federally endangered. It is also a California Fully Protected species. The USFWS notes that the unarmored threespine stickleback can be found in all areas of streams;[306] however, they tend to gather in slow-moving and standing water or behind obstructions, at the edges of streams, or in vegetation in faster-moving water. This species has been documented in the portion of the Santa Clara River on and adjacent to the project site and within the Santa Clara River portion of the Specific Plan in 1988, 1995, 2000, 2002–2005, and 2007.[307] Potential habitat for fish was not quantified because the fish are confined to the wetted channel of the Santa Clara River, the surface area of which is variable (i.e., may expand during the winter rainy season and become more confined during the dry summer season). Construction activities associated with the proposed Commerce Center Drive Bridge and bridge abutments could result in the loss of individual fish, and there is a potential for significant residual impacts to the unarmored threespine stickleback, including impacts to water quality such as sedimentation, dust, and other pollutants, and interference with natural flows and movement of the stickleback. However, the proposed bank stabilization features are set back beyond the existing riparian corridor at most of the project site and would not interface with the active stream channel. Mitigation measures to reduce impacts on the unarmored threespine stickleback to less than significant include the following:

- **SP 4.6-53** (surveys for special-status species),
- **SP 4.6-54** (consultation with USFWS),
- **SP 4.6-57** (exclusion/removal of fish from areas of proposed bridge construction),
- **SP 4.6-58** (require compliance with water quality permits),
- **SP 4.6-59** (surveys for special-status species).
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-2** (pre-construction surveys and coordination with Corps and CDFG for unarmored threespine stickback, arroyo chub, and Santa Ana sucker),

306 USFWS, *Unarmored Threespine Stickleback Recovery Plan* (Portland, Oregon: USFWS, 1985)

307 Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part II*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part III*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part IV*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part I*; ENTRIX, Inc., *Focused Special-Status Fish Species Habitat Assessment*; Haglund, *Current Status of the Unarmored Threespine Stickleback*; SMEA, *Sensitive Aquatic Species Survey;* Haglund and Baskin, *Fish and Wildlife Survey and Habitat Assessment*; Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species; Newhall Ranch;* Impact Sciences, Inc., *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species; Natural River Management Plan Area*; Impact Sciences, Inc., *Annual Status Report for Unarmored Threespine Stickleback within the Natural River Management Plan Area*.

- **MV 4.3-8** (patrol for stranded fish and aquatic organisms),
- **MV 4.3-9** (development of a Stream Crossing and Diversion Plan),
- **MV 4.3-10** (installation of structures within the riverbed not to impair movement of aquatic life),
- **MV 4.3-11** (regulating stream diversion bypass channels and dewatering),
- **MV 4.3-12** (creation of habitat for special-status fish during construction),
- **MV 4.3-13** (prevention of mud and pollutants from entering streams and storm flows), and
- **MV 4.3-53** (dust control measures to protect vegetation communities and special-status plant and aquatic wildlife species).

Implementation of these mitigation measures would prevent direct impacts to the unarmored threespine stickleback. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Arroyo chub (*Gila orcutti*), The arroyo chub is listed as a California Species of Special Concern, is considered imperiled regionally and globally under the Natural Heritage Program methodology, and is considered sensitive by the U.S. Forest Service. It occurs in slow-moving or backwater sections of warm to cool (10ºC to 24ºC) streams with mud or sand substrates.[308] This species has been documented in the Santa Clara River and could occur in the portion of the river adjacent to the project site. In their collections within the Specific Plan area of the NRSP Project site, ENTRIX found that the arroyo chub was common to abundant.[309] ENTRIX describes the arroyo chub as the dominant species of the Santa Clara River within the project area.[310] Potential habitat for fish was not quantified because the fish are confined to the wetted channel of the Santa Clara River, the surface area of which is variable (i.e., may expand during the winter rainy season and become more confined during the dry summer season). Construction activities associated with the proposed Commerce Center Drive Bridge and bridge abutments could result in the loss of individual fish. Although the proposed bank stabilization features are set back beyond the existing riparian corridor at most of the project site and would not interface with the active stream channel, a significant impact could occur, depending on the number and extent of this species that may be disturbed or removed during construction of the bridge. Mitigation measures to reduce impacts to less than significant levels include the following:

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[308] ENTRIX, Inc., *Focused Special-Status Fish Species Habitat Assessment*.
[309] Ibid.
[310] Ibid.

- **SP 4.6-44** (soft bottoms for all flows greater than 2,000 cubic feet per second [cfs]),
- **SP 4.6-53** (surveys for special-status species),
- **SP 4.6-54** (consultation with USFWS),
- **SP 4.6-57** (removal of fish from areas of proposed bridge construction),
- **SP 4.6-58** (require compliance with water quality permits),
- **SP 4.6-59** (consultation with County and CDFG before surveys for special-status species).
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-2** (pre-construction surveys and coordination with Corps and CDFG for unarmored threespine stickback, arroyo chub, and Santa Ana sucker),
- **MV 4.3-8** (patrol for stranded fish and aquatic organisms),
- **MV 4.3-9** (development of a Stream Crossing and Diversion Plan),
- **MV 4.3-10** (installation of structures within the riverbed not to impair movement of aquatic life),
- **MV 4.3-11** (regulating stream diversion bypass channels and dewatering),
- **MV 4.3-12** (creation of habitat for special-status fish during construction),
- **MV 4.3-13** (prevention of mud and pollutants from entering streams and storm flows), and
- **MV 4.3-53** (dust control measures to protect vegetation communities and special-status plant and aquatic wildlife species).

Implementation of these mitigation measures would reduce direct impacts to the arroyo chub to less than significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Arroyo toad (*Anaxyrus (Bufo) californicus*~~)~~). The arroyo toad is listed as a California Species of Special Concern and is federally endangered. The species utilizes aquatic, riparian, and upland habitats to different degrees depending on the individual's stage of development and the season. No adult or subadult arroyo toads have been observed in the project area. However, arroyo toad tadpoles were observed in the Specific Plan area during surveys

conducted in 2000.[311] Specifically, during the surveys conducted by Aquatic Consulting Services, arroyo toad tadpoles were observed in the Santa Clara River upstream and downstream of the proposed Commerce Center Drive Bridge site and near the Valencia Water Treatment Plant. Arroyo toad was not observed breeding or otherwise utilizing habitats on or bordering the project site during more recent protocol surveys.[312] ~~In addition, on April 13, 2005, the USFWS issued a revised critical habitat designation for the arroyo toad.[313] In that Final Rule, effective May 13, 2005, the USFWS deleted the entire Newhall Ranch Specific Plan area from the designated critical habitat for the arroyo toad. Note, however, that USFWS is currently reassessing the 2005 Final Rule to determine whether the critical habitat designation should be adjusted. The USFWS has proposed changes to the 2005 Final Rule, published in the Federal Register on October 13, 2009~~ On February 9, 2011, the USFWS issued a final rule for revised critical habitat for the arroyo toad.[314] The revised critical habitat designation totals 98,366 acres in 21 habitat units, some of which are further divided into subunits. The revised critical habitat designation for arroyo toad includes Subunit 6b located in the Santa Clara River and Castaic Creek in the project vicinity. According to the USFWS, "[t]his subunit allows for natural population expansion and fluctuation of the Santa Clara River population by connecting arroyo toad habitat in Castaic Creek with San Francisquito Creek and the occupied reach of the Santa Clara River."[315] A portion of the Subunit 6b critical habitat intersects the Mission Village project site; the project site contains 262 acres of arroyo toad critical habitat.

Given that: (a) the site ~~provides suitable~~ supports federally designated critical habitat for the arroyo toad ~~that this~~; (b) the species has been recorded in low numbers upstream of the project site~~;~~; and ~~that~~ (c) tadpoles were documented in the river on and adjacent to the project site, construction-related activities that could adversely affect individual toads~~, which~~ would be a significant impact. In order to reduce short-term construction-related impacts to this species, the project applicant would implement a series of mitigation measures designed to limit construction activities within high-quality habitat areas and capture and relocate animals away from the work area prior to construction. Equipment would not be operated within areas of ponded or flowing water (unless otherwise approved by the Corps and CDFG), and water containing mud, silt, and other pollutants would not be allowed to enter flowing water. Further, any arroyo toads potentially present would be removed from the disturbance footprint by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the project applicant

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311 Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part II*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part III*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part IV*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part I*.

312 Compliance Biology, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, Newhall Ranch*; Bloom Biological, Inc., *Report on Arroyo Toad Surveys on Landmark Village, Newhall Land and Farming Company Property, Los Angeles County, California* (2007).

~~313 70 FR 19562.~~

314 76 FR 7246.

315 76 FR 7261.

would conduct biological monitoring during ground disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Applicable mitigation measures include the following:

- **SP 4.6-53** and **SP 4.6-59** (surveys for special-status species within the project area),
- **SP 4.6-55** (federal and state permits for wetland impacts), and
- **SP 4.6-58** (NPDES and water quality permits).
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-4** (surveys of riverbed area for arroyo toad),
- **MV 4.3-9** (development of a Stream Crossing and Diversion Plan),
- **MV 4.3-10** (installation of structures within the riverbed not to impair movement of aquatic life),
- **MV 4.3-11** (regulating stream diversion bypass channels and dewatering),
- **MV 4.3-12** (creation of habitat for special-status fish during construction),
- **MV 4.3-13** (prevention of mud and pollutants from entering streams and storm flows)**,** and
- **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities).

Implementation of these mitigation measures would reduce impacts to arroyo toad to a less than significant level. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

As to project impacts on arroyo toad habitat, the Mission Village project site supports approximately 623 acres of potential arroyo toad habitat, although no adults or subadults have been actually observed on the project site.[316] The proposed project would result in the permanent loss of approximately 262 acres (42%) and temporary disturbance of 65.5 acres (10.5%) of such habitat. Of the permanently lost habitat, 29 acres (11%) consist of designated critical

[316] Prior survey results for arroyo toad within the Newhall Ranch Specific Plan and vicinity articulate the reasons why arroyo toad populations have not been found within the reach of the Santa Clara River, which encompasses the Specific Plan site. Those reasons include, among others, tertiary-treated effluent releases from the existing water reclamation plants, located upstream of the Specific Plan site. Please refer to: (a) Impact Sciences, Inc. *Results of Focusued Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, Newhall Ranch, Valencia, California* (May 21, 2002); and (b) Compliance Biology, Inc. *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, River Village Project, Newhall Ranch, Valencia, California* (October 2004). Both reports are incorporated by reference and available for public review and inspection by contacting the County's Department of Regional Planning.

habitat for the arroyo toad. Of the habitat that will be temporarily disturbed, approximately 16 acres (6%) consist of critical habitat. Given that the arroyo toad is federally listed as endangered, project impacts to both suitable and critical habitat would be significant, absent mitigation. The County has determined that the project's impacts on arroyo toad habitat, including critical habitat, can be mitigated to a level that is less than significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant. Note also that approximately 218 acres (83%) of arroyo toad critical habitat on site would not be impacted and approximately 354 acres would be protected and managed in the River Corridor SMA/SEA 23.

As part of its duties under section 7 of the federal Endangered Species Act, the USFWS is currently analyzing the related Newhall Ranch RMDP/SCP project's impacts on the critical habitat for the arroyo toad. When the USFWS completes that analysis, it is expected to issue a Biological Opinion with respect to whether the Newhall Ranch RMDP/SCP project, which includes the Mission Village project site, would cause adverse modification of critical habitat or otherwise jeopardize the arroyo toad species. Based on prior evaluations conducted by USFWS, however, the County does not anticipate adverse findings with respect to the arroyo toad or its habitat within the broader Newhall Ranch RMDP/SCP project area.

Western spadefoot toad (*Spea hammondii*). The western spadefoot toad is listed as a California Species of Special Concern. The species prefers open areas with sandy or gravelly soils in a variety of habitats, including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, river floodplains, alluvial fans, playas, and alkali flats.[317] In total, there have been four separate documented occurrences of the western spadefoot toad in the Specific Plan area based on the focused surveys and incidental observations. Two occurrences of tadpoles are known from the Mission Village development area.[318] A western spadefoot toad was also observed within an isolated pool along the Santa Clara River upstream of the Commerce Center Bridge.[319] Western spadefoot toads were observed off-site in the adjacent Potrero Village development area within a rain pool in winter 2005; this location is believed to be extant.[320] As western spadefoot toads have been observed in various locations in the Specific Plan area, and because suitable conditions for the species are expected elsewhere in unsurveyed portions of the Specific Plan area, there is a high potential for this species to occur on the project site where seasonal pools develop. The acreage of potential habiat for this species was not quantified because spatial seasonal breeding pools tend to be small, highly scattered discrete locations. Depending on the number and extent of western spadefoot on the site that would be disturbed or removed, the loss of this species would be a potentially significant impact. Mitigation measures to reduce these impacts below significant levels include the following:

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317 Robert C. Stebbins, *Western Reptiles and Amphibians*, 3rd ed. (New York: Houghton Mifflin, 2003); D.C. Holland and R.H. Goodman, *A Guide to the Amphibians and Reptiles of MCB Camp Pendleton, San Diego County, California* (1998).

318 Compliance Biology, Inc., *Results of the Focused Western Spadefoot Toad Surveys on the Mission Village Project Site*.

319 Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part II.*

320 Dave Crawford, Compliance Biology, Inc., telephone call to Sherri Miller (Dudek), November 2007.

- **SP 4.6-53** and **SP 4.6-59** (surveys for special-status species within the project area),
- **SP 4.6-55** (federal and state permits for wetland impacts), and
- **SP 4.6 58** (NPDES and water quality permits).
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-9** (development of a Stream Crossing and Diversion Plan),
- **MV 4.3-10** (installation of structures within the riverbed not to impair movement of aquatic life),
- **MV 4.3-25** (pre-construction surveys for western spadefoot toad~~), and~~ and creation of off-site breeding habitat), and
- **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities).

Implementation of these mitigation measures would reduce impacts, including loss of breeding sites, to western spadefoot to a less than significant level. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Silvery legless lizard (*Anniella pulchra pulchra*). The silvery legless lizard is listed as a California Species of Special Concern. This species may be found in sparsely vegetated areas in a variety of habitats, including beach dunes, chaparral, California sagebrush scrub, oak woodlands, pine forests, pine–oak woodland, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.[321] This species has been observed on the project site within the leaf litter of coast live oak woodlands in Chiquito Canyon. Overall, 23 individual silvery legless lizards were captured and released.[322] Silvery legless lizard was also observed at two locations in Long Canyon in 2005.[323] Because suitable habitat occurs on site in the form of riparian and riverbank habitats within the River Corridor SMA/SEA 23, as well as scrub, chaparral, and oak woodland habitats outside of the SMA/SEA boundary, silvery legless lizard could occur throughout those portions of the site with these habitat types. Construction-related activities could result in impacts to individual lizards.

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321 D.C. Zeiner, W.F. Laudenslayer Jr., and K.E. Mayer. *California's Wildlife: Volume I. Amphibians and Reptiles* (Sacramento: California Department of Fish and Game, 1988); Stebbins, *Western Reptiles and Amphibians*; Holland and Goodman, *A Guide to the Amphibians and Reptiles of MCB Camp Pendleton*.

322 Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.

323 Chris Huntley, Aspen, personal communication with Sherri Miller, Dudek, October 2006.

In order to reduce impacts to this species, the project applicant would implement a series of mitigation measures designed to capture and relocate animals away from the work area prior to construction. The fossorial behavior of the silvery legless lizard would prevent the capture and relocation of all individuals occurring. Therefore, specific measures (e.g., seasonal timing and hand raking) are required to maximize capture rates. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the project applicant would conduct biological monitoring during ground disturbing activities in an effort to salvage silvery legless lizards that may be uncovered during construction activities. Implementation of proposed **Mitigation Measures MV 4.3-7** (surveys to capture and relocate special-status reptiles) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 752 acres (62%) and temporary disturbance of approximately 117 acres (10%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. Note, however, that approximately 339 acres (28%) of suitable habitat on site would not be impacted and approximately 6,073 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potentially the direct loss of individuals of this species, would be considered an unavoidable significant impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this Draft EIR. In addition to the project-specific mitigation measures described above, a total of 6,~~113~~073 acres of ~~potential~~suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Applicable mitigation measures include **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). As a result, this EIR's finding that impacts on the silvery legless lizard can be mitigated to a less than significant level is consistent with the findings set forth in the Newhall Ranch Specific Plan Program EIR. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Coastal western whiptail (*Aspidoscelis tigris* ~~*stehnegeri*~~ *stejnegeri*). The coastal western whiptail is designated as a California Special Animal. The coastal western whiptail is found in a variety of habitats, primarily in areas where plants are sparse and there are open areas for running. The species is also found in woodland and streamside growth and avoids dense grassland and thick shrub growth. While coastal western whiptails were not trapped or otherwise observed during pitfall trap surveys, the subspecies was identified as having the potential to occur in the project

area.[324] The coastal western whiptail is assumed to be present in the project area because (1) the species has been observed in the High Country SMA/SEA 20 and nearby locations,[325] (2) the project site provides suitable habitat, (3) the project area is within the range of the subspecies as described by Stebbins,[326] and (4) the entire project area was not surveyed by Impact Sciences[327] at a level of detail necessary to determine presence or absence of a particular reptile species,. Construction-related activities could result in impacts to individual whiptails.

In order to reduce impacts to this species, the project applicant would implement four mitigation measures designed to capture and relocate animals away from the work area prior to construction. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the subspecies. In addition, the project applicant would conduct biological monitoring during ground disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (surveys for special-status species within the project area). Additional applicable mitigation measures are **MV 4.3-7** (surveys to capture and relocate special-status reptiles) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce this impact during construction to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 747 acres (68%) and temporary disturbance of approximately 90 acres (8%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. Note, however, that approximately 257 acres (24%) of suitable habitat on site would not be impacted and approximately 5,692 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Although the Newhall Ranch Specific Plan Program EIR concluded the substantial loss of habitat, and potential impacts to individuals of this species would be considered an unavoidable significant impact, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as that recommended in this EIR. In addition to the project-specific mitigation measures described above, a total of ~~6,113~~ 5,692 acres of ~~potential~~ suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Applicable mitigation measures include **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset

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[324] Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.

[325] Compliance Biology, Inc., *Results of Focused the Western Spadefoot Toad Surveys on the Mission Village Project Site*; Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

[326] Stebbins, *Western Reptiles and Amphibians*.

[327] Impact Sciences, *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.

impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. As a result, this EIR's finding that impacts on the whiptail can be mitigated to a less than significant level is consistent with the findings set forth in the Newhall Ranch Specific Plan Program EIR. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss. Impacts to this species were not previously analyzed as an individual topic at the program level in the Newhall Ranch Specific Plan Program EIR.

Southwestern pond turtle (~~*Clemmys*~~ *Actinemys marmorata pallida*). The southwestern pond turtle is listed as a California Species of Special Concern. Western pond turtles use a variety of aquatic habitats, including lakes, natural ponds, rivers, oxbows, streams (perennial/ephemeral), marshes, vernal pools, freshwater and brackish estuaries, drainage ditches, reservoirs, mill ponds, ornamental park ponds, stock ponds, abandoned gravel pits, and sewage treatment plants.[328] This species has been observed during visual surveys in the portion of the Santa Clara River within the Newhall Ranch Specific Plan area.[329] As these visual surveys were not conducted for purposes of estimating turtle populations, they did not follow U.S. Geological Survey (USGS) protocols for determining habitat suitability[330] or for trapping individuals, [331] neither of which is required under CEQA. However, these surveys have effectively documented the consistent presence of the southwestern pond turtle in the Santa Clara River. There are four documented occurrences of the southwestern pond turtle in the main channel of the Santa Clara River adjacent to the project site upstream and at the mouth of Castaic Junction. The species could also occur within the riparian habitats on and immediately bordering the project site. The removal of riparian vegetation and construction activities associated with the proposed bridge and/or bank protection could result in impacts to individual pond turtles. These impacts may be significant, depending on the number and extent of this species that may be disturbed or removed. To address these impacts, the following mitigation measures would be implemented:

- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-5** (surveys of riverbed area for southwestern pond turtle),
- **MV 4.3-10** (installation of structures within the riverbed not to impair movement of aquatic life),

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328 James Buskirk, "The Western Pond Turtle, *Emys marmorata*," *Radiata* 11(3) (May 2002), 30; NatureServe, "An Online Encyclopedia of Life."

329 Compliance Biology, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, River Village Project*.

330 U.S. Geological Survey, *Western Pond Turtle (*Emys marmorata*) Visual Survey Protocol for the Southcoast ecoregion* (2006).

331 U.S. Geological Survey, *Western Pond Turtle (*Emys marmorata*) Trapping Survey Protocol for the Southcoast Ecoregion*, (2006).

- **MV 4.3-13** (prevention of mud and pollutants from entering streams and storm flows), and
- **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities).

These mitigation measures would reduce impacts to the southwestern pond turtle to a less than significant level. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 15 acres (6%) and temporary disturbance of approximately 39 acres (17%) of habitat for this species within the Mission Village project site. Approximately 180 acres (77%) of suitable habitat on site would not be impacted and approximately 806 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Because this species has exhibited substantial population declines in Southern California, the combined permanent and temporary impacts to suitable habitat could have a substantial adverse effect on the distribution of the southwestern pond turtle both on site and within its range in Southern California. The combined permanent loss and temporary disturbance of habitat would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant.

Coast horned lizard (*Phrynosoma coronatum*). The coast horned lizard is listed as a California Species of Special Concern. The species is found in a wide variety of vegetation types with the requisite loose sandy soils, including California sagebrush scrub, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest.[332] One coast horned lizard was captured during the 2006 pitfall trap surveys and five additional coast horned lizards were incidentally observed during the 2004 reptile surveys.[333] The coast horned lizard observed during the 2006 surveys was captured in the eastern portion of the Specific Plan area (in the vicinity of the Potrero Village development) at a location containing sandy soils and riparian and non-native grassland vegetation.[334] No location or habitat association information was provided for the coast horned lizards incidentally observed during the 2004 surveys. Coast horned lizard was also observed along the Santa Clara River floodplain, approximately 500 feet south of The Old Road Bridge in 2006.[335] Construction-related activities could result in impacts to individual horned lizards.

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[332] L.M. Klauber, "Studies of Reptiles Life in the Arid Southwest: Part I, Night Collecting on the Desert with Ecological Statistics; Part II, Speculations on Protective Coloration and Protective Reflectivity; Part III, Notes on Some Lizards of the Southwestern United States," *Bulletin of the Zoological Society of San Diego* 14 (1939); Robert C. Stebbins, *Amphibians and Reptiles of Western North America* (Boston: McGraw Hill, 1954).

[333] Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.

[334] Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.

[335] Chris Huntley, Aspen, personal communication with Sherri Miller, Dudek, October 2006.

In order to reduce these impacts, the project applicant would implement a series of mitigation measures designed to capture and relocate animals away from the work area prior to construction. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the project applicant would conduct biological monitoring during ground-disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (surveys for special-status species within the project area). Additional applicable mitigation measures are **MV 4.3-7** (surveys to capture and relocate special-status reptiles) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce this impact to a level that is less than significant.

Implementation of the proposed project would also result in the permanent loss of approximately 747 acres (68%) and temporary disturbance of approximately 90 acres (8%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. Note, however, that approximately 257 acres (24%) of suitable habitat on site would not be impacted and approximately 5,692 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered an unavoidable significant impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this EIR. In addition to the mitigation measures described above, a total of ~~6,113~~ 5,692 acres of ~~potential~~ suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Therefore, this EIR's finding that impacts to the coast horned lizard can be mitigated to a less than significant level is consistent with the finding set forth in the Newhall Ranch Specific Plan Program EIR. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Two-striped garter snake (*Thamnophis hammondii*)**.** The two-striped garter snake is a California Species of Special Concern. Two-striped garter snakes are found in a variety of perennial and intermittent freshwater streams

within oak woodlands, shrublands, and sparse coniferous forests from sea level to 2,400 meters (7,874 feet) AMSL.[336] This species was observed in the reach of the Santa Clara River within and adjacent to the Specific Plan area.[337] The removal of riparian vegetation and construction activities associated with the proposed bridge and/or bank protection could result in impacts to individual two-striped garter snakes. This may be a significant impact, depending on the number and extent of this species that may be disturbed or removed. In order to reduce these impacts, the project applicant would implement a series of mitigation measures designed to limit construction activities within high quality habitat areas and capture and relocate animals away from the work area prior to construction. Mitigation measures to reduce impacts below significant levels include **SP 4.6-53** (surveys for special-status species) and **SP 4.6-58** (require compliance with water quality permits). In addition, equipment would not be operated within areas of ponded or flowing water (unless otherwise approved by the Corps and CDFG) and water containing mud, silt, and other pollutants would not be allowed to enter flowing water. Further, any two-stripe garter snakes potentially present would be removed from the disturbance footprint by qualified biologists and placed in a pre approved area capable of supporting the species. The project applicant would also conduct biological monitoring during ground disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Other applicable mitigation measures recommended in this EIR include the following:

- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-6** (surveys of riverbed area for two-striped garter snake and south coast garter snake),
- **MV 4.3-9** (development of a Stream Crossing and Diversion Plan),
- **MV 4.3-10** (installation of structures within the riverbed not to impair movement of aquatic life),
- **MV 4.3-11** (regulating stream diversion bypass channels and dewatering),
- **MV 4.3-12** (creation of habitat for special-status fish during construction),
- **MV 4.3-13** (prevention of mud and pollutants from entering streams and storm flows), and
- **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities).

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336 Stebbins, *Western Reptiles and Amphibians*; Zeiner, Laudenslayer Jr., and Mayer. *California's Wildlife: Volume I. Amphibians and Reptiles.*

337 Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part IV*; Compliance Biology, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, River Village Project*; ENTRIX, Inc., *Focused Special-Status Aquatic Species Assessment.*

Implementation of these mitigation measures would reduce impacts to the two-striped garter snake to a less than significant level. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 15 acres (6%) and temporary disturbance of approximately 39 acres (17%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 180 acres (77%) of suitable habitat on site would not be impacted and approximately 806 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Cooper's hawk (*Accipiter cooperii*)**.** The Cooper's hawk is on the CDFG Watch List. Cooper's hawks are found in areas with dense stands of live oak, riparian, or other forest communities near water.[338] The Cooper's hawk frequents landscapes where wooded areas occur in patches and groves and often uses patchy woodlands and edges with snags for perching.[339] The Cooper's hawk has been regularly observed within riparian and oak woodland habitats over multiple years during bird surveys conducted from 1988 through 2006 along the Santa Clara River.[340]

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338 D.C. Zeiner et al., *California's Wildlife: Volume II. Birds* (Sacramento: California Department of Fish and Game, 1990).

339 Frank L. Beebe, *Field Studies of the Falconiformes of British Columbia: Vultures, Hawks, Falcons, Eagles* (Victoria, British Columbia: the British Columbia Provincial Museum, 1974).

340 Guthrie, *Status of the Least Bell's Vireo along the Santa Clara River and Its Tributaries near Valencia, California, Spring 1988*; Guthrie, *Status of the Least Bell's Vireo along the Santa Clara River and Its Tributaries near Valencia, California, Spring 1989*; Guthrie, *Birds along the Santa Clara River and Its Tributaries near Valencia, California, with Special Reference to Least Bell's Vireo*; Guthrie, *Surveys for Least Bell's Vireo*; Guthrie, *Surveys along Castaic Creek for least Bell's Vireo*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1992); Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1993); Guthrie, *Bird Surveys along the Santa Clara River, 1993*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1994); Guthrie, *Bird Surveys along the Santa Clara River, 1994*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1995*; Guthrie, *Bird Surveys along the Santa Clara River, 1995*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1996*; Guthrie, *Bird Surveys along the Santa Clara River, 1996*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1997*; Guthrie, *Bird Surveys along the Santa Clara River, 1997*; Guthrie, *Bird Surveys along the Santa Clara River, 1998*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1998*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 1999*; Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*; Guthrie, *Bird Surveys along the Santa Clara River, 1999*; Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development*; Guthrie, *Bird Surveys along the Santa Clara River, 2000*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2000*; Guthrie, *Bird Surveys of Castaic Junction;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001*; Guthrie, *Bird Surveys along the Santa Clara River, 2001*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2002*; Guthrie, *Bird Surveys along the Santa Clara River, 2002*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003*; Daniel Guthrie, *Bird Surveys along the Santa Clara River, 2003*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2004*; Guthrie, *Bird Surveys along the Santa Clara River, 2004;* D.A. Guthrie, *Bird Observations during 2004 at Castaic Junction, an Area on the North Side of the Santa Clara River at the Junction of State Route 126 and Interstate 5, near Valencia, California* (2004); Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence* (2005); Guthrie, *Bird Surveys along the Santa Clara River, 2005*; Guthrie, *Bird Surveys along the Santa Clara River, 2006*; Guthrie, *Bird Surveys of The Old Road Phase III Environmental Project Study Area*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries*

This species is known to be a year-round resident within the project area.[341] If active hawk nests are present, the proposed removal of riparian vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to reduce impacts to this species, the project applicant would implement mitigation measures to reduce impacts to Cooper's hawk before and during construction. Previously incorporated mitigation measures include **SP 4.6-53** (updated site specific surveys) and **SP 4.6-59** (consultation with County and CDFG at important benchmarks). This impact would also be reduced through the implementation of **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to nesting Cooper's hawks to a level that is adverse but not significant. The finding that impacts to Cooper's hawk can be reduced to below a level of significance with mitigation is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 649 acres (68%) for this species within the Mission Village project site, including 11 acres of nesting and foraging habitat and 638 acres of foraging only habitat. The proposed project would result in temporary disturbance of approximately 85 acres (9%), including 28 acres of nesting and foraging habitat and 57 acres of foraging only habitat. Absent mitigation, this would be considered a significant impact. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 224 acres (23%) of suitable habitat on site would not be impacted, including 109 acres of nesting and foraging habitat and 115 acres of foraging only habitat. Approximately 3,623 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1,620 acres of nesting and foraging habitat and 2,003 acres of foraging only habitat.

Sharp-shinned hawk (*Accipiter striatus*). The sharp-shinned hawk is on the CDFG Watch List. Sharp-shinned hawks prefer riparian forest and woodlands.[342] They are found in a variety of ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats.[343] During migration, sharp-shinned hawks also may forage in

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(2006); Labinger, Greaves, and Haupt. *Preliminary Results of AvianSurveys*; Z. J. Labinger, J. Greaves, and D. Haupt. *Results of 1995 Avian Surveys following the January 17, 1994, ARCO/Four Corners Oil Spill on the Santa Clara River, California* (1996); Labinger, Greaves, and Haupt, *1996 Avian Survey Results*; Labinger, Greaves, and Haupt, *Results of 1997 Avian Surveys and Least Bell's Vireo Monitoring*; Labinger and Greaves, *Results of 1998 Avian Surveys and Least Bell's Vireo Monitoring*.

341 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

342 NatureServe, " An Online Encyclopedia of Life."

343 S.M. Joy et al., "Feeding Ecology of Sharp-Shinned Hawks Nesting in Deciduous and Coniferous Forests in Colorado," *Condor* 96(2)(March 1984), 455–467; Zeiner et al., *California's Wildlife: Volume II*; NatureServe, " An Online Encyclopedia of Life."

agricultural areas, scrub, and chaparral habitats.[344] Sharp-shinned hawks have been observed several times during the course of the avian surveys conducted along the Santa Clara River corridor. Guthrie observed two adults on two separate occasions in 1995 and again in 1997 and 1999.[345] Another sharp-shinned hawk was observed in March 2007 by Bloom Biological.[346] Because sharp-shinned hawks are highly mobile and are a rare winter visitor on the site, the proposed project would not result in mortality of individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site, construction and grading activities associated with the proposed project would not result in impacts to nesting birds of this species. Implementation of the proposed project would not directly impact this species. ~~The Newhall Ranch Specific Plan Program EIR concludes~~

Implementation of the proposed project would result in the permanent loss of approximately 1,149 acres (63%) and temporary disturbance of approximately 336 acres (18%) of habitat for this species within the Mission Village project site. Approximately 355 acres (19%) of suitable habitat on site would not be impacted and approximately 6,603 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The Newhall Ranch Specific Plan Program EIR concluded that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to sharp-shinned hawk would be considered a significant unavoidable impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this EIR. For example, a total of 6,~~113~~603 acres of ~~potential~~suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Tricolored blackbird (*Agelaius tricolor*). The tricolored blackbird is a California Species of Special Concern and a Bird of Conservation Concern with regard to its nesting colony status. These birds prefer to breed in freshwater marshes with dense growths of emergent vegetation dominated by cattails (*Typha* spp.) or bulrushes (*Schoenoplectus* spp.), but have also established colonies in willows (*Salix* spp.), blackberries (*Rubus* spp.), thistles

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344 D.C. Zeiner et al., *California's Wildlife: Volume II. Birds* (1990).

345 Guthrie, *Bird Surveys along the Santa Clara River, 1995*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries, near Valencia, California, 1997*; Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*.

346 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

(*Cirsium* and *Centaurea* spp.), and nettles (*Urtica* spp.). This species has been observed on the project site during focused bird surveys. Labinger et al. observed a small nesting colony within the project site;[347] however, the specific location is not known and was not mapped. Migrants have also been observed within the Specific Plan area along the Santa Clara River[348] and within Potrero Canyon in 1994.[349] Tricolored blackbird has been observed office along Castaic Creek,[350] and at Castaic Junction.[351] No breeding colonies have been observed since 1994, despite annual surveys through 2007 as described above. However, should this species nest on the site prior to development, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. In order to avoid impacts to this species, the project applicant would implement mitigation measures to reduce the loss of or harm to tricolored blackbird before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

The Newhall Ranch Specific Plan Program EIR ~~concludes~~concluded that given the potential to successfully relocate breeding colonies at new locations is relatively low, impacts to breeding colonies (if present) of tricolored blackbird would remain significant. However, given that no breeding colonies have been documented on or adjacent to the project site during annual bird surveys, and given the requirements of proposed **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation

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347 Labinger, Greaves, and Haupt, *Preliminary Results of Avian Surveys*.

348 Guthrie, *Bird Surveys along the Santa Clara River, 1996;* Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*; County of Los Angeles, *Newhall Ranch Specific Plan* (2003).

349 County of Los Angeles, *Newhall Ranch Specific Plan*.

350 Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1994); Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1995*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1996*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 1999*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2006).

351 Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1994); Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2000;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001*; Guthrie *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2006); Dudek and Associates, Inc., *Biological Resources Technical Report for the Entrada Site.*

clearing and grading activities), impacts to nesting tricolored blackbird (if present) can be reduced to below a level of significance at the project level.

Although the proposed project would not affect potential wetland nesting habitat for this species, it would result in the permanent loss of approximately 450 acres (63%) of upland foraging habitat within the Mission Village project site and temporary disturbance of approximately 232 acres (32%) of upland foraging habitat habitat for this species. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 33 acres (5%) of suitable upland foraging habitat on site would not be impacted and approximately 1,195 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1.4 acres of suitable nesting habitat and 1,194 acres of upland foraging habitat.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). The Southern California rufous-crowned sparrow is on the CDFG Watch List. This species is not federally listed as threatened or endangered within any part of its range.[352] The rufous-crowned sparrow occupies moderate to steep hillsides that are rocky, grassy, or covered by coastal sage scrub or chaparral. The Southern California rufous-crowned sparrow has been observed over multiple years as a fairly common resident in the coastal scrub within the Specific Plan area during annual bird surveys. It has been observed foraging upland and near the Santa Clara River[353] and was observed nesting in 2007.[354] Construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to reduce impacts to this species, the project applicant would implement mitigation measures to reduce impacts to Southern California rufous-crowned sparrow before and during construction. Previously incorporated mitigation measures include **SP 4.6-53** (updated site specific surveys) and **SP 4.6-59** (consultation with County and CDFG at important benchmarks). This impact would also be reduced through the implementation of **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to nesting Southern California rufus-crowned sparrows to a level that is adverse but not significant.

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352 Paul W. Collins, "Rufous-Crowned Sparrow," The Birds of North America Online, ed. A. Poole, 472 (1999), http://bna.birds.cornell.edu/bna/species/472.

353 Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area*; Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001*; Guthrie, *Bird Surveys along the Santa Clara River, 2002*; Guthrie, *Bird Observations for Spring 2004 in the Proposed Homestead and Chiquito Areas*; Guthrie, *Bird Observations for Spring 2004 in the Proposed Potrero Valley, Long Canyon, Oak Valley and Onion Fields Development Areas.*

354 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

Implementation of the proposed project would also result in the permanent loss of approximately 616 acres (79%) and temporary disturbance of approximately 50 acres (7%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 113 acres (15%) of suitable habitat on site would not be impacted and approximately 1,986 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR ~~concludes~~ concluded that due to the substantial loss of habitat resulting from buildout of the Specific Plan (loss of 1,820 acres of coastal sage scrub), impacts to Southern California rufous-crowned sparrow would be considered an unavoidably significant impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this EIR. In addition to the mitigation measures described above, a total of ~~6,113~~1,986 acres of ~~potential~~suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Golden eagle (*Aquila chrysaetos*). The golden eagle is on the CDFG Watch List and is a California Fully Protected species. The golden eagle requires rolling foothills, mountain terrain, and wide arid plateaus deeply cut by streams and canyons, open mountain slopes and cliffs, and rock outcrops.[355] On site, this species has been occasionally observed during the annual bird surveys conducted from 1988 through 2007 along the Santa Clara River. Observation of a single golden eagle soaring over the Santa Clara River was recorded on April 22, 1993.[356] In addition, two golden eagles were observed in the coast live oak woodlands west of Grapevine Mesa on the RMDP project site [357] No known nests occur on site or in the immediate vicinity, and the project site is not considered suitable for nesting eagles. However, suitable foraging habitat occurs on the project site. Because this species is not expected to nest or otherwise substantially utilize the project site, no significant impacts to golden eagle individuals are expected to occur as a result of the Mission Village development. Despite no significant impacts, applicable

[355] Zeineret al., *California's Wildlife: Volume II.*

[356] Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries (*1993).

[357] Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development.*

mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Any impacts also would be reduced through the implementation of Mitigation Measures **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would avoid impacts to nesting golden eagle if nests were located in the future.

Implementation of the proposed project would result in the permanent loss of approximately 945 acres (68%) and temporary disturbance of approximately 288 acres (21%) of potential foraging habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. Note, however, that approximately 164 acres (12%) of potential foraging habitat on site would not be impacted and approximately 4,085 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that due to the substantial loss of habitat, and potential impacts to individuals resulting from buildout of the Specific Plan, impacts to golden eagle would be considered significant and unavoidable; however, because the species is not expected to nest or otherwise substantially utilize the Mission Village project site, as stated above, no significant impacts to golden eagle individuals are expected to occur as a result of the Mission Village development. ~~In addition, since~~ However, significant impact to potential foraging habitat would occur. Since the Newhall Ranch Specific Plan Program EIR was certified, new mitigation measures have been added to this EIR. Those measures, referenced above and discussed in **Wildlife Habitat Loss**, ensure that any impacts to golden eagle are minimized to less than significant levels.

Short-eared owl (*Asio flammeus*). The short-eared owl is a federally listed Bird of Conservation Concern as well as a CDFG-designated California Species of Special Concern. The short-eared owl is a resident of mixed and tall grass habitats. The species is usually found in open areas with few trees, such as annual and perennial grasslands, prairies, tundra, dunes, meadows, agricultural lands, and saline and fresh emergent wetlands.[358] Short-eared owls have never been documented in the project area. However, an individual was observed just outside the project boundary in the Salt Creek area immediately west of the Ventura/Los Angeles County line in the fall of 2005.[359] Short-eared owl could potentially forage on site in grasslands during the winter months. Because short-eared owls are highly mobile and are a rare winter visitor on the site, the proposed project would not result in impacts to individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site,

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358 Zeiner et al., *California's Wildlife: Volume II*; J.K. Terres, *The Audubon Society Encyclopedia of North American Birds* (New York: Alfred A. Knopf, 1980).

359 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

construction and grading activities associated with the proposed project would not result in impacts to young or eggs. Implementation of the proposed project would not directly impact this species. ~~Impacts~~

Implementation of the proposed project would result in the permanent loss of approximately 227 acres (72%) and temporary disturbance of approximately 63 acres (20%) of potential winter foraging habitat for this species within the Mission Village project site. Approximately 25 acres (8%) of potential winter foraging habitat on site would not be impacted and approximately 1,498 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although a large percentage of potential winter foraging habitat for this species would be impacted, this species is a highly mobile and rare winter visitor in the project area. The 1,498 acres of protected and managed habitat would provide subtantial suitable habitat for the small number of short-eared owls that visit the area. Because the species occurs rarely in the project vicinity, the permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Note that impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR, as the species was not identified on the Specific Plan site until more recent surveys. See **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Long-eared owl (*Asio otus*). The long-eared owl has been designated by CDFG as a California Species of Special Concern. The long-eared owl primarily uses riparian habitat for roosting and nesting, but can also use live oak thickets and other dense stands of trees.[360] It appears to be more associated with forest edge habitat than with open habitat or forest habitat.[361] Dudek observed a long-eared owl during wildlife transect surveys within the Specific Plan area in live oak woodland south of Via Canyon during fall 2005.[362] The observed individual was not nesting. The species was not observed during 2007 surveys despite several nights spent camping in oak woodlands surrounding the Landmark Village project area.[363] Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on site that may be disturbed or removed, the loss of active nests could be a significant impact. The project applicant would implement mitigation measures to reduce impacts to long-eared owl before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important

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360 Zeiner et al., *California's Wildlife: Volume II*.

361 D.W. Holt, "The Long-Eared Owl (*Asio otus*) and Forest Management: A Review of the Literature," *Journal of Raptor Research* 31:175–186 (1997).

362 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

363 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

benchmarks). This impact would also be reduced through the implementation of **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 236 acres (52%) within the Mission Village project site, including 9 acres of nesting habitat and 227 acres of foraging only habitat for long-eared owl. The proposed project would result in temporary disturbance of approximately 89 acres (20%) of habitat for this species, including 28 acres of nesting habitat and 61 acres of foraging only habitat. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 130 acres (29%) of suitable habitat on site would not be impacted, including 108 acres of nesting habitat and 22 acres of foraging only habitat. Approximately 2,494 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1,179 acres of nesting habitat and 1,315 acres of foraging only habitat.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Western burrowing owl (*Athene cunicularia*). The western burrowing owl is a Bird of Conservation Concern and a California Species of Special Concern. In California, western burrowing owls are yearlong residents of flat, open, dry grassland and desert habitats at lower elevations.[364] They can inhabit annual and perennial grasslands and scrublands, including open coastal scrub, characterized by low-growing vegetation.[365] On site, the western burrowing owl has been observed anecdotally at two locations (i.e., the species has not been observed during focused avian surveys). A single western burrowing owl individual was observed twice at the same location within a four-week period (November and December 2006) in the northern portion of Middle Canyon, east of Airport Mesa, in ruderal habitat. Another individual was observed in December 2006 in Middle Canyon, and again on April 11, 2007.[366] Construction-related activities could result in the loss or abandonment of active burrows. Depending on the number and extent of active burrows on the site that may be disturbed or removed, the loss of active burrows could be a significant impact. The project applicant would implement mitigation measures to reduce impacts to western

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364 C. Bates, "Burrowing Owl (*Athene cunicularia*)," *California Partners in Flight Desert Bird Conservation Plan*, http://www.prbo.org/calpif/htmldocs/species/desert/burrowing_owl.htm. 2006.

365 D.C. Zeiner et al., *California's Wildlife: Volume II. Birds* (1990).

366 Sherri Miller, Dudek, verbal communicaiton with Callie Ford, Dudek, November 2007.

burrowing owl before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-20** (pre-construction surveys for burrowing owl). Implementation of these mitigation measures would reduce impacts to nesting and wintering western burrowing owls to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 450 acres (63%) and temporary disturbance of approximately 230 acres (32%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 31 acres (4%) of suitable habitat on site would not be impacted and approximately 1,009 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that due to the substantial loss of habitat, and potential impacts to individuals resulting from buildout of the Specific Plan, impacts to western burrowing owl would be considered a significant unavoidable impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this EIR. In addition to the mitigation measures described above, a total of ~~6,113~~1,009 acres of ~~potential~~suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Oak titmouse (*Baeolophus inornatus*). The oak titmouse is a California Special Animal. This species is not federally listed as threatened or endangered within any part of its range. Oak titmice inhabit a variety of habitat types, but are primarily associated with oaks, especially those in warm, dry habitats.[367] The oak titmouse is common and abundant in the project area, nesting on site in cottonwood riparian and coast live oak communities. It

[367] Carla Cicero, "Oak Titmouse," The Birds of North America Online, ed. A. Poole, 485a (2000), http://bna.birds.cornell.edu/bna/species/485a.

has been observed over multiple years along the Santa Clara River in the Specific Plan area. The oak titmouse was observed most recently by Guthrie in 2006[368] and by Bloom Biological in 2007.[369] Bloom Biological reported seeing between two and 14 individuals of this species daily. Most observations of this species were not mapped, but individuals have been sighted along the Santa Clara River and its tributaries. Construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the project applicant would implement mitigation measures to reduce impacts to oak titmouse before and during construction. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (require surveys of special-status species within the project site). This impact would also be reduced through the implementation of **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to nesting oak titmouse to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 11 acres (7%) and temporary disturbance of approximately 28 acres (19%) of habitat for this species within the Mission Village project site. Approximately 108 acres (74%) of suitable habitat on site would not be impacted and approximately 1,573 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The oak titmouse is still common and abundant in the project vicinity, a relatively small amount and percentage of habitat would be impacted. Further, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Ferruginous hawk (*Buteo regalis*). The ferruginous hawk is on the CDFG Watch List as a Bird of Conservation Concern The ferruginous hawk forages in open grasslands, agriculture, sagebrush flats, desert scrub, surrounding valleys in low foothills, and fringes of pinyon–juniper habitats.[370] On site, has been observed in the eastern alfalfa

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368 Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2006).

369 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

370 C. Polite and J. Pratt, Life History Accounts and Range Maps—California Wildlife Habitat Relationships System, http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx, 1999.

fields, Wolcott agricultural fields, Potrero Canyon, and other agriculture fields along the Santa Clara River in winter 2008.[371] The project area is outside of the species' breeding range and it is not expected to nest on site. Because ferruginous hawks are highly mobile and are a winter visitor on the site, the proposed project would not result in mortality of individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site, construction and grading activities associated with the proposed project would not result in impacts to young or eggs of this species. Implementation of the proposed project would not directly impact this species.

Implementation of the proposed project would result in the permanent loss of approximately 1,075 acres (71%) and temporary disturbance of approximately 288 acres (19%) of potential winter foraging habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 145 acres (10%) of potential winter foraging habitat on site would not be impacted and approximately 3,012 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to ferruginous hawk would be considered a significant unavoidable impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this EIR. For example, a total of ~~6,113~~3,012 acres of ~~potential~~suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Costa's hummingbird (*Calypte costae*). The Costa's hummingbird is a California Special Animal. It is not federally listed as threatened or endangered within any part of its range. Primary habitats are desert wash, edges of desert riparian and valley foothill riparian areas, coastal scrub, desert scrub, desert succulent scrub, lower-elevation

371 Bloom Biological, Inc., *Interim Report of Winter Surveys.*

chaparral, and palm oasis.[372] The species has been observed over multiple years during bird surveys conducted from 1988 through 2006 along the Santa Clara River within riparian scrub and woodland habitat; however, there are no mapped locations for observations. This species likely occurs as a migrant and could nest in suitable habitats on the borrow and grading sites. If nesting were to occur within or adjacent to the project site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. Implementation of proposed **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) would reduce impacts to nesting hummingbirds to below a level of significance. Impacts to this species were not previously analyzed in the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 679 acres (70%) and temporary disturbance of approximately 88 acres (9%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 198 acres (21%) of suitable habitat on site would not be impacted and approximately 3,871 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Lawrence's goldfinch (*Carduelis lawrencei*)**.** The Lawrence's goldfinch is as a California Special Animal. Additionally, this species is recognized under the NatureServe system of Natural Heritage Programs as vulnerable at the state level throughout its range and is listed as a Bird of Conservation Concern by the USFWS. Lawrence's goldfinches are found in cropland and hedgerows, shrubland and chaparral, conifer, hardwood and mixed woodlands.[373] On site, this species was observed in upland areas and riparian thickets in 2007[374] and has been observed over multiple years during the bird surveys conducted from 1988 through 2006 along the Santa Clara River.[375] Two to 70 were recorded daily throughout March, mostly in migrant flocks.[376] If present, construction-

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372 Zeiner et al., *California's Wildlife: Volume II*.

373 NatureServe, " An Online Encyclopedia of Life."

374 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

375 Compliance Biology, Inc., *Results of Focused Coastal California Gnatcatcher Surveys; Castaic Mesa Project*; Guthrie, *Status of the Least Bell's Vireo along the Santa Clara River and Its Tributaries near Valencia, California, Spring 1988;* Guthrie, *Birds along the Santa Clara River and Its Tributaries near Valencia, California, with Special Reference to Least Bell's Vireo*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1992); Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries*(1993); Guthrie, *Bird Surveys along the Santa Clara River, 1993;* Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1994); Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1996*; Guthrie, *Bird Surveys along the Santa Clara River, 1996;* Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1997*; Guthrie, *Bird Surveys along the Santa Clara River, 1997;* Guthrie, *Bird Surveys along the Santa Clara River, 1998*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1998*; Guthrie, *Bird Surveys along a Portion of the Santa Clara*

related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the project applicant would implement mitigation measures to reduce impacts to Lawrence's goldfinch before and during construction. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (require surveys of special-status species within the project site). This impact would also be reduced through the implementation of Mitigation Measures **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to nesting Lawrence's goldfinches to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 677 acres (68%) within the Mission Village project site, including 10 acres of nesting and foraging habitat and 667 acres of foraging only habitat. The proposed project would also result in the temporary disturbance of approximately 88 acres (9%) of habitat for this species, including 28 acres of foraging and nesting habitat and 60 acres of foraging only habitat. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 224 acres (23%) of suitable habitat on site would not be impacted, including 107 acres of nesting and foraging habitat and 117 acres of foraging habitat only. Approximately 4,663 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1,179 acres of nesting and foraging habitat and 3,484 acres of foraging only habitat.

River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 1999; Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*; Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area*; Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development*; Guthrie, *Bird Surveys along the Santa Clara River, 2000*; Guthrie, *Bird Surveys in the Proposed Magic Mountain Entertainment Project Area*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2000*; Guthrie, *Bird Surveys of Castaic Junction*; Guthrie, *Bird Surveys along the Santa Clara River; Los Angeles/Ventura County Line*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001*; Guthrie, *Bird Surveys along the Santa Clara River, 2001;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2002*; Guthrie, *Bird Surveys along the Santa Clara River, 2002;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003*; Guthrie, *Bird Surveys along the Santa Clara River, 2003;* Guthrie, *Bird Observations in the Stevenson Ranch*; Guthrie, *Bird Observations for Spring 2004 in the Proposed Potrero Valley, Long Canyon, Oak Valley and Onion Fields Development Areas*; Guthrie, *Bird Observations for Spring 2004 in the Proposed Mesa East and West Development;* Guthrie, *Bird Observations in the Proposed Magic Mountain Entertainment Project Area*; Guthrie, *Bird Surveys along the Santa Clara River, 2004;*Guthrie, *Bird Observations during 2004*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries*(2006); Labinger, Greaves, and Haupt, *Results of 1995 Avian Surveys*; Labiner, Greaves, and Haupt, *1996 Avian Survey Results*; Labiner, Greaves, and Haupt, *Results of 1997 Avian Surveys and Least Bell's Vireo Monitoring*; Labinger and Greaves, *Results of 1998 Avian Surveys and Least Bell's Vireo Monitoring*.

[376] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Turkey vulture (*Cathartes aura*). Although the turkey vulture has no federal or state status, it is being discussed, for the purposes of this report, as a CDFG trust resource. Turkey vultures use a variety of habitats while foraging for both wild and domestic carrion. They prefer open stages of most habitats. In the western United States, they tend to occur regularly in areas of hilly pastured rangeland, nonintensive agriculture, and areas with rock outcrops suitable for nesting, although they are not generally found in high-elevation mountain areas.[377] On site, this species has been observed over multiple years during bird surveys conducted from 1988 through 2007 along the Santa Clara River,[378] and off site in the Castaic Junction area by Guthrie[379] and Haglund and Baskin.[380] However, no mapped

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[377] David A. Kirk and Michael J. Mossman. "Turkey Vulture," The Birds of North America Online, ed. A. Poole, 339 (1998), http://bna.birds.cornell.edu/bna/species/339; Zeiner et al., *California's Wildlife: Volume II*.

[378] Guthrie, *Bird Surveys along the Santa Clara River, 1993;* Guthrie, *Bird Surveys along the Santa Clara River, 1994;* Guthrie, *Bird Surveys along the Santa Clara River, 1996;* Guthrie, *Bird Surveys along the Santa Clara River, 1997*; Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*; Guthrie, *Bird Surveys along the Santa Clara River, 1999;* Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area*; Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2000;* Guthrie, *Bird Surveys of Castaic Junction;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001*; Guthrie, *Bird Surveys along the Santa Clara River, 2001;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2002;* Guthrie, *Bird Surveys along the Santa Clara River, 2003;* Guthrie, *Bird Observations for Spring 2004 in the Proposed Homestead and Chiquito Areas;* Guthrie, *Bird Observations for Spring 2004 in the Proposed Potrero Valley, Long Canyon, Oak Valley and Onion Fields Development Areas;* Guthrie, *Bird Observations for Spring 2004 in the Proposed Mesa East and West Development;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2004;* Guthrie, *Bird Surveys along the Santa Clara River, 2004;* Guthrie, *Bird Surveys along the Santa Clara River, 2005;* Guthrie, *Bird Surveys along the Santa Clara River, 2006*; Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area;* Lemons, "Focused California Gnatcatcher Surveys for Mission Village";~~,~~ Labinger, Greaves, and Haupt, *Preliminary Results of Avian Surveys*; Labiner, Greaves, and Haupt, *1996 Avian Survey Results*; Labiner, Greaves, and Haupt, *Results of 1997 Avian Surveys and Least Bell's Vireo Monitoring*; and Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

[379] Guthrie, *Status of the Least Bell's Vireo along the Santa Clara River and Its Tributaries near Valencia, California, Spring 1988;* Guthrie, *Birds along the Santa Clara River and Its Tributaries near Valencia, California, with Special Reference to Least Bell's Vireo;* Guthrie, *Surveys for Least Bell's Vireo*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1993); Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1994); Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1995*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1996*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1997*; Guthrie, *Bird Surveys along the Santa Clara River, 1998;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 1999*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2002*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003*; Guthrie, *Bird Observations during 2004*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2005); Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2006).

[380] Haglund and Baskin, *Fish and Wildlife Survey and Habitat Assessment*.

occurrences of this species were recorded. If present, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the project applicant would implement mitigation measures to reduce impacts to turkey vulture before and during construction. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (require surveys of special-status species within the project site). This impact would also be reduced through the implementation of Mitigation Measures **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 1,094 acres (70%) within the Mission Village project site, of which 1,088 acres are foraging only habitat. The proposed project would also result in temporary disturbance of approximately 293 acres (19%) of habitat for this species, of which 289 acres are foraging only habitat. Approximately 174 acres (11%) of suitable habitat on site would not be impacted and approximately 4,283 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 848 acres of the potential nesting/roosting habitat, 413 acres of habitat suitable for nesting/roosting and foraging, and 3,022 acres of foraging only habitat. Although a relatively large amount of foraging habitat would be impacted, this species is still common and widespread in it range and has no state or federal status. A large amount (3,022 acres) of foraging habtiat would be protected and managed, and this species is expected to continue using the project region for foraging in the future. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Northern harrier (*Circus cyaneus*)**.** The northern harrier is a California Species of Special Concern. Northern harriers use a wide variety of open habitats in California, including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, estuaries, flood plains, and marshes.[381] The species can also forage over coastal sage scrub or other open scrub communities.[382] The northern harrier has been observed in or near the project area infrequently during the 20 years when surveys were conducted.[383] More recently, Dudek observed a northern

[381] R. Bruce Macwhirter and Keith L. Bildstein. "Northern Harrier," The Birds of North America Online, ed. A. Poole, 210 (1996), http://bna.birds.cornell.edu/bna/species/210.

[382] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

[383] Guthrie, *Bird Surveys in the Proposed Riverwood Project Area;* Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area*.

harrier in the Mission Village area,[384] and in March 2007, Bloom Biological made three separate observations of a single male at different locations in or near the project area along the Santa Clara River.[385] While no active nests were observed during surveys, suitable nesting habitat occurs in association within the agricultural and grassland habitats on site. Should this species nest on the project site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of this species' active nests on site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the project applicant would implement mitigation measures to reduce impacts to the northern harrier before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** (requiring updated surveys of special-status species within the project area) and **SP 4.6-59** (consultation with Los Angeles County and CDFG at important benchmarks). This impact would also be reduced by the implementation of Mitigation Measures **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce this impact to a less than significant level.

Implementation of the proposed project would also result in the permanent loss of approximately 873 acres (70%) within the Mission Village project site, including 227 acres of nesting and foraging habitat and 646 acres of foraging habitat. The proposed project would also result in the temporary disturbance of approximately 133 acres (11%) of habitat for this species, including 63 acres of nesting and foraging habitat and 70 acres of foraging only habitat. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 236 acres (19%) of suitable habitat on site would not be impacted, including 25 acres of nesting and foraging habitat and 211 acres of foraging only habitat. Approximately 4,695 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1,501 acres of nesting and foraging habitat and 3,194 acres of foraging only habitat.

The Newhall Ranch Specific Plan Program EIR ~~concludes~~concluded that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to northern harrier would be considered a significant unavoidable impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this EIR. In addition to the mitigation measures described above, a total of ~~6,113~~4,695 acres of ~~potential~~suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **MV 4.3-24** (preservation of 616.3 acres of coastal

384 Lemons, "Focused California Gnatcatcher Surveys for Mission Village."

385 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). The western yellow-billed cuckoo is a candidate for listing under the federal ESA, is a CESA-listed endangered species, and is a Bird of Conservation Concern with regard to its nesting status. The eastern yellow-billed cuckoo prefers a diverse variety of habitats, including open woodland with clearings and low, dense, scrubby vegetation as well as abandoned farmland, overgrown fruit orchards, successional shrubland, dense thickets along streams and marshes, shade trees, and gardens.[386] The habitat preference of the western yellow-billed cuckoo, in contrast, is much more restricted in both species composition and size of the patch of preferred habitat. The habitat of the western yellow-billed cuckoo primarily consists of large blocks of riparian habitat, particularly cottonwood–willow riparian woodlands.[387] The western yellow-billed cuckoo has occasionally been documented within the Santa Clara River corridor during focused bird surveys in the RMDP area, although the locations of these observations were not mapped. Single individuals (thought to be migrants) were observed along the Santa Clara River east of the project site in 1997 and 1998[388] and west of the Ventura county line in 1997.[389] However, none has been observed in the project area since then. In addition, suitable habitat does occur in association with the riparian habitats on site, and western yellow-billed cuckoo could nest in those areas. Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of active nests on site that may be disturbed or removed, the loss of active nests could be a significant impact. The project applicant would implement mitigation measures to reduce impacts to western yellow-billed cuckoo before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) ~~and~~ **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading

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386 Janice M. Hughes, "Yellow-Billed Cuckoo," The Birds of North America Online, ed. A. Poole, 418 (1999), http://bna.birds.cornell.edu/bna/species/418.

387 66 FR 38611–38626.

388 Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1997*; Labinger, Greaves, and Haupt, *Results of 1997 Avian Surveys and Least Bell's Vireo Monitoring*; Labinger and Greaves, *Results of 1998 Avian Surveys and Least Bell's Vireo Monitoring*.

389 Guthrie, *Bird Surveys along the Santa Clara River, 1997*.

activities), and **MV 4.3-83** (replace or enhance nesting and foraging habitat for least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and coastal California gnatcatcher). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 5 acres (4%) and temporary disturbance of approximately 25 acres (22%) of habitat for this species within the Mission Village project site. Approximately 81 acres (73%) of suitable habitat on site would not be impacted and approximately 331 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Due to large habitat losses in California, the yellow-billed cuckoo is listed as endangered under CESA. As a result, even small amounts of habitat loss are subtantially adverse. Therefore, the project's impacts on habitat suitable for the yellow-billed cuckoo would be significant absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Hermit warbler (*Dendroica occidentalis*). The hermit warbler is considered a CDFG trust resource for the purposes of this analysis. Hermit warblers are found in conifer and mixed forests, shrubland, chaparral, and conifer and mixed woodlands.[390] On site, this species was observed over multiple years during bird surveys conducted from 1988 through 2006 along the Santa Clara River within woodland habitat;[391] however, there are no mapped occurrences of these observations. All observed individuals were thought to be migrants. If nests occur on site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of proposed **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to hermit warbler to a less than significant level. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

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390 NatureServe, " An Online Encyclopedia of Life."

391 Guthrie, *Bird Surveys along the Santa Clara River, 1994;* Guthrie, *Bird Surveys along the Santa Clara River, 1996*; Guthrie, *Bird Surveys along the Santa Clara River, 2002*.

Implementation of the proposed project would also result in the permanent loss of approximately 6 acres (17%) and temporary disturbance of approximately 4 acres (9%) of habitat for this species within the Mission Village project site. Approximately 28 acres (74%) of suitable habitat on site would not be impacted and approximately 1,289 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The hermit warbler is common in the project vicinity and does not have state or federal status. A relatively small amount and percentage of habitat would be impacted. Further, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Yellow warbler (*Dendroica petechia brewsteri*)**.** The yellow warbler has no federal or state sensitivity status but is designated as a California Species of Special Concern. In general, the yellow warbler breeds most commonly in wet, deciduous thickets, especially those dominated by willows, and in disturbed and early successional habitats.[392] A single migrant was observed in the Entrada planning area in 2000.[393] This species has been observed within the riparian habitats on the project site and is presumed to nest on site. If the species is present, the proposed removal of riparian vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the project applicant would implement mitigation measures to reduce impacts to the yellow warbler before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** (special-status species presence/absence survey requirements) and **SP 4.6-59** (consultation with the CDFG prior to surveys to establish appropriate survey methodology). This impact would also be reduced through implementation of proposed **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to nesting yellow warblers to a level that is adverse but not significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 5 acres (4%) and temporary disturbance of approximately 25 acres (22%) of habitat for this species within the Mission Village project site. Approximately 81 acres (73%) of suitable habitat on site would not be impacted and approximately 331 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although the project would affect a relatively small amount of yellow warbler habitat, this impact, absent mitigation, would be

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392 Lowther et al., "Yellow Warbler (*Dendroica petechia*)," in *The Birds of North America*, ed. A. Poole and F. Gill, 454 (Washington, D.C.: Cornell Laboratory of Ornithology and the Academy of Natural Sciences, 1999).

393 Guthrie, *Bird Surveys in the Proposed Magic Mountain Entertainment Project Area*.

significant because: (1) it would contribute to the large loss of riparian habitat in Southern California, (2) this species is declining in California, and (3) this species is likely to nest on site, See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant.

White-tailed kite (*Elanus leucurus*)**.** The white-tailed kite is a California Fully Protected species. The white-tailed kite is commonly associated with agriculture areas.[394] It also inhabits low-elevation grasslands, savannah-like habitats, open sage scrub, meadows, wetlands, and oak woodlands, particularly in areas with a dense population of voles.[395] On the project site, white-tailed kite has been observed primarily along the Santa Clara River, where it nests in associated riparian woodlands and forages in adjacent grasslands, open sage scrub, and agricultural fields.[396] If nesting kites are present during construction, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Due to the kite's status as a California Fully Protected species, the loss of active nests would be a significant impact. In order to avoid such impacts, the project applicant would implement mitigation measures to reduce impacts to the white-tailed kite before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** (special-status species presence/absence survey requirements) and **SP 4.6-59** (consultation with the CDFG prior to surveys to establish appropriate survey methodology). This impact would also be reduced through implementation of proposed **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would avoid impacts to nesting white-tailed kites.

Implementation of the proposed project would also result in the permanent loss of approximately 697 acres (66%) within the Mission Village project site, including 11 acres of nesting habitat and 686 acres of foraging habitat. The proposed project would also result in the temporary disturbance of approximately 134 acres (13%) of habitat for this species, including 28 acres of nesting habitat and 106 acres of foraging habitat. Approximately 233 acres (22%) of suitable habitat on site would not be impacted, including 109 acres of nesting habitat and 124 acres of foraging habitat. Approximately 4,421 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area, including 1,546 acres of nesting habitat and 2,875 acres of foraging habitat.

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394 J. Grinnell and A.H. Miller. The Distribution of the Birds of California." *Pacific Coast Avifauna* 27 (1944). Reprinted in Lee Vining, California: Artemisia Press. April 1986.

395 L.B. Waian and R.C. Stendell. "The White-Tailed Kite in California with Observations of the Santa Barbara Population." *California Fish and Game* 56 (1970), 188–198.

396 Guthrie, *White-Tailed Kite Populations*; Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor;* Bloom Biological, Inc., *Report on White-Tailed Kites*.

The Newhall Ranch Specific Plan Program EIR ~~concludes~~concluded that due to the substantial loss of habitat resulting from buildout of the Specific Plan, impacts to white-tailed kite would be considered a significant unavoidable impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as this EIR. A total of ~~6,113~~4,421 acres of potential nesting and foraging habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. In addition to the mitigation measures set forth in the Newhall Ranch Specific Plan Program EIR, this EIR includes the following mitigation measures which, when implemented, will reduce impacts to flycatcher: **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Willow flycatcher (*Empidonax traillii*)/**Southwestern willow flycatcher** (*Empidonax trailii extimus*). The full species of willow flycatcher, including its subspecies—the southwestern willow flycatcher, little willow flycatcher (*E. t. brewsteri*), and *E. t. adastus* (no common name other than willow flycatcher subspecies, was listed as state endangered by CDFG in 1991. The subspecies southwestern willow flycatcher was listed as federally endangered species by the USFWS in 1995. The willow flycatcher has been detected almost every year within the River corridor in the project area during the focused bird surveys. However, because all observations were early in the breeding season with none occurring after June 22, the start of the nesting season, all individuals are assumed to have been migrants and were probably either the little willow flycatcher or *E. t. adastus*. No southwestern willow flycatchers have been observed to nest on site. Along the Santa Clara River in the NRSP, willow flycatchers were observed by Guthrie,[397] Labinger *et al.*,[398] and Bloom Biological, Inc.,[399] along Castaic Creek in VCC by Guthrie;[400] and

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397 Guthrie, *Bird Surveys along the Santa Clara River, 1993*; Guthrie, *Bird Surveys along the Santa Clara River, 1997*; Guthrie, *Bird Surveys along the Santa Clara River, 1998*; Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*; Guthrie, *Bird Surveys along the Santa Clara River, 2000*; Guthrie, *Bird Surveys along the Santa Clara River, 2001*; Guthrie, *Bird Surveys along the Santa Clara River, 2002*; Guthrie, *Bird Surveys along the Santa Clara River, 2004*; Guthrie, *Bird Surveys along the Santa Clara River, 2005*.

398 Labinger, Greaves, and Haupt, *Preliminary Results of Avian Surveys*.

399 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

400 Guthrie, *Status of the Least Bell's Vireo along the Santa Clara River and Its Tributaries near Valencia, California, Spring 1988*; Guthrie, *Birds along the Santa Clara River and Its Tributaries near Valencia, California, with Special Reference to Least Bell's Vireo*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2000*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2002;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2004*; Guthrie, *Bird Surveys*

adjacent to Entrada in the Castaic Junction area by Guthrie[401] and Dudek.[402] No southwestern willow flycatchers exhibiting nesting, paired, or territorial behavior have been observed in the project site or vicinity. The most recent observation of the southwestern willow flycatcher displaying territorial behavior is downstream approximately 18 miles, near Saticoy.[403] The CNDDB[404] lists one occurrence of nesting southwestern willow flycatchers in the Santa Clara River corridor upstream of the project area, along Soledad Canyon Road near Agua Dulce, in 1997. A single willow flycatcher was observed east of the project site foraging along the Santa Clara River on May 31, 2004;[405] however, given the timing of this observation and the lack of any subsequent evidence of nesting, the observed willow flycatcher cannot be positively identified as belonging to the southwestern category of willow flycatchers.[406] Similarly, several adult willow flycatchers were observed during recent surveys, but no nesting was confirmed.[407] However, as suitable nesting habitat does occur in association with the riparian habitats on site, southwestern willow flycatcher could nest in those areas. Should this species occur on site, construction-related activities could result in the loss or abandonment of active nests. The loss of active nests of this species would be a significant impact. The project applicant would implement mitigation measures to reduce or avoid impacts to southwestern willow flycatcher before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through implementation of **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) ~~and~~ **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), and **MV 4.3-83** (replace or enhance nesting and foraging habitat for least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and coastal California gnatcatcher). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

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along a Portion of the Santa Clara River and Its Tributaries (2005).

401 Guthrie, *Birds along the Santa Clara River and Its Tributaries near Valencia, California, with Special Reference to Least Bell's Vireo*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1997;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 1999*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2000*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2002*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2006).

402 Dudek and Associates, Inc., *Biological Resources Technical Report for the Entrada Site*.

403 Labinger and Greaves, *Results of 1998 Avian Surveys and Least Bell's Vireo Monitoring*.

404 CDFG, "RareFind."

405 Guthrie, *Bird Surveys along the Santa Clara River, 2004*.

406 Guthrie, *Bird Surveys along the Santa Clara River, 2004*.

407 Bloom, *Report on Arroyo Toad Surveys*.

Implementation of the proposed project would also result in the permanent loss of approximately 5 acres (4%) and temporary disturbance of approximately 25 acres (22%) of habitat for the willow flycatcher within the Mission Village project site. Approximately 81 acres (73%) of suitable habitat on site would not be impacted and approximately 331 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Due in part to large habitat losses in California, this species is listed as endangered under both FESA and CESA. For this reason, even small amounts of habitat loss are subtantially adverse. Therefore, the project's impacts on suitable habitat for this species would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

California horned lark (*Eremophila alpestris*). The California horned lark is on the CDFG Watch List. California horned larks are common and abundant residents in a variety of open habitats, usually where trees and shrubs are absent. California horned larks have been observed regularly foraging in plowed and graded fields near the Santa Clara River within the NRSP Project area Guthrie,[408] Labinger *et al.*,[409] Labinger and Greaves,[410] and Bloom Biological, Inc.,[411] in the VCC planning area;[412] and off site in the Castaic Junction area.[413] More recent surveys have observed several individuals in the agricultural fields along the Santa Clara River and a flock of approximately 20 individuals was observed adjacent to the project site foraging in a dirt agricultural field within the Landmark

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408 Guthrie, *Bird Surveys along the Santa Clara River, 1994*; Guthrie, *Bird Surveys along the Santa Clara River, 1995*; Guthrie, *Bird Surveys along the Santa Clara River, 1996;* Guthrie, *Bird Surveys along the Santa Clara River, 1998*; Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*; Guthrie, *Bird Surveys along the Santa Clara River, 1999*; Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area*; Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development;* Guthrie, *Bird Surveys along the Santa Clara River, 2000*; Guthrie, *Bird Surveys along the Santa Clara River, 2005*.

409 Labinger, Greaves, and Haupt, *Preliminary Results of Avian Surveys*; Labinger, Greaves, and Haupt, *Results of 1995 Avian Surveys*; Labinger, Greaves, and Haupt, *Results of 1997 Avian Surveys and Least Bell's Vireo Monitoring*.

410 Labinger and Greaves, *Results of 1998 Avian Surveys and Least Bell's Vireo Monitoring*.

411 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

412 Guthrie, *Birds along the Santa Clara River and Its Tributaries near Valencia, California, with Special Reference to Least Bell's Vireo*; Guthrie, *Surveys along Castaic Creek for least Bell's Vireo*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California* (1992); Guthrie, *Bird Surveys along the Santa Clara River, 1996*; Guthrie, *Bird Surveys along the Santa Clara River, 1997*; Guthrie, *Bird Surveys along the Santa Clara River, 2000*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2002*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003*; Guthrie, *Bird Observations in the Commerce Center Project Site*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2005); Guthrie, *Bird Surveys along the Santa Clara River, 2005*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2006); Dudek and Associates, Inc., *Biological Resources Technical Report for the Valencia Commerce Center*.

413 Guthrie, *Surveys along Castaic Creek for least Bell's Vireo*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1993); Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1994); Guthrie, *Bird Surveys along the Santa Clara River, 1994*; Guthrie, *Bird Surveys along the Santa Clara River, 1995*; Guthrie, *Bird Surveys of Castaic Junction*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003;* Guthrie, *Bird Observations during 2004 at Castaic Junction*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2005).

Village impact area.[414] Should this species nest on site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of active nests on site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid such impacts, the project applicant would implement mitigation measures to reduce impacts to the California horned lark before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** (special-status species presence/absence survey requirements) and **SP 4.6-59** (consultation with the CDFG prior to surveys to establish appropriate survey methodology). This impact would also be reduced through the implementation of **Mitigation Measure MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR, as it was not identified on site until later surveys.

Implementation of the proposed project would also result in the permanent loss of approximately 450 acres (63%) and temporary disturbance of approximately 230 acres (32%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 31 acres (4%) of suitable habitat on site would not be impacted and approximately 1,009 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Merlin (*Falco columbarius*). The merlin is on the CDFG Watch List. The merlin uses a wide variety of semi-open to open habitats during breeding and wintering.[415] Individuals frequent coastlines, grasslands, savannahs, open woodlands, lakes, wetlands, edges, and communities in early successional stages while foraging. In 2007, Bloom Biological made four observations of wintering or migrating merlins between March 4 and March 23.[416] One male and one female were documented hunting over agriculture fields bordering riparian habitat near Indian Dunes, which is located in the Specific Plan area. Merlins were not observed during bird surveys in any other year between 1988 and 2007. Merlins are highly mobile and visit the site only during the winter. For these reasons, the proposed project would not result in mortality of individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site, construction and grading activities associated with the proposed project would not result in impacts to young birds or eggs. Implementation of the proposed project

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414 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

415 K. Garrett and J. Dunn. *The Birds of Southern California: Status and Distribution* (Los Angeles Audubon Society, 1981); Sodhi et al., "Merlin," The Birds of North America Online, ed. A. Poole, 044 (February 2005), http://bna.birds.cornell.edu/bna/species/044.

416 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

would not directly impact this species. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR, as it was not identified on site until later surveys.

Implementation of the proposed project would also result in the permanent loss of approximately 482 acres (48%) and temporary disturbance of approximately 275 acres (28%) of habitat for this species within the Mission Village project site. Approximately 238 acres (24%) of suitable habitat on site would not be impacted and approximately 3,115 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species does not nest in or regularly use the project vicinity (individuals were only observed in 2007), is still widespread, forages in a variety of habitats. Further, substantial habitat would be protected and managed in the area. The merlin would be expected to still occasionally use the area for foraging. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Prairie falcon (*Falco mexicanus*). North America's only endemic falcon, the prairie falcon is a Bird of Conservation Concern and is on the CDFG Watch List. Additionally, USFWS identified the prairie falcon as a Bird of Conservation Concern.[417] Prairie falcons inhabit open habitats in North America, including arid plains and steppe habitats. In the western states they prefer chaparral, desert grasslands, and creosote bush habitats. Surveys conducted by Guthrie detected two individual prairie falcons foraging during various surveys; one prairie falcon was detected on April 7, 2000, in the Potrero Canyon and Long Canyon area, and the other on July 2, 2001, along Castaic Creek between the confluence with the Santa Clara River and I-5.[418] Dudek biologists detected a prairie falcon within the Salt Creek watershed in late November 2005 and again in late August 2007 over Salt Creek within the High Country SMA/SEA 20.[419] Prairie falcons are highly mobile and visit the site only during the winter. For these reasons, the proposed project would not result in mortality of individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site, construction and grading activities associated with the proposed project would not result in impacts to young birds or eggs. Implementation of the proposed project would not directly impact this species. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR, as it was not identified on site until later surveys.

Implementation of the proposed project would also result in the permanent loss of approximately 452 acres (63%) and temporary disturbance of approximately 230 acres (32%) of habitat for this species within the Mission Village

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417 USFWS, *Birds of Conservation Concern 2002* (Arlington, Virginia: Division of Migratory Bird Management, 2002).

418 Guthrie, *Bird Surveys in the Proposed Magic Mountain Entertainment Project Area*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001*.

419 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*; J. Trow, personal observation of prairie falcon by J. Trow (Dudek) over Salt Creek within the High Country SMA, August 2007.

project site. Approximately 32 acres (5%) of suitable habitat on site would not be impacted and approximately 1,423 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species does not nest in project vicinity, is still widespread, forages in a variety of habitats. Further, substantial habitat would be protected and managed in the area. The prairie falcon would be expected to still occasionally use the area for foraging. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

American peregrine falcon (*Falco peregrinus anatum*). A subspecies of the peregrine falcon, the American peregrine falcon is listed as endangered under the California Endangered Species Act (CESA) and is also a California Fully Protected species. On October 11, 2007, the California Fish and Game Commission designated the American peregrine falcon as a candidate for delisting under CESA.[420] Peregrine falcons in general use a large variety of open habitats for foraging, including tundra, marshes, seacoasts, savannahs, grasslands, meadows, open woodlands, and agricultural areas. One American peregrine falcon was observed hunting along the Santa Clara River Corridor near the Grapevine Mesa area within the Specific Plan area by Guthrie in July 2000.[421] No other occurrences of this species have been documented on site during annual bird surveys between 1988 and 2007. American peregrine falcons are highly mobile and visit the site only during the winter. For these reasons, the proposed project would not result in mortality of individuals occupying this habitat during construction and/or grading activities. Furthermore, because the species does not nest on site, construction and grading activities associated with the proposed project would not result in impacts to young or eggs. Implementation of the proposed project would not directly impact this species. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR, as it was not identified on site until later surveys.

Implementation of the proposed project would result in the permanent loss of approximately 230 acres (55%) and temporary disturbance of approximately 85 acres (21%) of habitat for this species within the Mission Village project site. Approximately 101 acres (24%) of suitable habitat on site would not be impacted and approximately 1,218 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species does not nest in the project vicinity, may occur throughout the non-desert areas of California during the non-breeding season, forages in a variety of habitats. Further, substantial habitat would be protected and managed in the area. The peregrine falcon would be expected to still occasionally use the area for foraging. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

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420 California Regulatory Notice Register, Notice of Findings Regarding the Removal of the American Peregrine Falcon from the Endangered Species List, 44-Z (November 2, 2007) 1856.

421 Guthrie, *Bird Surveys along the Santa Clara River, 2000*.

California condor (*Gymnogyps californianus*). The California condor is federally and state listed as endangered and is also a California Fully Protected species. California condors require vast expanses of open savannah, grasslands, and foothill chaparral, with cliffs, large trees, and snags for roosting and nesting.[422] Until April 2008, California condors had not been known to nest or land within the project area in the last 25 years.[423] In April 2008, a California condor was observed feeding on a dead calf in a Potrero side canyon by Bloom Biological, Inc. wildlife biologist Chris Niemela.[424] A condor was also observed in January 2009 in the Potrero Canyon area,[425] and there have been other documented landings in the project area between April and July 2008.[426] Additional 2009 flight data provided to CDFG by the USFWS indicate that the condor frequently flies over the project area when moving between the Sespe Wilderness area to the northwest and the San Gabriel Mountains to the southeast of the project area, and that the species appears to be increasing its use of the Santa Clarita Valley area. Observations of California condors within the Newhall Ranch Specific Plan area have been associated with areas where cattle grazing currently occurs and dead calves have provided feeding opportunities. Because grazing does not occur within the proposed project site, there is a lack of carcasses. However, with increasing use of the Santa Clarita Valley area, the condor is expected to continue to forage opportunistically in portions of the Specific Plan, VCC, and Entrada planning areas for dead cattle and other large mammal carcasses~~. Implementation of the proposed project would not directly impact this species.~~ Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR, as it was not identified on site until later surveys. The proposed project may cause significant impacts to California condor. However, the project applicant would implement a series of mitigation measures designed to avoid or minimize such impacts to a level that is adverse but not significant. These include the following:

- Mitigation Measures **SP-4.6 29** through **SP-4.6-32** (recreational usage and access restrictions within the High Country SMA);
- Mitigation Measures **MV 4.3-24** (conservation of 616.3 acres of coastal scrub), **MV 4.3-81** (dedication of the Salt Creek area to the public), and **MV 4.3-82** (restoration/enhancement of coastal scrub in the High County SMA, Salt Creek area, and River Corridor SMA);
- Mitigation Measure **MV 4.3-91** (restrictions on installation of towers/poles in the High Country SMA and Salt Creek area); and

422 Zeineret al., *California's Wildlife: Volume II*.

423 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*; Bloom Biological, Inc., *Interim Report of Winter Surveys*.

424 M. Carpenter, Newhall Ranch, personal communication reporting that a California condor was observed feeding on a dead calf in a Potrero side canyon by wildlife biologist Chris Niemela in a Potrero side canyon, 2008.

425 C. Niemela, memo from C. Niemela (Bloom Biological) to Jesse Grantham (USFWS) regarding observations of California condor in Potrero Canyon in January 2009, March 11, 2009.

426 R.P. Root. "Acknowledgement of Request for Formal Consultation on the Proposed Newhall Ranch Specific Plan, Santa Clarita, Los Angeles County, California." Letter from R.P. Root (USFWS) to A.O. Allen (Corps), November 12, 2008.

- Mitigation Measure MV-92 (installing anti-perching devices and debris control guidelines for towers/poles in the High Country SMA and Salt Creek area).

Implementation of the proposed project would also result in the permanent loss of potential condor foraging areas, most of which consists of former cattle grazing lots. However, cattle have not grazed on site in many years and there is no evidence that condors have landed on the project site since 2002 when condor GPS data was first collected. The nearest landing site is Potrero Canyon, where condors have fed on cattle carcasses in the past. For this reason, there is not a quantifiable loss of foraging habitat on the project site. The California condor has not been documented to forage on site. Therefore, the proposed project would not have a substantial adverse effect on its foraging behavior. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species, and no significant impact would result.

Yellow-breasted chat (*Icteria virens*)**.** The yellow-breasted chat is a California Species of Special Concern. This species is not federally listed as threatened or endangered, but has been listed as threatened, endangered, or of special concern in some states and provinces on the periphery of its range (*e.g.*, Connecticut, New Jersey, New York, Ontario, and British Columbia).[427] In Southern California, the yellow-breasted chat is primarily found in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. On site, this species has been observed nesting in riparian thickets in 2007[428] and has also been observed over multiple years during bird surveys conducted from 1988 through 2006.[429] The proposed

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427 K.P. Eckerle and C.F. Thompson. "Yellow-Breasted Chat (*Icteria virens*)." In *The Birds of North America*, ed. A. Poole and F. Gill, 575 (Philadelphia: The Birds of North America, Inc., 2001).

428 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

429 Guthrie, *Status of the Least Bell's Vireo along the Santa Clara River and Its Tributaries near Valencia, California, Spring 1988*; Guthrie, *Status of the Least Bell's Vireo along the Santa Clara River and Its Tributaries near Valencia, California, Spring 1989*; Guthrie, *Birds along the Santa Clara River and Its Tributaries near Valencia, California, with Special Reference to Least Bell's Vireo*; Guthrie, *Surveys for Least Bell's Vireo*; Guthrie, *Surveys along Castaic Creek for least Bell's Vireo*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1992); Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1993); Guthrie, *Bird Surveys along the Santa Clara River, 1993*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1994); Guthrie, *Bird Surveys along the Santa Clara River, 1994*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1995*; Guthrie, *Bird Surveys along the Santa Clara River, 1995*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1996*; Guthrie, *Bird Surveys along the Santa Clara River, 1996*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries, near Valencia, California 1997*; Guthrie, *Bird Surveys along the Santa Clara River, 1997*; Guthrie, *Bird Surveys along the Santa Clara River, 1998*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1998*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 1999*; Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*; Guthrie, *Bird Surveys along the Santa Clara River, 1999*; Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development*; Guthrie, *Bird Surveys along the Santa Clara River, 2000*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2000*; Guthrie, *Bird Surveys of Castaic Junction;* Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001*; Guthrie, *Bird Surveys along the Santa Clara River, 2001*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2002*; Guthrie, *Bird Surveys along the*

removal of riparian vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of bird nests on the site that may be disturbed or removed, the loss of active nests would be a significant impact. In order to avoid impacts to this species, the project applicant would implement mitigation measures to reduce the impacts to yellow-breasted chat before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** (special-status species presence/absence survey requirements) and **SP 4.6-59** (consultation with the CDFG prior to surveys to establish appropriate survey methodology). This impact would also be reduced through the implementation of Mitigation Measures **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to nesting yellow-breasted chats to a level that is adverse but not significant. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR, as it was not identified on site until later surveys.

Implementation of the proposed project would also result in the permanent loss of approximately 5 acres (4%) and temporary disturbance of approximately 25 acres (22%) of habitat for this species within the Mission Village project site. Approximately 81 acres (73%) of suitable habitat on site would not be impacted and approximately 331 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The yellow-breated chat is still common in the project vicinity, and the project would affect a relatively small amount and percentage of habitat. Moreover, a substantial amount of habitat would be protected and managed. For these reasons, project impacts would have a less than significant impact on the species.

Loggerhead shrike (*Lanius ludovicianus*). The loggerhead shrike is a Bird of Conservation Concern and a California Species of Special Concern. The species occurs most frequently in riparian areas along the woodland edge, grasslands with sufficient perching and butchering sites, scrublands, and open-canopied woodlands, although they can be quite common in agricultural and grazing areas and can sometimes be found in mowed roadsides, cemeteries, and golf courses. The loggerhead shrike is a breeding resident on site.[430] It has been observed to be

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Santa Clara River, 2002; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003*; Guthrie, *Bird Surveys along the Santa Clara River, 2003*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2004*; Guthrie, *Bird Surveys along the Santa Clara River, 2004*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2005); Guthrie, *Bird Surveys along the Santa Clara River, 2005*; Guthrie, *Bird Surveys along the Santa Clara River, 2006*; Labinger, Greaves, and Haupt, *Preliminary Results of Avian Surveys*; Labinger, Greaves, and Haupt, *Results of 1997 Avian Surveys and Least Bell's Vireo Monitoring*; Labinger and Greaves, *Results of 1998 Avian Surveys and Least Bell's Vireo Monitoring*.

[430] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

fairly common within California sagebrush scrub and grasslands in the Specific Plan area[431] and has been observed within the VCC planning area;[432] however, no mapped locations were recorded**.** Should this species occur on site, construction-related activities could result in the loss or abandonment of active nests. Depending on the number and extent of active nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid this impact to the loggerhead shrike, the project applicant would implement mitigation measures to reduce the impacts to loggerhead shrike before and during construction. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), Mitigation Measures **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would result in the avoidance of impacts and, therefore, a significant impact would not occur. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 919 acres (70%) and temporary disturbance of approximately 140 acres (11%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 264 acres (20%) of suitable habitat on site would not be impacted and approximately 6,115 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Black-crowned night-heron (*Nycticorax nycticorax*). The black-crowned night heron is a California Special Animal. This species is not federally listed as threatened or endangered within any part of its range. Its habitat requirements are varied, including all types of wetland areas, including fresh, brackish, and salt water ecosystems and even man-made ditches, canals, reservoirs, and wet agricultural fields.[433] On site, this species was observed early in the year and is thought to be a wintering or migratory species within the project site. In the most recent survey, several adults and juveniles were observed along the Santa Clara River after dusk and before dawn.[434]

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431 Guthrie, *Bird Surveys along the Santa Clara River, 1993*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1996;* Guthrie, *Bird Observations for Spring 2000 in the Proposed Potrero and Long Canyon Development Area*; Guthrie, *Bird Observations for Spring 2000 in the Proposed Mesa Development*; Guthrie, *Bird Surveys along the Santa Clara River, 2002*; Guthrie, *Bird Observations for Spring 2004 in the Proposed Homestead and Chiquito Areas;* Guthrie, *Bird Observations for Spring 2004 in the Proposed Mesa East and West Development*; Guthrie, *Bird Surveys along the Santa Clara River, 2005*; Labinger, Greaves, and Haupt, *Preliminary Results of Avian Surveys*; Lemons, "Focused California Gnatcatcher Surveys for Mission Village"; Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

432 Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries, near Valencia, California, 1995*; Guthrie, *Bird Observations in the Commerce Center Project Site.*

433 County of Riverside, "Birds," http://www.rctlma.org/mshcp/volume2/birds.html. 2008.

434 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

Observations of the species were mapped along the Santa Clara River in the RMDP/SCP project area south of Landmark Village and near the Ventura County line.[435] No roosts or rookeries (nesting colonies) have been detected during the surveys within or adjacent to the project site during any of the surveys that have been conducted over the years. Should nesting occur adjacent to the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid this impact to the black-crowned night-heron, the project applicant would implement mitigation measures to reduce impacts to the black-crowned night-heron before and during construction. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would result in the avoidance of impacts and, therefore, a significant impact would not occur. This is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 6 acres (5%) and temporary disturbance of approximately 26 acres (23%) of habitat for this species within the Mission Village project site. Approximately 81 acres (72%) of suitable habitat on site would not be impacted and approximately 381 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The black-crowned night-heron is only a winter vistor or migrant in the project vicinity (no roosts or rookeries have been observed), a relatively small amount and percentage of habitat would be impacted. Further, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Nuttall's woodpecker (*Picoides nuttallii*). The Nuttall's woodpecker is a California Special Animal. This species is not federally listed as threatened or endangered within any part of its range. The Nuttall's woodpecker is primarily found in oak woodlands, to a lesser extent in riparian woodlands, and rarely in conifer forests. Nuttall's woodpecker has been described as a species characteristic of, if not confined to, oak woodlands in California.[436] It has been observed nearly every year along the Santa Clara River since surveys began in 1988. Nuttall's woodpeckers are common residents in cottonwood and willow riparian habitat along Santa Clara River, Castaic Creek and other tributaries, and in coast live oak woodlands in adjoining canyons. Bloom Biological recorded three to 14 daily within the RMDP/SCP project area in 2007.[437] Should nesting occur within or adjacent to the project site,

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435 Ibid.

436 Peter E. Lowther, "Nuttall's Woodpecker," The Birds of North America Online, ed. A. Poole, 555 (2000), http://bna.birds.cornell.edu/bna/species/555.

437 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would result in the avoidance of impacts and, therefore, a significant impact would not occur.

Implementation of the proposed project would also result in the permanent loss of approximately 12 acres (8%) and temporary disturbance of approximately 30 acres (20%) of habitat for this species within the Mission Village project site. Approximately 109 acres (73%) of suitable habitat on site would not be impacted and approximately 1,640 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Nuttall's woodpecker is still common and abundant in the project vicinity, and the project would affect a relatively small amount and percentage of woodpecker habitat. In addition, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Summer tanager (*Piranga rubra*). The summer tanager is not state or federally endangered, but is a California Species of Special Concern. Western populations of summer tanagers occupy riparian woodlands dominated by willows and cottonwoods (*Populus* spp.) at lower elevations;[438] and at higher elevations they utilize mesquite (*Prosopis* spp.) and salt cedar (*Tamarix* spp.) habitats.[439] No individuals have been observed within the project site during annual bird surveys. One individual was observed off site west of the Ventura County line in 1993 and 1994;[440] within Castaic Junction in 1991;[441] in April, May, and July 1993 in dense cottonwoods downstream of the Valencia Wastewater Plant (Castaic Junction area);[442] and it has also been observed east of the project site in 2000

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438 W. Douglas Robinson, "Summer Tanager." The Birds of North America Online. ed. A. Poole, 248 (1996), http://bna.birds.cornell.edu/bna/species/248; K.V. Rosenberg et al., "Community Organization of Riparian Breeding Birds: Response to an Annual Resource Peak," *Auk* 99 (1982):260–274; K.V. Rosenberg et al., *Birds of the Lower Colorado River Valley* (Tucson, Arizona: University of Arizona Press, 1991).

439 Robinson, "Summer Tanager."

440 Guthrie, *Bird Surveys along the Santa Clara River, 1993*; Guthrie, *Bird Surveys along the Santa Clara River, 1994*.

441 Guthrie, *Surveys for Least Bell's Vireo*.

442 Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1993).

and 2003.[443] These observations were not mapped. ~~If~~ This species occurs only rarely in coastal southern California as a breeding bird, and it is not expected to nest on site. However, if nesting occurs on site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. The project applicant would implement mitigation measures to reduce or avoid impacts to summer tanager before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to summer tanager to a level that is adverse but not significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 5 acres (4%) and temporary disturbance of approximately 25 acres (22%) of habitat for this species within the Mission Village project site. Approximately 81 acres (73%) of suitable habitat on site would not be impacted and approximately 331 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The summer tanager is uncommon and not expected to nest on site; and the project would affect a relatively small amount and percentage of habitat. Further, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Coastal California gnatcatcher (*Polioptila californica californica*). The coastal California gnatcatcher is a federally listed threatened species and a California Species of Special Concern. It occurs in coastal Southern California and Baja California year-round, where it depends on a variety of arid scrub habitats. While isolated occurrences of California gnatcatchers occur off site to the east and southwest, no California gnatcatchers have been observed during the course of the focused surveys conducted for this species within the Specific Plan or Entrada areas. However, during the course of surveys conducted within the VCC planning area, an individual California gnatcatcher was observed on October 5, 2007, by Dudek biologist Jeff Priest and biologist Ron Francis, a subconsultant to Dave Crawford, Compliance Biology, Inc.[444] Should this species occur on site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending

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[443] Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2000*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003*.

[444] Priest, "Documentation of California Gnatcatcher Observation."

on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. The project applicant would implement mitigation measures to reduce or avoid impacts to California gnatcatcher before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests), **MV 4.3-82** (restoration/enhancement of coastal scrub in the High County SMA, Salt Creek area, and River Corridor SMA), **MV 4.3-83** (replace or enhance nesting and foraging habitat for least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and coastal California gnatcatcher), and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to coastal California gnatcatcher to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 616 acres (79%) and temporary disturbance of approximately 50 acres (7%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts to a federally-listed bird species would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 113 acres (15%) of suitable habitat on site would not be impacted and approximately 1,986 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Vermilion flycatcher (*Pyrocephalus rubinus*). The vermilion flycatcher is a California Species of Special Concern. This species is found in riparian thickets near open, mesic habitats. It breeds in cottonwood, willow, mesquite, oak, sycamore, and other vegetation in desert riparian communities that are located adjacent to irrigated fields, irrigated ditches, or pastures.[445] A single individual was observed along the Santa Clara River on June 19, 1993.[446] This is the only observation of a vermilion flycatcher from any of the many years of surveys both within and adjacent to the project site, and its location was not mapped. If nesting occurs on site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests could be a significant

[445] Zeiner et al., *California's Wildlife: Volume II*; B.O. Wolf and S.L. Jones, "Vermilion Flycatcher." The Birds of North America Online, ed. A. Poole, 484 (2000), http://bna.birds.cornell.edu/bna/species/484.

[446] Guthrie, *Bird Surveys along the Santa Clara River, 1993*.

impact. The project applicant would implement mitigation measures to reduce or avoid impacts to vermilion flycatcher before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to vermilion flycatcher to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 10 acres (9%) and temporary disturbance of approximately 25 acres (21%) of habitat for this species within the Mission Village project site. Approximately 81 acres (70%) of suitable habitat on site would not be impacted and approximately 336 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The vermilion flycatcher is very uncommon and not expected to nest on site; and the project would affect a relatively small amount and percentage of habitat. Further, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Rufous hummingbird (*Selasphorus rufus*). The rufous hummingbird is a California Special Animal and is a Bird of Conservation Concern with regard to its nesting colony status. The rufous hummingbird uses a variety of vegetation communities that provide nectar-producing flowers. In its breeding range, which in California is limited to the extreme north coastal part of the state, the species uses open areas as well as coniferous forests, deciduous woods, riparian thickets, swamps, meadows, agricultural areas, parks, and residential areas.[447] Rufous hummingbirds have been observed within and near the project area in several different years; these individuals are assumed to have been migrants. Three rufous hummingbirds were observed in early April of 1999 by Guthrie north of SR-126 in what is now the Homestead West area.[448] Another individual was observed in late March 2004 by Guthrie within Potrero Valley, Oak Valley, Long Canyon, or Onion Fields.[449] Another individual was observed in early April of that year

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447 S. Healy and W.A. Calder, "Rufous Hummingbird." The Birds of North America Online, ed. A. Poole, 053 (2006), http://bna.birds.cornell.edu/bna/species/053.

448 Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*.

449 Guthrie, *Bird Observations for Spring 2004 in the Proposed Potrero Valley, Long Canyon, Oak Valley and Onion Fields Development Areas*.

in the southern half of the Legacy Village area,[450] which is adjacent to the project area just south of Mission Village and east of Potrero Village. No mapped occurrences of this species were recorded. The Project vicinity is outside the species' breeding range, so no impacts to active nests would occur. Injury or mortality of adult rufous hummingbirds related to construction activities is not expected because this species is highly mobile. Individuals of the species would not be affected by the Project. Impacts to this species during construction would be less than significant.

Implementation of the proposed project would also result in the permanent loss of approximately 681 acres (62%) and temporary disturbance of approximately 100 acres (9%) of habitat for this species within the Mission Village project site. Approximately 320 acres (29%) of suitable habitat on site would not be impacted and approximately 5,367 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Survey data indicate that the rufous hummingbirds observed on site were migrants, not resident birds. Given that the rufous hummingbird does not use the site extensively and does not nest there, and given that the project would affect a relatively small amount and percentage of hummingbird habitat, the project would not have a significant impact on this species.

~~If nesting occurs on site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid impacts to these species, the project applicant would implement mitigation measures to reduce impacts to the rufous/Allen's hummingbird before and during construction. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to rufous hummingbirds to a level that is adverse but not significant.~~ The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Chipping sparrow (*Spizella passerina*). The chipping sparrow is a California Special Animal. This species is not federally listed as threatened or endangered within any part of its range and Sauer *et al.* have concluded that continental populations appear healthy.[451] Chipping sparrows prefer open wooded habitats with a sparse or low herbaceous layer and few shrubs, if any.[452] On site, this species has been observed as a common migrant in the

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450 Guthrie, *Bird Observations in the Stevenson Ranch*.

451 J.R. Sauer et al., *The North American Breeding Bird Survey, Results and Analysis 1966–2000*. Version 2001.2. (Laurel, Maryland: U.S. Geological Survey, Patuxent Wildlife Research Center, 1997).

452 Zeiner et al., *California's Wildlife: Volume II*.

project area, and one to 12 individuals were observed near edges of agricultural fields most days in early March.[453] The chipping sparrow has been observed over multiple years during bird surveys conducted from 1988 through 2007 along the Santa Clara River within riparian scrub and woodland habitat. If nesting occurs on site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of chipping sparrow nests that may be disturbed or removed, this could be a significant impact. In order to avoid impacts to this species, the project applicant would implement mitigation measures to reduce the impacts to chipping sparrow before and during construction. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests), and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 7 acres (18%) and temporary disturbance of approximately 4 acres (9%) of habitat for this species within the Mission Village project site. Approximately 28 acres (73%) of suitable habitat on site would not be impacted and approximately 1,281 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Migrant chipping sparrows have been commonly observed in the project vicinity; and the project would affect a relatively small amount and percentage of habitat would be impacted. Further, a substantial amount of habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Least Bell's vireo (*Vireo bellii pusillus*)**.** The least Bell's vireo was state listed as endangered in 1980 and federally listed as endangered by the USFWS in 1986.[454] The USFWS made a final critical habitat designation for the least Bell's vireo in 1994.[455] The Mission Village project site supports 135 acres of vireo critical habitat. Least Bell's vireos primarily occupy riverine riparian habitats that feature dense cover within one to two meters of the ground and a dense, stratified canopy. The least Bell's vireo inhabits low, dense riparian growth along water or along dry parts of intermittent streams and is typically associated with southern willow scrub, cottonwood forest, mulefat

[453] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*
[454] 51 FR 16474.
[455] 59 FR 4845.

scrub, sycamore alluvial woodland, southern coast live oak riparian forest, arroyo willow riparian forest, wild blackberry, or mesquite in desert localities. The least Bell's vireo has been observed almost every year along the Santa Clara River within the Specific Plan area,[456] and off site in Castaic Junction[457] and has also been observed over multiple years within the VCC planning area.[458] Most recently, Bloom Biological observed at least 56 territories and three active nests within the Specific Plan area and adjacent areas.[459] If least Bell's vireos are nesting during development of the site, the proposed removal of riparian vegetation and/or construction-related noise could result in the loss or abandonment of active nests during that year's nesting season. In light of the vireo's status as a federal- and state-listed endangered species, loss of active nests of this species would be a significant impact. In order to avoid this impact to the least Bell's vireo, the project applicant would implement mitigation measures for the least Bell's vireo before and during construction. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests), **MV 4.3-83** (replace or enhance nesting and foraging habitat for least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and coastal California gnatcatcher) and **MV 4.3-26** (pre-construction

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456 Guthrie, *Bird Surveys along the Santa Clara River, 1993;* Guthrie, *Bird Surveys along the Santa Clara River, 1995*; Guthrie, *Bird Surveys along the Santa Clara River, 1996*; Guthrie, *Bird Surveys along the Santa Clara River, 1997*; Guthrie, *Bird Surveys along the Santa Clara River, 1998*; Guthrie, *Bird Surveys in the Proposed Riverwood Project Area*; Guthrie, *Bird Surveys along the Santa Clara River, 2000;* Guthrie, *Bird Surveys along the Santa Clara River, 2001;* Guthrie, *Bird Surveys along the Santa Clara River, 2002;* Guthrie, *Bird Surveys along the Santa Clara River, 2003;* Guthrie, *Bird Surveys along the Santa Clara River, 2004;* Guthrie, *Bird Surveys along the Santa Clara River, 2005;* Guthrie, *Bird Surveys along the Santa Clara River, 2006*; Labinger, Greaves, and Haupt, *Preliminary Results of Avian Surveys*; Labinger, Greaves, and Haupt, *Results of 1995 Avian Surveys*; Labinger, Greaves, and Haupt. *1996 Avian Survey Results*;– Labinger, Greaves, and Haupt, *Results of 1997 Avian Surveys and Least Bell's Vireo Monitoring*; Labinger and Greaves, *Results of 1998 Avian Surveys and Least Bell's Vireo Monitoring*; Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

457 Guthrie *Status of the Least Bell's Vireo along the Santa Clara River and Its Tributaries near Valencia, California, Spring 1988*; Guthrie, *Birds along the Santa Clara River and Its Tributaries near Valencia, California, with Special Reference to Least Bell's Vireo*; Guthrie, *Surveys for Least Bell's Vireo*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1996*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1997*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1998*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2000*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2001*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2002*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2004*; Guthrie, *Bird Observations during 2004*, Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries* (2005); Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries (*2006); Dudek and Associates, Inc., *Biological Resources Technical Report for the Entrada Site*; Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

458 Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries* (1994); Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1995*; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1996*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries Upstream from the Castaic Creek Confluence, near Valencia, California, 2003*; Guthrie, *Bird Surveys along a Portion of the Santa Clara River and Its Tributaries (*2006).

459 Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor.*

educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would avoid impacts to least Bell's vireos adults, nests, eggs, nestlings, and fledglings. As a result, no significant impact would occur because no individual birds would be affected. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would result in the permanent loss of approximately 27 acres (18%) of suitable habitat for least Bell's vireo within the Mission Village project site, including 16 acres of nesting and foraging habitat and 11 acres of foraging only habitat. Of this permanent loss, approximately 15 acres are within designated critical habitat (11% of the critical habitat total), including 10 acres of nesting and foraging habitat and 4.5 acres of foraging only habitat. The proposed project also would result in the temporary disturbance of approximately 31 acres (20%) of suitable habitat, including 29 acres of nesting and foraging habitat and 2.1 acres of foraging only habitat. Of this temporary disturbance, approximately 28 acres are within designated critical habitat (21% of the critical habitat total), including 27 acres of nesting and foraging habitat and 1.2 acres of foraging only habitat. Approximately 94 acres (63%) of suitable habitat on site would not be impacted, including 82 acres of nesting and foraging habitat and 12 acres of foraging habitat. Of the non-impacted areas, 92 acres of critical habitat on site would not be impacted (68% of the critical habitat total), including approximately 82 acres of nesting and foraging habitat and 9.9 acres of foraging only habitat. Approximately 359 acres of suitable nesting and foraging habitat for least Bell's vireo would be protected and managed in the River Corridor SMA, of which 113 acres are within critical habitat. The least Bell's vireo is state and federally listed as endangered, and has experienced large losses of riparian habitat in Southern California. The project's impacts to designated critical habitat, as well as its impacts to suitable habitat, could have a substantial adverse effect on least Bell's vireo habitat use, thus substantially reducing its range on site. This impact would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant.

Yellow-headed blackbird (*Xanthocephalus xanthocephalus*). The yellow-headed blackbird is a California Species of Special Concern. This species is not federally listed as threatened or endangered within any part of its range. It is found primarily within prairie wetlands, but it is also commonly found in wetlands associated with quaking aspen parks, mountain meadows, and arid regions. This species has been observed within the Specific Plan area.[460] Bloom Biological observed one individual in an agriculture field within a flock of red-winged blackbirds on April 1, 2007.[461] No nesting colonies have been observed within the project site. If nesting occurs on site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending

[460] Guthrie, *Bird Surveys along the Santa Clara River, 1996*; Guthrie, *Bird Surveys along the Santa Clara River*, 1997; Guthrie, *Bird Surveys along the Santa Clara River and Its Tributaries near Valencia, California, 1998*; Guthrie, *Bird Surveys along the Santa Clara River, 2001*; Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

[461] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*.

on the number and extent of this species' bird nests on the site that may be disturbed or removed, the loss of active nests could be a significant impact. In order to avoid impacts to these species, the project applicant would implement mitigation measures to reduce impacts to the yellow-headed blackbird before and during construction. Applicable mitigation measures include **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks), **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests), and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce impacts to yellow-headed blackbird to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 460 acres (55%) of upland foraging habitat and temporary disturbance of approximately 242 acres (29%) of upland foraging habitat for this species within the Mission Village project site. Approximately 129 acres (16%) of upland foraging habitat on site would not be impacted and approximately 1,434 acres (including 1.4 acres of suitable nestng habitat) would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although a large amount and percentage of upland foraging habitat would be impacted, this species occurs only rarely in the project vicinity and is not expected to nest on site. In addition, a large amount of suitable upland foraging habitat would be protected and managed. For these reasons, the project impacts to upland foraging habitat would not have a substantial adverse effect on the use of the project vicinity. Therefore, no significant impact would result.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Pallid bat (*Antrozous pallidus*), California Species of Special Concern; **western mastiff bat** (*Eumops perotis*), California Species of Special Concern; **western red bat** (*Lasiurus blossevillii*), California Species of Special Concern; **fringed myotis** (*Myotis thysanodes*), California Special Animal; **Yuma myotis** (*Myotis yumanensis*), California Special Animal; and **pocketed free-tailed bat** (*Nyctinomops femorosaccus*), California Species of Special Concern. These species were detected on or in the vicinity of the project site during active Anabat surveys and mist net surveys conducted in 2004 and 2006 by Impact Sciences. Suitable roosting habitat for western mastiff bat and pocketed free-tailed bat is not present, as the project site lacks rugged rocky areas and cliffs, and suitable made-structures. However, pallid bat could roost within hollow oak trees on the site. Suitable western red bat roosting habitat and fringed myotis habitat occurs throughout the project site. Forests and woodlands are primary habitats for the Yuma myotis. Should active bat roosts be present, construction-related activities could result in the direct loss or abandonment of active roost sites. In order to reduce these impacts, the project applicant would avoid direct effects on pallid bat individuals during construction and establish new day roosts (including maternity roosts) should any existing day roosts be permanently lost as a result of the project. Depending on the number and extent of

day roosts that may be disturbed or removed, impacts to pallid bat could be significant. In order to reduce these impacts, the project applicant would avoid direct effects on pallid bat individuals during construction and establish new day roosts should any existing day roosts be permanently lost as a result of the project. In addition, the applicable mitigation measure for impacts during construction is **Mitigation Measure MV 4.3-18** (pre-construction surveys for active roosts of special-status bats), which requires that, no earlier than 30 days prior to the commencement of construction activities, a pre-construction survey be conducted by a qualified biologist to determine whether active roosts of special-status bats, including the pallid bat, are present on or within 300 feet of the project disturbance boundaries. Should an active maternity roost be identified (the breeding season of native bat species in California, including the pallid bat, generally occurs from April 1 through August 31), the roost shall not be disturbed and construction within 300 feet shall be postponed or halted, at the discretion of the biological monitor, until the roost is vacated and juveniles have fledged, as determined by the biologist. The applicable mitigation measures for permanent loss of roost sites are **MV 4.3-19** (day roost site replacement), which requires the project applicant to prepare and implement a bat roost site creation plan that would establish (an) alternative roost site(s) within suitable preserved open space located at an adequate distance from sources of human disturbance and **MV 4.3-78** (culvert and bridge design to provide roosting habitat for bats), which requires a qualified biologist shall work with the project engineer to identify and incorporate structures into the design that provide suitable roosting habitat for bat species occurring in the project area. Implementation of these mitigation measures would reduce this impact to a level that is not significant. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

For the pocketed free-tailed bat, western mastiff bat, and western red bat, implementation of the proposed project would result in the permanent loss of approximately 752 acres (62%) and temporary disturbance of approximately 119 acres (10%) of foraging habitat. Approximately 347 acres (29%) of suitable habitat on site would not be impacted and approximately 6,265 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

For the pallid bat, implementation of the proposed project would result in the permanent loss of approximately 743 acres (68%) and temporary disturbance of approximately 106 acres (10%) of habitat. Approximately 243 acres (22%) of suitable habitat for pallid bat on site would not be impacted and approximately 5,833 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

For the Yuma myotis, implementation of the proposed project would result in the permanent loss of approximately 5.5 acres (4%) and temporary disturbance of approximately 29 acres (23%) of habitat. Approximately 90 acres (73%) of suitable habitat for Yuma myotis on site would not be impacted and approximately 573 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The project would affect a large amount and percentage of foraging habitat for all of the identified bat spcies, except Yuma myotis. This impact to foraging habitat could have a substantial adverse effect on the foraging patterns on these bats on site.

Absent mitigation, the impact would be significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant.

For Yuma myotis, which is a widespread species in the non-desert regions of California (except along the lower Colorado River), a small amount and percentage of foraging habitat would be impacted and a substantial amount of habitat would be protected and managed. The combined permanent loss and temporary disturbance of habitat for Yuma myotis would be less than significant.

San Diego black-tailed jackrabbit (*Lepus californicus*). The San Diego black-tailed jackrabbit is listed as a California Species of Special Concern. The black-tailed jackrabbit occupies many diverse habitats, but is primarily found in arid regions supporting shortgrass and open or early succession scrub and chaparral habitats.[462] Systematic surveys of the project area have not been conducted, but the San Diego black-tailed jackrabbit has been anecdotally observed on site.[463] Based on the Impact Sciences report of the San Diego black-tailed jackrabbit in the project area,[464] it is assumed that the species potentially occurs in suitable habitat throughout the site. Construction-related activities could result in the impacts to individual black-tailed jackrabbit. In order to reduce impacts to this species, the project applicant would implement four mitigation measures designed to avoid impacts and otherwise capture and relocate animals away from the work area prior to construction. These animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the project applicant would conduct biological monitoring during ground-disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to San Diego black tailed jackrabbit individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **MV 4.3-16** (pre-construction surveys and relocation of San Diego black-tailed jackrabbit and San Diego woodrat), **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 868 acres (71%) and temporary disturbance of approximately 129 acres (11%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for

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[462] D.C. Zeiner et al., *California's Wildlife: Volume III.Mammals* (1990).

[463] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

[464] Ibid.

a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 233 acres (19%) of suitable habitat on site would not be impacted and approximately 3,551 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered a significant unavoidable impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this EIR. In addition to the mitigation measures described above, a total of ~~6,113~~3,551 acres of ~~potential~~suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

San Diego desert woodrat (*Neotoma lepida intermedia*). The San Diego desert woodrat is a California Species of Special Concern. Desert woodrats are found in a variety of shrub and desert habitats and are primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth.[465] The mammal assessment conducted by Impact Sciences[466] found that the San Diego desert woodrat is a relatively common rodent within the Specific Plan area of the NRSP site. Dudek observed a single midden in the High Country SMA/SEA 20.[467] San Diego desert woodrat was observed in Long and Potrero canyons in 2005.[468] Construction-related activities would result in the direct loss of individual woodrats or active woodrat nests (stick houses). Implementation of proposed **Mitigation Measures MV 4.3--16** (pre-construction surveys and relocation of San Diego black-tailed jackrabbit and San Diego woodrat) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological

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465 V.C. Bleich, "Ecology of Rodents at the United States Naval Weapons Station; Seal Beach, Fallbrook Annex, San Diego County, California" (Master's thesis, California State University, Long Beach, 1973); V.C. Bleich and O.A. Schwartz. "Observations on the Home Range of the Desert Woodrat," *Journal of Mammalogy* 56 (1975), 518–519; J. H. Brown, G.A. Lieberman, and W.F. Dengler. "Woodrats and Cholla: Dependence of a Small Population on the Density of Cacti," *Ecology* 53 (1972), 310–313; G.N. Cameron and D.G. Rainey. "Habitat Utilization by *Neotoma lepida* in the Mojave Desert," *Journal of Mammalogy* 53 (1972), 251–266; S.D. Thompson, Spatial Utilization and Foraging Behavior of the Desert Woodrat, *Neotoma lepida lepida*." *Journal of Mammalogy* 63 (1982), 570–581.

466 Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

467 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

468 Chris Huntley, Aspen, personal communication with Sherri Miller, Dudek, October 2006.

monitoring during vegetation clearing and grading activities) would reduce the magnitude of impacts to the San Diego desert woodrat to less than significant.

Implementation of the proposed project would also result in the permanent loss of approximately 668 acres (79%) and temporary disturbance of approximately 61 acres (7%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 117 acres (14%) of suitable habitat on site would not be impacted and approximately 3,487 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potentially the direct loss of individuals of this species, would be considered a significant unavoidable impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this EIR. In addition to the mitigation measures described above, a total of ~~6,113~~3,487 acres of ~~potential~~suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Mule deer (*Odocoileus hemionus*). The mule deer is considered a CDFG trust resource and is considered a special-status species for the purposes of this analysis, because take of the species requires a game permit. Mule deer have been documented within and adjacent to the project area during focused surveys in 2004 for mammals by Impact Sciences.[469] Mule deer were also observed in the High Country SMA/SEA 20 in 2005.[470] Construction-related activities could result in impacts to individual mule deer. Potentially significant impacts to mule deer could occur without mitigation, depending on the number and extent of the species on site that may be disturbed or removed. In order to reduce impacts to this species, the project applicant would implement several mitigation measures designed to avoid impacts during the rearing season (i.e., the period from birth to dispersal of young) and otherwise capture and relocate animals away from the work area prior to construction. These animals would be handled by qualified

[469] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

[470] Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

biologists and placed in a pre-approved area capable of supporting the species. In addition, the project applicant would conduct biological monitoring during ground disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to mule deer individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures SP 4.6-53 and SP 4.6-59 (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are MV 4.3-26 (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and MV 4.3-30 (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. ~~The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis~~.

Implementation of the proposed project would also result in the permanent loss of approximately 684 acres (68%) and temporary disturbance of approximately 92 acres (9%) of habitat for this species within the Mission Village project site. Approximately 232 acres (23%) of suitable habitat on site would not be impacted and approximately 5,140 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although a large amount and percentage of habitat would be impacted, the mule deer is a common and widespread species in California and a large amount of habitat for the species would be protected and managed. It is expected to remain a common species in the project vicinity in the River Corridor SMA, High Country SMA, and Salt Creek area. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Note that the Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Mountain lion (~~*Odocoileus hemionus*~~). *Puma concolor*). The mountain lion is designated by CDFG as a Specially Protected Mammal, which means it may not be taken, injured, possessed, transported, imported, or sold without a depredation permit. The mountain lion is considered a special-status species for the purposes of this analysis. Mountain lions prefer habitats that provide cover, such as thickets of brush and timber in woodland vegetation communities.[471] They also utilize caves and other natural cavities for cover and breeding. Mountain lions have been documented within and adjacent to the project area during focused surveys in 2004 for mammals by Impact

[471] D.C. Zeiner et al., *California's Wildlife: Volume III. Mammals* (Sacramento: California Department of Fish and Game, 1990).

Sciences.[472] Specific locations for mountain lions in the project area were not provided, but it is assumed that mountain lions could occur anywhere in the project area where deer also occur. Construction-related activities could result in impacts to individual mountain lion. Potentially significant impacts to mountain lion could occur without mitigation, depending on the number and extent of the species on site that may be disturbed or removed. In order to reduce impacts to this species, the project applicant would implement several mitigation measures designed to avoid impacts during the rearing season (i.e., the period from birth to dispersal of young) and otherwise capture and relocate animals away from the work area prior to construction. These animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the project applicant would conduct biological monitoring during ground-disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to mountain lion individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **MV 4.3-14** (pre-construction surveys for mountain lion natal dens and establishment of appropriate setbacks), **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 684 acres (68%) and temporary disturbance of approximately 92 acres (9%) of habitat for this species within the Mission Village project site. Approximately 232 acres (23%) of suitable habitat on site would not be impacted and approximately 5,140 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species is uncommon in the project vicinity, and its range in California is being reduced by urbanization. The project would contribute to this trend by affecting a large portion of mountain lion habitat on site. For this reason, the project would have a significant impact on this species, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

American badger (*Taxidea taxus*)**.** The American badger is a California Species of Special Concern~~ (CSC)~~. Badgers are generally associated with dry, open, treeless regions, prairies and grasslands, low-intensity agriculture

[472] Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

(*e.g.*, pasture and dryland crops), drier open shrublands and forest, parklands, and cold desert areas.[473] The badger, although not common on site, has been documented through systematic surveys and anecdotal observations of badger dens and tracks in three locations in the project area, including the Specific Plan area,[474] Potrero Creek in the Specific Plan area,[475] and High Country SMA/SEA 20.[476] Construction-related activities could result in impacts to individual American badger. Potentially significant impacts to American badgers could occur without mitigation, depending on the number and extent of the species on site that may be disturbed or removed. In order to reduce impacts to this species, the project applicant would implement several mitigation measures designed to avoid impacts during the rearing season (i.e., the period from birth to dispersal of young) and otherwise capture and relocate animals away from the work area prior to construction. These animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the project applicant would conduct biological monitoring during ground-disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to badger individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures include **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities.), **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation)**,** and **MV 4.3-17** (American badger natal den avoidance). Implementation of these mitigation measures would reduce impacts to the American badger to a less-than-significant level. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR.

Implementation of the proposed project would also result in the permanent loss of approximately 868 acres (71%) and temporary disturbance of approximately 129 acres (11%) of habitat for this species within the Mission Village project site. Approximately 233 acres (19%) of suitable habitat on site would not be impacted and approximately 3,551 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species is uncommon in the project vicinity, and its range in California is being reduced by urbanization. The project would contribute to this trend by affecting a large portion of badger habitat on site. For this reason, the project would have a significant impact on this species, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to less than significant.

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473 C.A. Long, "*Taxidea taxus*," *Mammalian Species* 26 (1973), 1–4; Zeiner et al., *California's Wildlife: Volume III. Mammals*.

474 Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

475 P. Behrends (Dudek and Associates, Inc.), personal observation of badger den in Potrero Creek during wetland delineation, August, 1, 2006.

476 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

Black bear (*Ursus americanus*). The American black bear is considered special status as a trust resource by CDFG for the purposes of this report. The black bear is found in dense, mature stands of a variety of forest types. It can utilize valley foothill riparian forests, wet meadows, and brushy stands of forests. The black bear was anecdotally observed within High Country SMA/SEA 20 in 2005.[477] The specific location was not recorded, but it is assumed that black bears utilize portions of the High Country SMA/SEA 20 due to its connection to the Santa Susana Mountains to the south. ~~Construction~~ This species may occasionally use a portion of the Santa Clara River within the Specific Plan area for movement between the Santa Susana Mountains and Santa Monica Mountains to the south and the Los Padres National Forest and Angeles National Forest in the Sierra Madre Mountains to the north. Because the proposed project site is not regularly used, on-site suitable habitat for the black bear was not quantified. Nonetheless, construction-related activities could result in impacts to individual black bear. Potentially significant impacts to black bear could occur without mitigation, depending on the number and extent of the species on site that may be disturbed or removed. In order to reduce impacts to this species, the project applicant would implement several mitigation measures designed to avoid impacts during the rearing season (i.e., the period from birth to dispersal of young) and otherwise capture and relocate animals away from the work area prior to construction. These animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the project applicant would conduct biological monitoring during ground disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to badger individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures SP 4.6-53 and SP 4.6-59 (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Impacts to Species Potentially Occurring on the Mission Village Site

Trask shoulderband snail (*Helminthoglypta traskii traskii*). The Trask shoulderband snail is listed as a California Special Animal. Surveys of the project area for Trask shoulderband snail between November 2009 and January

[477] Ibid.

2010[478] were negative. However, three non-special-status shoulderband snail species were detected in the project area or surrounding areas. These included specimens tentatively identified as Southern California shoulderband snail, Vasquez rocks shoulderband snail, and Grapevine shoulderband snail. Based on these survey results, the presence of coastal scrub, riparian and chaparral vegetation communities, and the occurrence of the Trask shoulderband snail downstream along the Santa Clara River in the Fillmore area, it was concluded that the Trask shoulderband snail potentially occurs in the project area. If present, the Trask shoulderband snail subspecies likely would be limited to small microhabitats, such as decaying yucca clumps, downed wood, stick litter around the bases of trees and shrubs, and woodrat nests that occur in coastal scrub, riparian, and chaparral vegetation communities. Because Trask shoulderband snails in general are associated with specific microhabitats, their total suitable habitat on site was not quantified. Potential direct impacts (loss of individual snails and/or microhabitats) and indirect impacts (construction-related dust and ground vibration; habitat fragmentation; off-road vehicles; cattle grazing; altered wildfire regimes; invasive plant species; increased human activity; Argentine ants; other introduced non-native snails such as decollate snails; increased activity by pet, stray, and feral cats and dogs; and pesticides) to Trask shoulderband snail, if it occurs, as a result of implementation of the proposed project would, (1) constitute a substantial direct adverse effect on this species, (2) conflict with local policies and ordinances protecting biological resources, and (3) substantially reduce the number and range of this species. Thus, this impact is significant, absent mitigation. In order to reduce direct impacts to this species, the project applicant would implement a series of mitigation measures designed to avoid or minimize the impact of project implementation on Trask shoulderband snail, if it occurs, to a level that is adverse but not significant. Applicable mitigation measures include the following previously incorporated measures:

- Mitigation Measures **SP 4.6-1** through **SP 4.6-16, SP 4.6-21** through **SP 4.6-26,** and **SP 4.6-63** (habitat restoration, enhancement, and preservation of the River Corridor SMA/SEA 23);

- Mitigation Measure **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23)**, SP 4.6-18**(provision of transition areas adjacent to the River Corridor SMA/SEA 23)**, SP 4.6-19** (requirements for transition areas adjacent to the River Corridor SMA/SEA 23).

- Mitigation Measures **SP 4.6-20**, **SP 4.6-34**, and **SP 4.6-35** (guidelines for grading activities in the River Corridor SMA/SEA 23 and the High Country SMA/SEA 20);

- Mitigation Measure **SP 4.6-27** (habitat enhancement of the High Country SMA/SEA 20);

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- Mitigation Measures **SP 4.6-29** through **SP 4.6-32** (recreation and access restrictions within the High Country SMA/SEA 20);
- Mitigation Measure **SP 4.6-33** (protection of transition areas between the development edge and the High Country SMA/SEA 20);
- Mitigation Measures **SP 4.6-36** through **SP 4.6-42** (open space dedication of the High Country SMA/SEA 20);
- Mitigation Measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks); and

This impact would also be reduced through the implementation of the following:

- Mitigation Measure **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas)
- Mitigation Measure **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- Mitigation Measure **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village);
- Mitigation Measures **MV 4.3-31** through **MV 4.3-43** (wetlands mitigation plan and riparian restoration activities on the project site);
- Mitigation Measure **MV 4.3-45** (develop an integrated pest management plan that addresses pesticide use)
- Mitigation Measure **MV 4.3-47** (control of pet, stray, and feral cats and dogs in or near open space areas)
- Mitigation Measure **MV 4.3-48** (quarterly monitoring and control measures for Argentine ants for up to 5 years),
- Mitigation Measure **MV 4.3-53** (dust control measures to protect vegetation communities and special-status aquatic wildlife species);

- Mitigation Measure **MV 4.3-54** (permanent fencing along trails in the River Corridor SMA/SEA 23);
- Mitigation Measure **MV 4.3-57 (**review of plant palettes and inspection of container plants for use within 200 feet of native vegetation for pests and disease; restrictions on invasive plants and irrigation).

Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Impacts to this species were not previously analyzed as part of the Newhall Ranch Specific Plan Program EIR and Additional Analysis because the snail was identified after that environmental documentation was certified.

Southern steelhead (*Oncorhynchus mykiss*). The southern steelhead is listed as federally endangered and is a California Species of Special Concern. Within the Santa Clara River drainage, southern steelhead historically inhabited Piru Creek, Sespe Creek, Santa Paula Creek, Hopper Creek, and possibly Pole Creek.[479] Presently, southern steelhead occur downstream of the proposed project in the Santa Clara River watershed in Piru Creek, between the confluence with the Santa Clara River and Santa Felicia Dam, in Sespe Creek, in Santa Paula Creek, and possibly in Hopper Creek and Pole Creek.[480] Habitat for juveniles and spawning adults is described as relatively cool freshwater streams, well-oxygenated water with adequate depth and cover in the way of gravel, cobble, boulder, undercut banks, large and small woody debris, and overhanging vegetation. As non-spawning adults, southern steelhead are found in the Pacific Ocean.[481] Reconnaissance surveys conducted along the Santa Clara River and tributary drainages within the Specific Plan area of the RMDP were negative in 2004 and 2005.[482] This species is not expected to occur in the project area and the requisite habitat features to support spawning and rearing are not present on site. Implementation of the proposed project would not directly impact this species. Impacts to this species were not addressed by the Newhall Ranch Specific Plan Program EIR.

California red-legged frog (*Rana draytonii*). The California red-legged frog is a federally threatened species and is a California Species of Special Concern. Breeding occurs in streams, deep pools, backwaters within streams and creeks, ponds, marshes, sag ponds, dune ponds, lagoons, and stock ponds. California red-legged frogs can occur in ephemeral ponds or permanent streams and ponds; however, populations probably cannot persist in ephemeral streams. The California red-legged frog has not been observed in the project area. While there are no records of California red-legged frog from the project site in the numerous wildlife surveys conducted since 1992, the species

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[479] Titus, Erman, and Snider. *History and Status of Steelhead*.

[480] Stoeker and Kelly, *Santa Clara River Steelhead Trout*.

[481] D. McEwan and T.A. Jackson. *Steelhead Restoration and Management Plan for California* (Sacramento: CDFG, 1996); P. Moyle, *Inland Fishes of California*. (Berkeley and Los Angeles: University of California Press, 2002).

[482] ENTRIX, Inc., *Focused Special-Status Fish Species Habitat Assessment*.

is known from the project region. The San Marino Environmental Associates report states that Thomas Haglund observed red-legged frogs in the mid-1970s in the Santa Clara River at Fillmore and that "this may represent the last sighting of this species in the Santa Clara River" (p. 37).[483] Given that this species has been documented upstream of the project site within tributaries of the river, it is possible that non-breeding frogs could move through the river corridor within the project site. Should construction and/or grading activities occur during a time period that individual frogs are moving through the river corridor, the species may be adversely affected. In order to reduce impacts to this species, the project applicant would implement a series of mitigation measures designed to limit construction activities within aquatic habitats and capture and relocate animals away from the work area prior to construction. Equipment would not be operated within areas of ponded or flowing water (unless otherwise approved by the Corps and CDFG), and water containing mud, silt, and other pollutants would not be allowed to enter flowing water. Further, any California red legged frogs potentially present would be removed from the disturbance footprint by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the project applicant would conduct biological monitoring during ground disturbing activities in an effort to salvage animals that may be uncovered during construction activities.

Applicable mitigation measures include the following previously incorporated measures:

- Mitigation Measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks); and
- Mitigation Measures **SP 4.6-55** (federal and state permits for wetland impacts), and **SP 4.6-58** (NPDES and water quality permits).

Additional applicable mitigation measures include:

- Mitigation Measure **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas)**;**
- Mitigation Measure **MV 4.3-3** (surveys of riverbed for California red-legged frog);
- Mitigation Measure **MV 4.3-8** (patrol for stranded fish and aquatic organisms);
- Mitigation Measure **MV 4.3-9** (development of a Stream Crossing and Diversion Plan);
- Mitigation Measure **MV 4.3-10** (installation of structures within the riverbed not to impair movement of aquatic life);

[483] SMEA, *Sensitive Aquatic Species Survey*.

- Mitigation Measure **MV 4.3-11** (regulating stream diversion bypass channels and dewatering);
- Mitigation Measure **MV 4.3-12** (creation of habitat for special-status fish during construction);
- Mitigation Measure **MV 4.3-13** (prevention of mud and pollutants from entering streams and storm flows);
- Mitigation Measure **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities).

Implementation of these mitigation measures would reduce impacts to California red-legged frog to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 14 acres (6%) and temporary disturbance of approximately 36 acres (16%) of habitat for this species within the Mission Village project site. Approximately 178 acres (78%) of suitable habitat on site would not be impacted and approximately 575 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. The California red-legged frog is federally listed as threatened and has suffered large population declines. For these reasons, the project's impacts on red-legged frog habitat would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to California red-legged frog, due to the species' limited potential to occur on the project site.

Rosy boa (*Charina trivirgata*)**.** The rosy boa is a California Special Animal. The rosy boa inhabits rocky shrubland and desert habitats and is attracted to oases and streams but does not require permanent water.[484] Rosy boas were not trapped or otherwise observed during surveys conducted on portions of the Specific Plan area in 2004 and 2006.[485] Suitable habitat occurs in association with scrub, chaparral, riverbank, and oak woodland habitats, and rosy boa is presumed to occur in portions of the site supporting these habitat types. Construction-related activities could result in the direct impacts to individual animals. In order to reduce impacts to this species, the project applicant would implement four mitigation measures designed to capture and relocate animals away from the work area prior to construction. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the project applicant would conduct biological monitoring during ground-disturbing activities in an effort to salvage animals that may be uncovered during construction activities.

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[484] Stebbins, *Western Reptiles and Amphibians*.

[485] Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.

Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **MV 4.3-7** (surveys to capture and relocate special-status reptiles) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 677 acres (71%) and temporary disturbance of approximately 71 acres (7%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 212 acres (22%) of suitable habitat on site would not be impacted and approximately 3,726 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered an unavoidable significant impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this EIR. In addition to the mitigation measures described above, a total of ~~6,113~~3,726 acres of ~~potential~~suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

San Bernardino ringneck snake (*Diadophis punctatus modestus*)**.** The San Bernardino ringneck snake is a California Special Animal. The ringneck snake is found in moist habitats, including woodlands, hardwood and conifer forest, grassland, sage scrub, chaparral, croplands/hedgerows, and gardens.[486] San Bernardino ringneck snakes were not trapped or otherwise observed during surveys conducted on portions of the Specific Plan area in 2004 and 2006.[487] Suitable habitat occurs at the project site in association with scrub, chaparral, riverbank and oak

[486] NatureServe, " An Online Encyclopedia of Life." Stebbins, *Western Reptiles and Amphibians*.

[487] Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.

woodland habitats, and San Bernardino ringneck snake is presumed to occur in portions of the site supporting these habitat types. Construction-related activities could result in direct impacts to individual animals. In order to reduce impacts to this subspecies, the project applicant would implement two mitigation measures designed to capture and relocate animals away from the work area prior to construction. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the subspecies. In addition, the project applicant would conduct biological monitoring during ground disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Applicable mitigation measures are **MV 4.3-7** (surveys to capture and relocate special-status reptiles) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce the impacts to the San Bernardino ringneck to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 747 acres (62%) and temporary disturbance of approximately 115 acres (10%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 338 acres (28%) of suitable habitat on site would not be impacted and approximately 6,060 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered an unavoidable significant impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this EIR. In addition to the mitigation measures described above, a total of 6,~~113~~060 acres of ~~potential~~suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

Coast patch-nosed snake (*Salvadora hexalepis virgultea*)**.** The coast patch-nosed snake is listed as a California Species of Special Concern. It occupies desert scrub, coastal chaparral, washes, sandy flats, and rocky areas. Coast patch-nosed snakes were not trapped or otherwise observed during surveys conducted on portions of the Specific

Plan area in 2004 and 2006.[488] The project area is located towards the northern extent of the subspecies' range,[489] and based on the CNDDB, the coast patch-nosed snake has been documented only south of the project area. Suitable habitat occurs in association with scrub habitat on site, and coast patch-nosed snake is presumed to occur in areas supporting this habitat type. Construction-related activities could result in direct impacts to individual animals. In order to reduce impacts to this species, the project applicant would implement a series of mitigation measures designed to capture and relocate animals away from the work area prior to construction. The captured animals would be handled by qualified biologists and placed in a pre-approved area capable of supporting the species. In addition, the project applicant would conduct biological monitoring during ground disturbing activities in an effort to salvage animals that may be uncovered during construction activities. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures are **MV 4.3-7** (surveys to capture and relocate special-status reptiles) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce this impact to the coast patch-nosed snake to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 677 acres (71%) and temporary disturbance of approximately 71 acres (7%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 212 acres (22%) of suitable habitat on site would not be impacted and approximately 3,726 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR concluded that the substantial loss of habitat, and potential impacts to individuals of this species, would be considered an unavoidable significant impact; however, the mitigation proposed in the Newhall Ranch Specific Plan Program EIR was not as extensive as the mitigation recommended in this EIR. In addition to the mitigation measures described above, a total of ~~6,113~~3,726 acres of ~~potential~~suitable habitat will be protected and managed in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area. Additional mitigation to that in the Newhall Ranch Specific Plan Program EIR includes **MV 4.3-24** (preservation of 616.3 acres of coastal scrub on site within Open Area and/or off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); **MV 4.3-28** (Oak Resource Management Plan identifying areas suitable for oak woodland enhancement and creation); and **MV 4.3-30** (grading and construction

488 Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.
489 Stebbins, *Western Reptiles and Amphibians*.

activities should begin in disturbed areas and avoid isolating patches of vegetation). This additional open space would reduce impacts to a level that is adverse, but not significant. Also, see **Wildlife Habitat Loss** for a discussion of project-related impacts to special-status wildlife due to habitat loss.

South coast garter snake (*Thamnophis sirtalis*). The south coast garter snake is a California Species of Special Concern. No focused surveys have been conducted for this species, and no observations have been noted in previous wildlife surveys for other riparian and aquatic species.[490] ~~Natural~~ This species is very uncommon, but natural history records for the south coast garter snake in California include sightings from Santa Clara River Valley (Ventura County), south to San Pasqual (San Diego County).[491] Suitable habitat for the species occurs on-site in association with marsh, riparian and adjacent habitats. The removal of riparian vegetation and construction activities associated with the proposed bridge and/or bank protection could result in impacts to individual south coast garter snakes. Impacts to the south coast garter snake would be potentially significant, depending on the number and extent of this species that may be disturbed or removed. Implementation of proposed Mitigation Measures **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas), **MV 4.3-9** (development of a Stream Crossing and Diversion Plan), **MV 4.3-10** (installation of structures within the riverbed not to impair movement of aquatic life)**, MV 4.3-11** (regulating stream diversion bypass channels and dewatering), **MV 4.3-13** (prevention of mud and pollutants from entering streams and storm flows)**,** and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities),would reduce impacts to the species to a less than significant level.

Implementation of the proposed project would also result in the permanent loss of approximately 41 acres (15%) and temporary disturbance of approximately 48 acres (18%) of habitat for this species within the Mission Village project site. Approximately 182 acres (67%) of suitable habitat on site would not be impacted and approximately 833 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although the project would affect a relatively small amount of of south coast garter snake habitat, the species is quite rare in Southern California, where urbanization has caused substantial habitat loss. Because the project would contribute to this trend, its impact on the species would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

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490 SMEA, *Sensitive Aquatic Species Survey*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part II*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part III*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part IV*; Aquatic Consulting Services, Inc., *Aquatic Surveys along the Santa Clara River; Part I;* Impact Sciences, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, Newhall Ranch, Valencia, California*; Compliance Biology, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, River Village Project*; Impact Sciences, Inc., *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians within the Natural River Management Plan Area, Valencia, California*; Ecological Sciences, Inc., "Results of Focused Arroyo Toad Surveys, Castaic Creek" (2004).

491 NatureServe, " An Online Encyclopedia of Life."

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Grasshopper sparrow (*Ammodramus savannarum*). The grasshopper sparrow is a California Species of Special Concern. The species frequents dense, dry or well-drained grassland, especially native grassland with a mix of grasses and forbs for foraging and nesting. Grasshopper sparrows require fairly continuous native grassland areas with occasional taller grasses, forbs, or shrubs for song perches.[492] No observations of the grasshopper sparrow have been made within the project area, but potential habitat exists on site. ~~Depending on the number and extent of this species'~~ The Project area is just south of the southern edge of the portion of this species' summer breeding range, which occurs at approximately the Los Angeles/Kern County boundary. If it were to nest on site, depending on the number and extent of this species' bird nests that may be disturbed or removed, the loss of active nests would be a potentially significant impact. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of Mitigation Measures **MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 53 acres (65%) and temporary disturbance of approximately 13 acres (16%) of habitat for this species within the Mission Village project site. Approximately 16 acres (20%) of suitable habitat on site would not be impacted and approximately 660 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although a large percentage of on-site habitat would be impacted, the total impact would only be about 68 acres. Further, this species has not been observed during surveys, and it is not expected to nest on site. In addition, a large amount of suitable grassland habitat would be protected and managed. For these reasons, this permanent loss and temporary disturbance of habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Black-chinned sparrow (*Spizella atrogularis*). The black-chinned sparrow is a California Special Animal and is a USFWS Bird of Conservation Concern. This species is not federally listed as threatened or endangered within any part of its range. The black-chinned sparrow occupies arid brushlands and chaparral, although it occurs less

[492] Garrett and Dunn, *The Birds of Southern California.*

commonly within coastal sage scrub.[493] The species may use open chaparral[494] but usually favors moderately dense but not overgrown chaparral of mixed species and shows in lowest numbers in thick old chaparral on north-facing slopes.[495] The black-chinned sparrow was not detected within the project area or region. The species has not been detected in the area for over a dozen years; it is not believed to occur within the project area. However, the species is likely to occur as a migrant on sage scrub- and chaparral-covered hillsides and a few could remain to breed on more rugged slopes on the borrow and grading sites. Should this species occur on the site, construction-related activities could result in the loss or abandonment of active nests during that year's nesting season. Depending on the number and extent of this species' bird nests that may be disturbed or removed, the loss of active nests would be a potentially significant impact. The project applicant would implement mitigation measures to reduce or avoid impacts to black-chinned sparrow before and during construction. Applicable mitigation measures include previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). This impact would also be reduced through the implementation of **Mitigation Measures MV 4.3-15** (pre-construction surveys for nesting native bird species and construction setbacks for active nests) and **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant. The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Implementation of the proposed project would also result in the permanent loss of approximately 668 acres (79%) and temporary disturbance of approximately 60 acres (7%) of habitat for this species within the Mission Village project site. Approximately 117 acres (14%) of suitable habitat on site would not be impacted and approximately 3,486 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. Although a large amount and percentage of habitat would be impacted, the black-chinned sparrow has not been observed in the project vicinity during surveys and is not expected to nest on site. Further, a large amount of suitable habitat would be preserved and managed. For these reasons, project impacts to sparrow habitat would not have a substantial adverse effect on this species. Therefore, no significant impact would result.

Ringtail~~Cat~~ (*Bassariscus astutus*). The ringtail cat (ringtail) is a California Fully Protected species. Suitable habitat for ringtails consists of broken semi-arid country with a mixture of hardwood forest and shrubland in close

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493 P. Unitt, *San Diego County Bird Atlas. No. 39. October 31, 2004 Proceedings of the San Diego Society of Natural History* (Ibis Publishing Company, 2004); Garrett and Dunn, *The Birds of Southern California*.

494 Garrett and Dunn, *The Birds of Southern California.*

495 Chris R. Tenney, "Black-Chinned Sparrow." The Birds of North America Online, ed. A. Poole, 270 (1997), http://bna.birds.cornell.edu/bna/species/270; Unitt, *San Diego County Bird Atlas*.

association with rocky areas or riparian habitats.[496] Although no ringtails were documented during the mammal survey, Impact Sciences concluded that the species has a moderate potential to occur ~~on site~~ in the project vicinity in dense woodland or riparian areas.[497] However, this species has never been observed in the numerous wildlife surveys conducted in the Specific Plan area, including recent wildlife surveys conducted by Dudek.[498] Should ringtail be present, construction-related activity could result in direct impacts to individual ringtail. Potentially significant impacts to ringtail could occur without mitigation, depending on the number and extent of the species on site that may be disturbed or removed. In order to reduce impacts to this species, the project applicant would implement several mitigation measures designed to avoid impacts, including conducting pre-construction surveys for ringtail in suitable habitat in and within 300 feet of the construction zone and, if the species is observed in the breeding and rearing period, no construction-related activities shall occur within 300 feet until it has been determined that construction activities would not adversely affect the rearing of young. In addition, the project applicant would conduct biological monitoring during ground disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts to badger individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable mitigation measures include **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities), **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation)**,** and **MV 4.3-49** (ringtail avoidance). Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 9 acres (6%) and temporary disturbance of approximately 28 acres (19%) of habitat for this species within the Mission Village project site. Approximately 107 acres (74%) of suitable habitat on site would not be impacted and approximately 1,179 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area. This species is rare in Southern California and its habitat has substantially declined due to urbanization. Because the project would contribute to this trend, its impacts on the ringtail would be significant, absent mitigation. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant.

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496 I. Poglayen-Neuwall and D.E. Toweill. "*Bassariscus astutus*," *Mammalian Species* 327 (1988), 1–8; Zeiner et al., *California's Wildlife: Volume III. Mammals*.

497 Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

498 Dudek and Associates, Inc., *2006 Spineflower Monitoring Pilot Study* (2006); Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*; Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch Specific Plan Area*; Dudek and Associates, Inc., *Biological Resources Technical Report for the Valencia Commerce Center*.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.

Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), California Species of Special Concern***;*** **western small-footed myotis** ***(****Myotis ciliolabrum*)**,** California Special Animal***;*** and **long-legged myotis** *(Myotis volans*)**,** California Special Animal. These bat species have not been observed on the project site, but given the presence of suitable habitat, these species could roost and/or forage on or adjacent to the site. Should active bat roosts be present, construction-related activity could result in the direct loss or abandonment of active roost sites. In order to reduce impacts to this species, the project applicant would implement mitigation measures designed to avoid direct impacts to bat individuals during construction and to establish new day roosts should any existing day roosts be permanently lost as a result of the project. The applicable mitigation measure for impacts during construction is **MV 4.3-18** (pre-construction surveys for active roosts of special-status bats), which requires that, no earlier than 30 days prior to the commencement of construction activities, a pre-construction survey be conducted by a qualified biologist to determine whether active roosts of special-status bats are present on or within 300 feet of the project disturbance boundaries. Should an active maternity roost be identified (the breeding season of native bat species in California generally occurs from April 1 through August 31), the roost shall not be disturbed and construction within 300 feet shall be postponed or halted, at the discretion of the biological monitor, until the roost is vacated and juveniles have fledged, as determined by the biologist. The applicable mitigation measures for permanent loss of roost sites are **MV 4.3-19** (day roost site replacement), which requires the project applicant to prepare and implement a bat roost site creation plan that would establish (an) alternative roost site(s) within suitable preserved open space located at an adequate distance from sources of human disturbance and **MV 4.3-78** (culvert and bridge design to provide roosting habitat for bats), which requires a qualified biologist shall work with the project engineer to identify and incorporate structures into the design that provide suitable roosting habitat for bat species occurring in the project area. Implementation of these mitigation measures would reduce impacts to roosting bats to below a level of significance This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Townsend's big-eared bat, long-legged myotis, and western small-footed myotis forage in essentially the same habitats. Implementation of the proposed project would result in the permanent loss of approximately 752 acres (62%) and temporary disturbance of approximately 119 acres (10%) of foraging habitat for these species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 347 acres (29%) of foraging habitat on site would not be impacted and approximately 6,265 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

Southern grasshopper mouse (*Onychomys torridus*). The southern grasshopper mouse is a California Species of Special Concern. The southern grasshopper mouse is found rangewide in low arid scrub and semi-scrub vegetation,[499] and the subspecies *O. t. ramona* (which is the subspecies designated as a California Species of Special Concern) occurs in grasslands and sparse coastal scrub habitats. The mammal assessment conducted by Impact Sciences did not document the southern grasshopper mouse in the project area.[500] The species also was not captured in pitfall trapping studies in 2004 and 2006 that were conducted primarily to inventory the reptiles and amphibians in the project area.[501] However, this species has the potential to occur on site in scrub and grassland habitat. Should this species occur on site, construction-related activities could result in direct impacts to the individual southern grasshopper mouse. In order to reduce impacts to this species, the project applicant would conduct biological monitoring during ground-disturbing activities, in an effort to salvage animals that may be discovered during construction activities. These measures will reduce impacts southern grasshopper mouse individuals to the extent feasible and practicable. Applicable mitigation measures include the previously incorporated measures **SP 4.6-53** and **SP 4.6-59** (updated surveys for special-status species and consultation with the County and CDFG at important benchmarks). Additional applicable Mitigation Measure **MV 4.3-26** (pre-construction educational meetings, construction-limit staking, and biological monitoring during vegetation clearing and grading activities) would also be implemented. Implementation of these mitigation measures would reduce this impact to a level that is adverse but not significant.

Implementation of the proposed project would also result in the permanent loss of approximately 685 acres (77%) and temporary disturbance of approximately 70 acres (8%) of habitat for this species within the Mission Village project site. Absent mitigation, these impacts would be considered significant. See **Wildlife Habitat Loss** above for a discussion of the mitigation that would reduce these habitat impacts to a level less than significant. Note also that approximately 132 acres (15%) of suitable habitat on site would not be impacted and approximately 2,658 acres would be protected and managed in the River Corridor SMA, High Country SMA, and Salt Creek area.

The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis. See **Wildlife Habitat Loss**, for a discussion of project-related impacts to special-status wildlife due to habitat loss.

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499 D.H. Frank and E.J. Heske. "Seasonal Changes in Space Use Patterns in the Southern Grasshopper Mouse, *Onychomys torridus torridus*," *Journal of Mammalogy* 73 (1992), 292–298; R. McCarty, "*Onychomys torridus*," *Mammalian Species* 59 (1975), 1–5.

500 Impact Sciences, Inc., *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

501 Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.

Impacts to Special-Status Wildlife Species Occurring Downstream of the Project Site

The following special-status wildlife species are known to, or could, occur within the Santa Clara River downstream of the Mission Village project site: Santa Ana sucker, unarmored threespine stickleback, arroyo chub, arroyo toad, California red-legged frog, southwestern pond turtle, and two-striped garter snake. The *Flood Technical Report for the Mission Village Project*[502] found that there would be no significant changes in water flows, velocities, depth, sedimentation or floodplain and channel conditions downstream of the project site as a result of the proposed project (see **Appendix 4.2**). These hydraulic effects were also found to be insufficient to alter the amount, location, and nature of aquatic and riparian habitats in the project area and downstream into Ventura County. The technical analysis further determined that the river would still retain sufficient width to allow natural fluvial processes to continue; consequently the mosaic of habitats in the river that support various sensitive species would be maintained and the population of the species within and immediately adjacent to the river corridor would not be significantly affected. Based on that technical assessment, and the analysis of these species and their habitat described in the PACE 2006 report[503] (these conclusions were reached by ENTRIX based upon the PACE report), no significant impacts to downstream populations of these special-status wildlife species are expected to occur.

(i) Sensitive Plant Communities

As discussed under ~~**subsection**~~**Subsection 7.c,** CDFG has identified as sensitive four of the plant communities found within the Mission Village project site: big sagebrush scrub, Mexican elderberry scrub, southern willow scrub, and southern cottonwood–willow riparian. In addition to those vegetation communities ranked as G1, G2, or G3, riparian and wetland vegetation communities on site are considered special-status, including herbaceous wetland, river wash, alluvial scrub, giant reed, arrow weed scrub, and mulefat scrub. Given the occurrence of *Artemisia tridentata* ssp. *parishii* (which is considered special status by the County of Los Angeles) within the big sagebrush scrub community, this EIR treats big sagebrush scrub as a special-status vegetation community as well. Impacts to these sensitive plant communities are discussed below.

Herbaceous Wetland (NA/NA[504]). The project site contains 4.0 acres of herbaceous wetland. The proposed project would result in the permanent conversion of 0.4 acre of herbaceous wetland, and 1.0 acre would be temporarily disturbed by bank stabilization and/or haul roads; however, this area would be revegetated following completion of construction. Of the total 1.2 acres present within the boundaries of the River Corridor SMA/SEA 23, 0.4 acre would be developed and 0.8 acre would be temporarily disturbed. Given the riparian nature of this plant community,

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502 PACE, *Flood Technical Report for the Mission Village Project.*

503 PACE, *Flood Technical Report for the Mission Village Project.*

504 A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

the loss of herbaceous wetland would be a significant impact. To address this impact, the following mitigation measures are recommended:

- **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-63** (habitat restoration/enhancement in the River Corridor SMA/SEA 23; 1:1 riparian resource replacement),
- **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),
- **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23),
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and
- **MV 4.3-31** through **MV 4.3-41** (wetlands mitigation plan and riparian restoration activities on the project site).

Once implemented, these mitigation measures would reduce impacts to this plant community to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR, which analyzed impacts on this plant community as part of its assessment of the overall loss of wildlife habitat (~~**subsection**~~Subsection 9.b.1.(b), Wildlife Habitat Loss).

River Wash (NA/NA). The project site contains 115.1 acres of river wash. The proposed project would result in the permanent conversion of 9.7 acres of river wash. An additional 10.0 acres would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. Of the total acreage present within the boundaries of the River Corridor SMA/SEA 23, 2.3 acres would be developed and 5.5 acres would be temporarily disturbed. The river wash in the project study area occurs in CDFG and Corps jurisdiction where it is associated with (1) wetlands, (2) state and/or U.S. waters, and (3) seasonally wetted portions of river wash. These areas may provide breeding habitat for aquatic species. Because river wash is a riparian vegetation community, the losses resulting from the project would represent a significant impact on biological resources absent

mitigation. Impacts to this vegetation community also would be considered significant due to their potential to affect numerous sensitive species, which use this habitat, including the unarmored threespine stickleback, arroyo chub, arroyo toad, and others. To address this impact, the following mitigation measures are recommended:

- **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-63** (habitat restoration/enhancement in the River Corridor SMA/SEA 23; 1:1 riparian resource replacement),
- **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),
- **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23),
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and
- **MV 4.3-31** through **MV 4.3-41** (wetlands mitigation plan and riparian restoration activities on the project site).

Once implemented, these mitigation measures would reduce impacts to this plant community to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR, which analyzed impacts to this plant community as part of its assessment of the overall loss of wildlife habitat (see **~~subsection~~Subsection 9.b.1.(b), Wildlife Habitat Loss**).

Alluvial Scrub (NA/NA). The project site contains 0.5 acre of alluvial scrub. The proposed project would result in no permanent conversion of alluvial scrub; however, 0.5 acre would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. The alluvial scrub in the project study area occurs in CDFG and Corps jurisdiction where it is associated with (1) wetlands, (2) state and/or U.S. waters, and (3) seasonally wetted portions of alluvial scrub. These areas may provide breeding habitat for aquatic species. Because alluvial scrub is a riparian vegetation community, the losses resulting from the project would represent a significant impact on biological resources absent mitigation. Impacts to this vegetation community also

would be considered significant due to their potential to affect numerous sensitive species, which use this habitat, including the unarmored threespine stickleback, arroyo chub, arroyo toad, and others. To address this impact, the following mitigation measures are recommended:

- **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-63** (habitat restoration/enhancement in the River Corridor SMA/SEA 23; 1:1 riparian resource replacement),
- **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),
- **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23),
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and
- **MV 4.3-31** through **MV 4.3-41** (wetlands mitigation plan and riparian restoration activities on the project site).

Once implemented, these mitigation measures would reduce impacts to this plant community to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR, which analyzed impacts to this plant community as part of its assessment of the overall loss of wildlife habitat (see **~~subsection~~Subsection 9.b.1.(b), Wildlife Habitat Loss**).

Big Sagebrush Scrub (35.110.00). The project site contains 24.6 acres of big sagebrush scrub, of which 15.8 acres would be developed and 6.5 acres would be temporarily disturbed by bank stabilization and/or haul roads (but would be revegetated following completion of construction). Of the total acreage present within the boundaries of the River Corridor SMA/SEA 23, 0.8 acre would be developed and 0.2 acre would be temporarily disturbed. Given that *Artemisia tridentata* ssp. *parishii* (which is considered sensitive by the County of Los Angeles) occurs within the big sagebrush scrub community, and that this plant community is considered sensitive by the CDFG, the loss of big

sagebrush scrub would be a significant impact. Implementation of the following mitigation measures will address these impacts:

- **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-63** (habitat restoration/enhancement in the River Corridor SMA/SEA 23; 1:1 riparian resource replacement),
- **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),
- **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23),
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and
- **MV 4.3-31** through **MV 4.3-41** (wetlands mitigation plan and riparian restoration activities on the project site).

Once implemented, these mitigation measures would reduce impacts to big sagebrush scrub to a less than significant level. The Newhall Ranch Specific Plan Program EIR analyzed this impact as part of its assessment of the overall loss of wildlife habitat (see **~~subsection~~Subsection 9.b.1.(b), Wildlife Habitat Loss**).

Giant Reed (42.080.00). The project site contains 5.6 acres of giant reed. The proposed project would not result in the permanent conversion of giant reed; however, 0.1 acre would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. Of the total acreage present within the boundaries of the River Corridor SMA/SEA 23, 0.1 acre would be temporarily disturbed. Given the riparian nature of this plant community, the impacts to giant reed would be significant. To address this impact, the following mitigation measures are recommended:

- **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-63** (habitat restoration/enhancement in the River Corridor SMA/SEA 23; 1:1 riparian resource replacement),

- **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),
- **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23),
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and
- **MV 4.3-31** through **MV 4.3-41** (wetlands mitigation plan and riparian restoration activities on the project site).

Once implemented, these mitigation measures would reduce impacts to this plant community to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR, which analyzed impacts to this plant community as part of its assessment of the overall loss of wildlife habitat (see ~~**subsection**~~**Subsection 9.b.1.(b), Wildlife Habitat Loss**).

***Arrow Weed Scrub (63.710.00*).** The project site contains 7.6 acres of arrow weed scrub. The proposed project would result in the permanent conversion of 4.9 acres of arrow weed scrub. An additional 2.0 acres would be temporarily disturbed by bank stabilization and/or haul roads, but would be revegetated following completion of construction. Of the total acreage present within the boundaries of the River Corridor SMA/SEA 23, 2.1 acres would be developed and 1.1 acres would be temporarily disturbed. Given the riparian nature of this plant community, the impacts to arrow weed scrub would be significant. To address this impact, the following mitigation measures are recommended:

- **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-63** (habitat restoration/enhancement in the River Corridor SMA/SEA 23; 1:1 riparian resource replacement),
- **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),

- **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23),
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and
- **MV 4.3-31** through **MV 4.3-41** (wetlands mitigation plan and riparian restoration activities on the project site).

Once implemented, these mitigation measures would reduce impacts to this plant community to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR, which analyzed impacts to this plant community as part of its assessWithin 30 ment of the overall loss of wildlife habitat (see ~~**subsection**~~**Subsection 9.b.1.(b),Wildlife Habitat Loss**).

Mexican Elderberry Scrub (63.410.00). The project site contains 5.8 acres of Mexican elderberry scrub. Given that this plant community is relatively uncommon in the project area and is considered sensitive by the CDFG, without mitigation, the permanent loss of 5.3 acres, in addition to the temporary loss of 0.3 acre of Mexican elderberry scrub would be a significant impact. To address this impact, the following mitigation measures are recommended:

- **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-63** (habitat restoration/enhancement in the River Corridor SMA/SEA 23; 1:1 riparian resource replacement),
- **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),
- **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23),
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),

- **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and
- **MV 4.3-31** through **MV 4.3-41** (wetlands mitigation plan and riparian restoration activities on the project site).

Once implemented, these mitigation measures would reduce impacts to this plant community to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Mulefat Scrub (63.410.00). The project site contains 1.8 acres of mulefat scrub, of which 0.5 acre would be developed and 1.2 acres would be temporarily disturbed by bank stabilization and/or haul roads (but would be revegetated following completion of construction). Of the total acreage present within the boundaries of the River Corridor SMA/SEA 23, 0.2 acre would be developed and 0.4 acre would be temporarily disturbed. Given the biological value of this riparian habitat, and because this plant community is considered sensitive and is under the jurisdiction of the CDFG, the loss of mulefat scrub would be a significant impact. To address this impact, the following mitigation measures are recommended:

- **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-63** (habitat restoration/enhancement in the River Corridor SMA/SEA 23; 1:1 riparian resource replacement),
- **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),
- **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23),
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and

- **MV 4.3-31** through **MV 4.3-41** (wetlands mitigation plan and riparian restoration activities on the project site).

Once implemented, these mitigation measures would reduce impacts to this plant community to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Southern Willow Scrub (61.208.00). The project site contains 1.5 acres of southern willow scrub, of which 0.7 acre would be developed and 0.1 acre would be temporarily disturbed by bank stabilization and/or haul roads (but would be revegetated following completion of construction). Of the total acreage present within the boundaries of the River Corridor SMA/SEA 23, 0.1 acre would be developed and <0.1 acre would be temporarily disturbed. Given the biological value of this habitat, and because this plant community is considered sensitive and is under the jurisdiction of the CDFG, the loss of southern willow scrub would be a significant impact. To address this impact, the following mitigation measures are recommended:

- **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-63** (habitat restoration/enhancement in the River Corridor SMA/SEA 23; 1:1 riparian resource replacement),
- **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),
- **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23),
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and
- **MV 4.3-31** through **MV 4.3-41** (wetlands mitigation plan and riparian restoration activities on the project site).

Once implemented, these mitigation measures would reduce impacts to this plant community to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

Southern Cottonwood–Willow Riparian (61.130.02). The project site contains 109.2 acres of southern cottonwood–willow riparian forest, of which 6.4 acres would be developed and 22.4 acres would be temporarily disturbed by bank stabilization and/or haul roads (but would be revegetated following completion of construction). Of the total acreage present within the boundaries of the River Corridor SMA/SEA 23, 4.8 acres would be developed and 14.1 acres would be temporarily disturbed. Given the biological value of this riparian habitat, and because this plant community is considered sensitive and is under the jurisdiction of the CDFG, the loss of southern cottonwood willow riparian forest would be a significant impact. To address this impact, the following mitigation measures are recommended:

- **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-63** (habitat restoration/enhancement in the River Corridor SMA/SEA 23; 1:1 riparian resource replacement),
- **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),
- **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23),
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and
- **MV 4.3-31** through **MV 4.3-41** (wetlands mitigation plan and riparian restoration activities on the project site).

Once implemented, these mitigation measures would reduce impacts to this plant community to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR.

(j) Jurisdictional Resources

The proposed project would result in the permanent fill of 20.76 acres and the temporary disturbance of an additional 12.06 acres of drainages under the jurisdiction of the Corps and CDFG (**Figures 4.3-11 through 4.3-11-A5, Impacted Jurisdictional Resources**). Areas to be permanently filled include 0.27 acre within Exxon Canyon,

2.69 acres within Lion Canyon, 6.56 acres within Magic Mountain Canyon, 1.30 acres within Dead-End Canyon, 4.03 acres within Middle Canyon, and 5.91 acres within the Santa Clara River and in the off-site areas: 0.32 acre within Unnamed Canyon 1, 0.31 acre within Unnamed Canyon 2, 0.69 acre within Unnamed Canyon D, and 0.19 acre within Mid Martinez Canyon.

The proposed project would also result in impacts to 2.38 acres (permanent impacts) and 13.25 acres (temporary impacts) of CDFG-only jurisdictional areas. Areas to be permanently filled include 2.16 acres within the Santa Clara River and 0.17 acre within Unnamed Canyon 2. The fill/removal/disturbance of these jurisdictional resources would be a significant impact.

Within the Corps and/or CDFG jurisdictional boundaries, the proposed project would affect the following vegetation communities and land covers:

- Santa Clara River: primarily river wash, southern cottonwood-willow riparian forest, California sagebrush scrub, coast live oak woodland, herbaceous wetlands, arrow weed scrub, giant reed grasslands, agriculture, and disturbed land.
- Exxon Canyon: primarily California sagebrush scrub, California sagebrush scrub-purple sage and California buckwheat, undifferentiated chaparral, isolated pockets of annual grasslands, and disturbed land.
- Lion Canyon: primarily California sagebrush scrub and chaparral.
- Dead-End Canyon: primarily California sagebrush scrub, California sagebrush scrub-purple sage and California buckwheat, undifferentiated chaparral, isolated pockets of annual grasslands, riparian, and disturbed land.
- Middle Canyon: primarily California sagebrush scrub, California sagebrush scrub-purple sage and California buckwheat, undifferentiated chaparral, isolated pockets of annual grasslands, and disturbed land.
- Mid-Martinez Canyon: primarily California sagebrush scrub, annual grasslands, and disturbed land.
- Magic Mountain Canyon: primarily California sagebrush scrub, California sagebrush scrub-purple sage and California buckwheat, undifferentiated chaparral, isolated pockets of annual grasslands, agriculture, and disturbed land.
- Unnamed Canyon 1: primarily California sagebrush scrub, California sagebrush scrub-California buckwheat, undifferentiated chaparral, and annual grasslands.

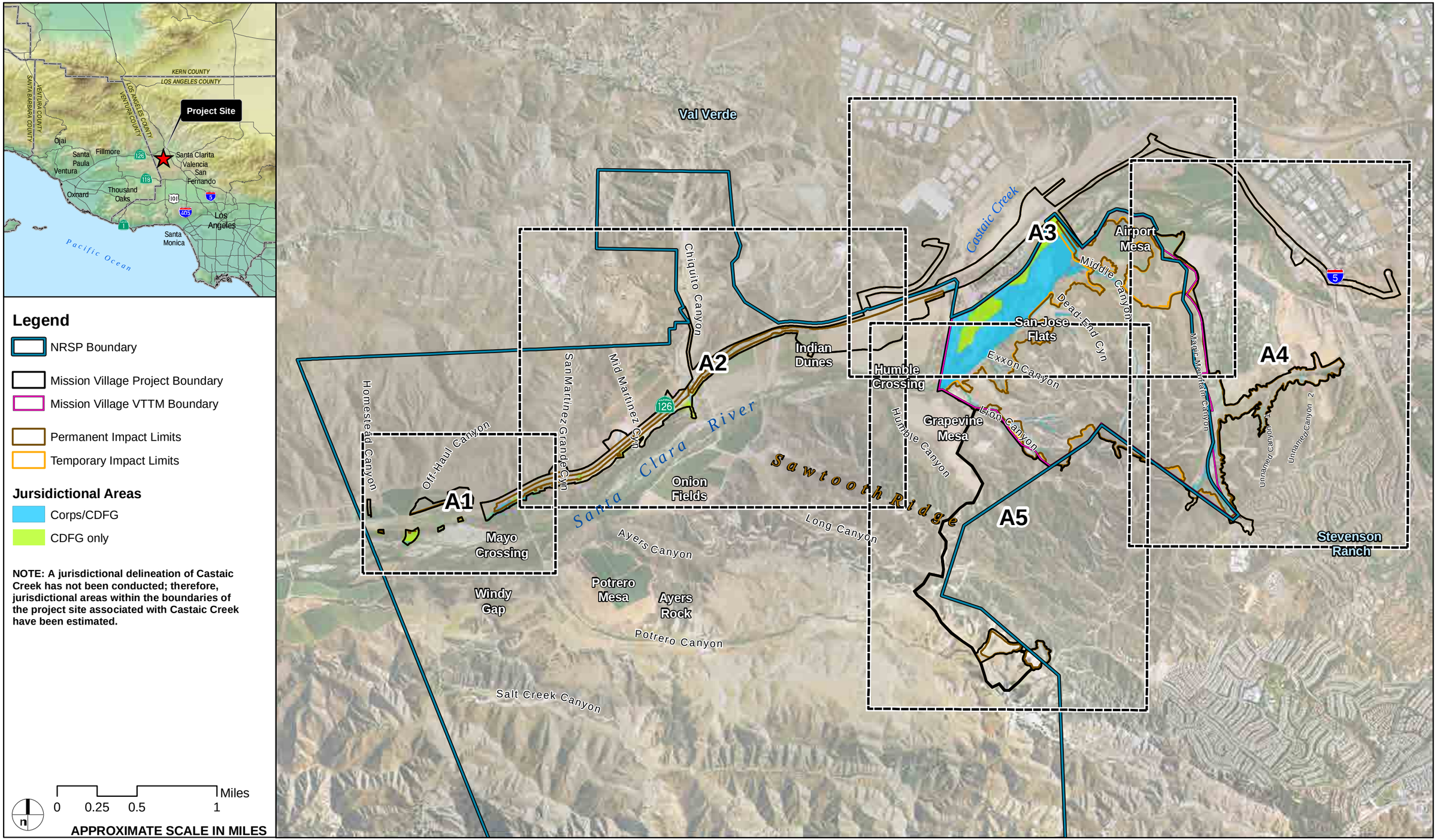

IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-11

Mission Village EIR

DUDEK

Impacted Jurisdictional Resources

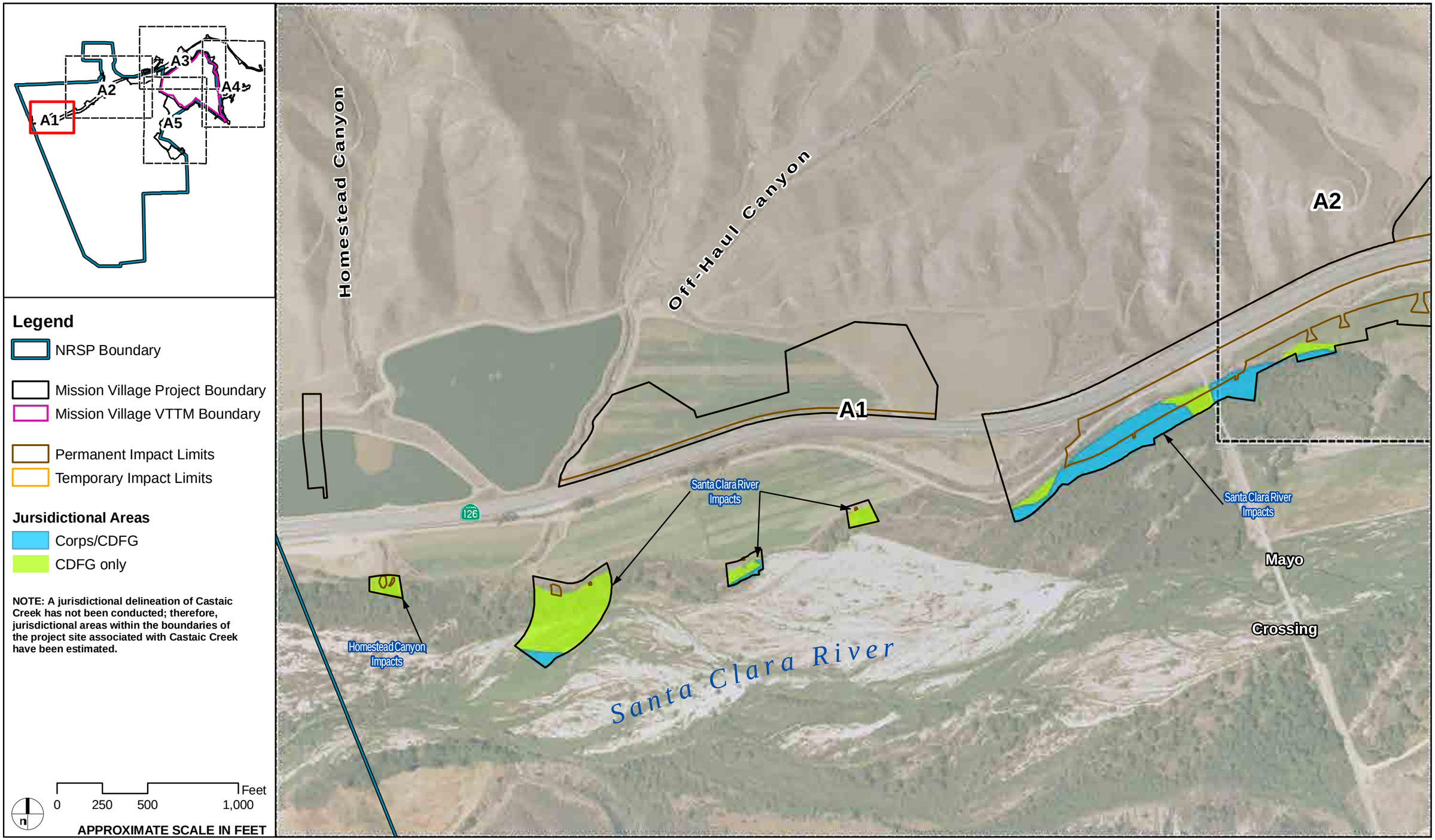

IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-11-A1

Mission Village EIR

DUDEK

Impacted Jurisdictional Resources

IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-11-A2

Mission Village EIR

Impacted Jurisdictional Resources

DUDEK

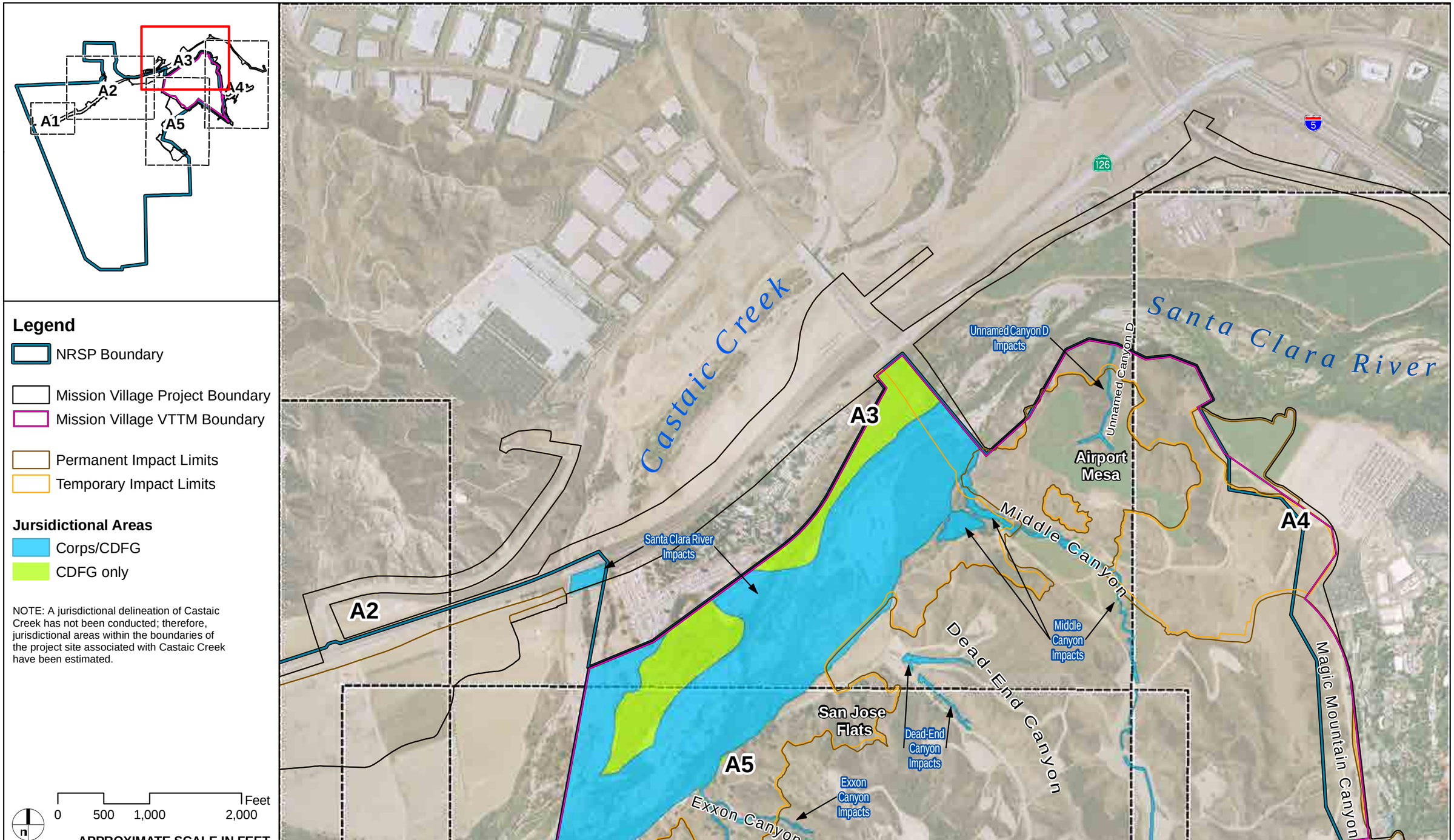

IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-11-A3

Mission Village EIR

DUDEK

Impacted Jurisdictional Resources

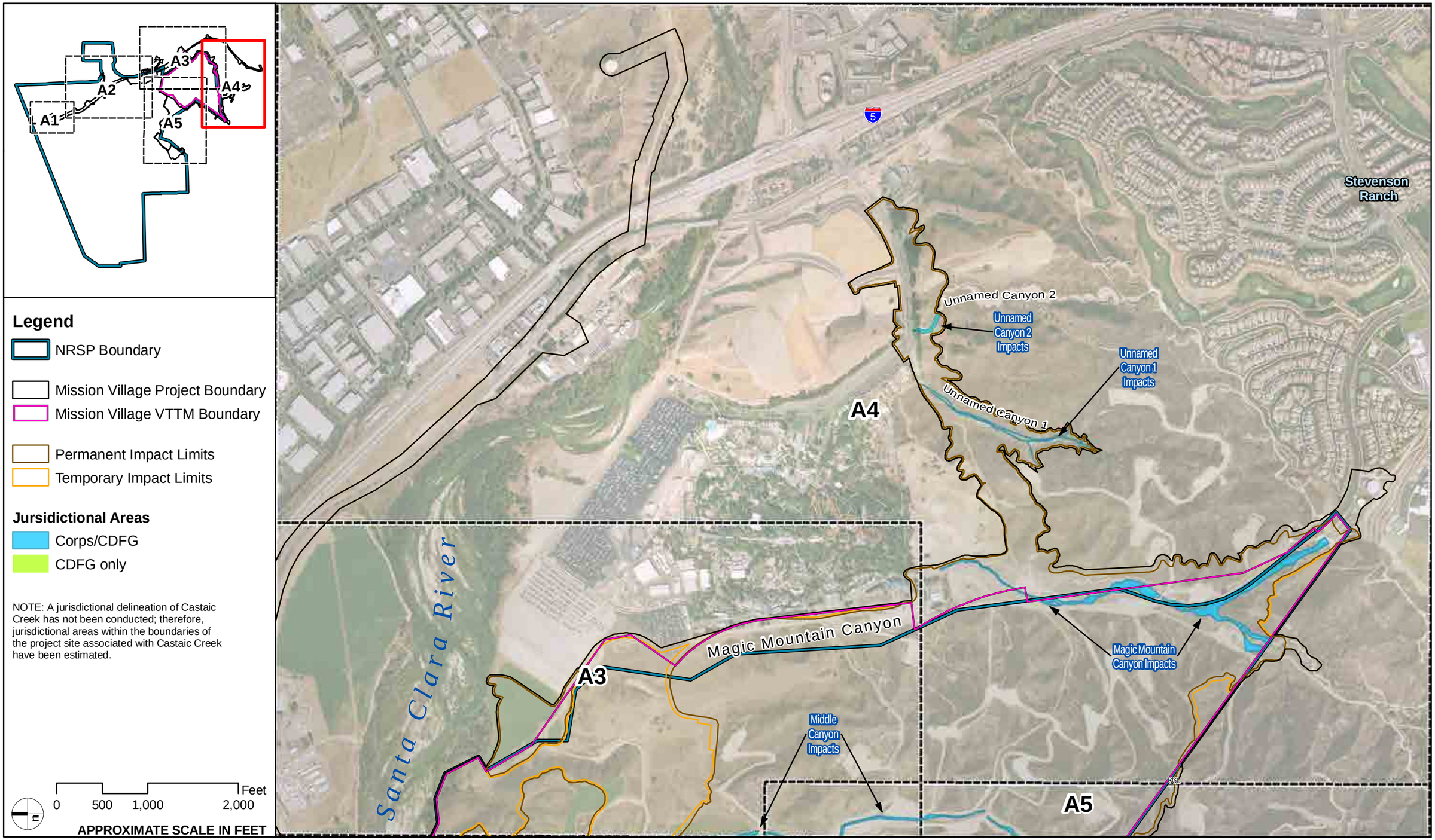

IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-11-A4

Mission Village EIR

DUDEK

Impacted Jurisdictional Resources

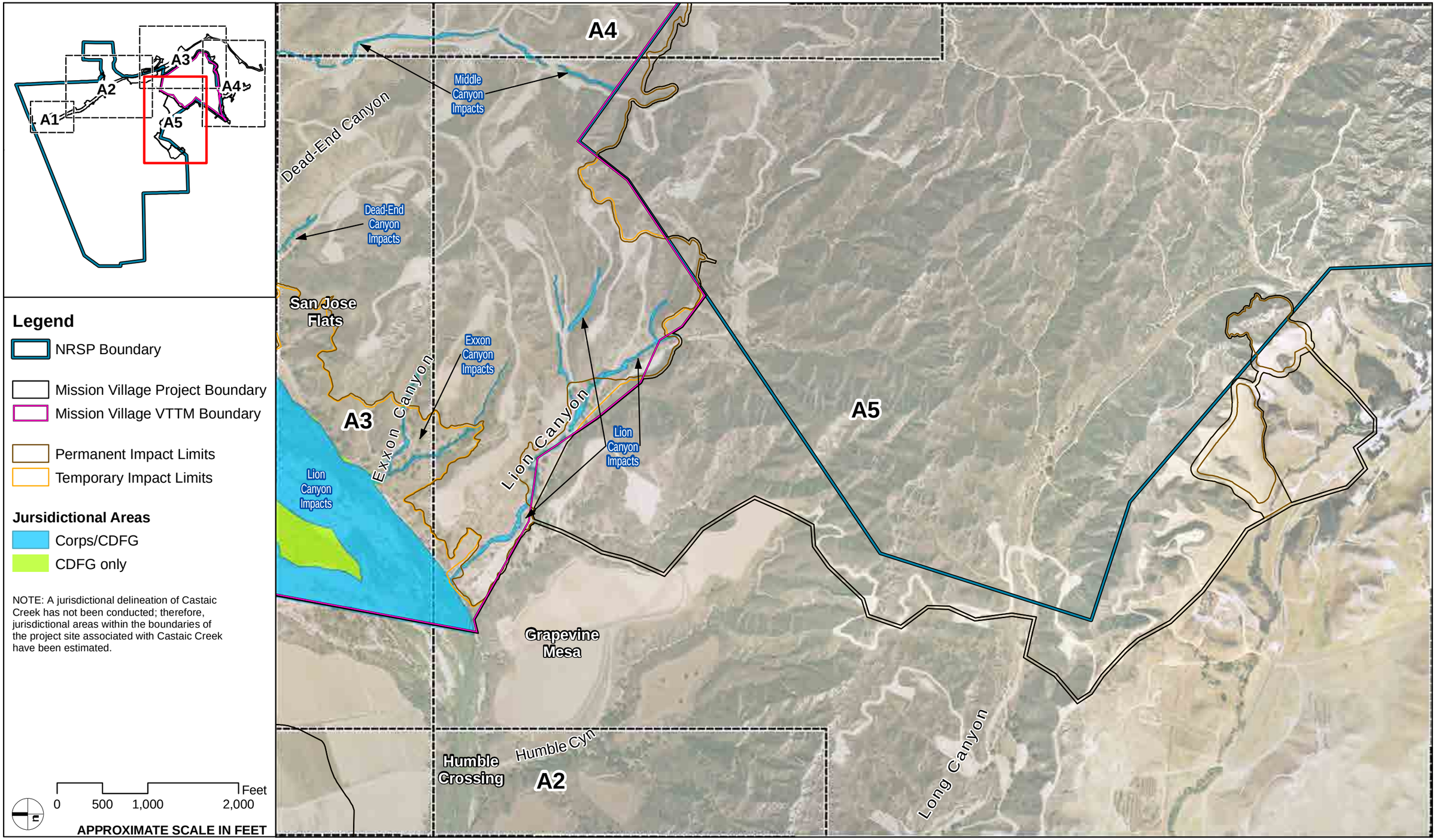

IMAGE SOURCE: DigitalGlobe 2007

FIGURE 4.3-11-A5

DUDEK

Mission Village EIR

Impacted Jurisdictional Resources

- Unnamed Canyon 2: primarily California sagebrush scrub, California sagebrush scrub-California buckwheat, annual grasslands, riparian, and developed and disturbed land.
- Unnamed Canyon D: primarily California sagebrush scrub, annual grasslands, riparian, and agriculture.
- Agricultural ditch: disturbed land.

To address the project's potential impacts to resources within the jurisdiction of the Corps and/or CDFG, the following mitigation measures are recommended:

- **SP 4.6-1** through **SP 4.6-16** and **SP 4.6-63** (habitat restoration/enhancement in the River Corridor SMA/SEA 23; 1:1 riparian resource replacement),
- **SP 4.6-17** (standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23),
- **SP 4.6-18** and **SP 4.6-19** (transition areas along the River Corridor SMA/SEA 23),
- **SP 4.6-20** (marking and inspection of grading perimeters; avoiding inadvertent impacts to riparian resources in the River Corridor SMA/SEA 23),
- **SP 4.6-21** through **SP 4.6-26** (open space dedication of the River Corridor SMA/SEA 23), and
- **MV 4.3-1** (restriction of construction activities in the riverbed to specified areas),
- **MV 4.3-23** (development of a conceptual wetlands mitigation plan),
- **MV 4.3-30** (grading and construction activities should begin in disturbed areas and avoid isolating patches of vegetation), and
- **MV 4.3-31** through **MV 4.3-41** <u>and **MV 4.3-80**</u> (wetlands mitigation plan and riparian restoration activities on the project site).

Once implemented, these mitigation measures would reduce impacts to jurisdictional resources to below a level of significance. This finding is consistent with the findings of the Newhall Ranch Specific Plan Program EIR**.**

The Mission Village applicant is seeking approval of a Clean Water Act (CWA) long-term, individual Section 404 permit from the Corps and a Master Streambed Alteration Agreement under Fish and Game Code section 1600, *et seq*. from CDFG for the Newhall Ranch Specific Plan area, including the Mission Village site. The environmental review for these permits is in process at this time and a Final EIS/EIR was released for final public comment in June

2010. The applicant would also be subject to all measures contained in these agreements/permits, if approved. Although it is expected that these measures would feasibly mitigate impacts to jurisdictional resources, they cannot be relied upon for CEQA compliance because they have not yet been adopted by the resource agencies. Therefore, consistent with the requirements of CEQA, the applicant shall, at a minimum, also implement the above measures.

(2) Indirect Impacts

Indirect impacts to biological resources would occur in those habitat areas surrounding the development envelope, as well as in remaining habitat areas within the proposed development area, both during and after the completion of the proposed project. Indirect impacts on biological resources as a result of project development on the site can include the following: (1) increased lighting and glare effects on wildlife species in remaining and adjacent open space areas; (2) a potential increase in pesticides, herbicides and pollutants into adjacent drainages, creeks, rivers and wetlands, as a result of landscaping irrigation and stormwater runoff; (3) an increase in non-native plant and wildlife species that are adapted to more urban environments and can out compete native species for available resources, thus reducing the distribution and population of native species; (4) increased human activity and domestic animal presence that can disturb natural habitat areas and displace wildlife populations; and (5) erosion and dust resulting from construction/grading activities.

Indirect impacts associated with the proposed project are not quantifiable, but are reasonably foreseeable. As such, the following discussion identifies expected types of secondary impacts and their relative magnitude, such that decision makers and the general public are aware of the indirect impact potential associated with implementation of the proposed project. This type of analysis is consistent with the requirements of CEQA.

(a) Increased Light and Glare

The development of a residential community would increase the number of nighttime light and glare sources on the site over current levels, which are very low to non-existent. Nighttime lighting can disturb resting and foraging behavior and can potentially alter breeding cycles and nesting behavior. If uncontrolled, such light where proximal to riparian areas associated with the Santa Clara River could adversely impact the composition and behavior of the animal species that occur in the area. Because of the potential disruption to breeding, movement, and foraging behavior of wildlife species, without mitigation, increased nighttime lighting and glare associated with the proposed project is a significant impact. Implementation of Newhall Ranch Specific Plan Program EIR Mitigation Measure 4.6-56 would reduce potential impacts resulting from increased light and glare to below a level of significance.

(b) Landscaping Irrigation and Stormwater Runoff

Overirrigation of landscaped areas, especially when combined with the use of chemicals, could lead to runoff that contains pesticides, herbicides, nitrates, and other contaminants. Any runoff that flows into the river corridor

containing high levels of nutrients, particularly fertilizers and waste products such as nitrogen and phosphorous, could result in eutrophication (excessive nutrient buildup). This, in turn, could result in a depletion of available oxygen due to increased biological oxygen demand (BOD) and reduce available dissolved oxygen for aquatic organisms. Other chemicals, pesticides, and herbicides could also adversely affect aquatic systems. In addition, paved surfaces would contribute runoff into the river corridor during storm events. Depending on the magnitude and frequency of storm events and the overall level of water quality, this runoff could cause increased eutrophication, depleted oxygen levels, long-term buildup of toxic compounds and heavy metals, and other adverse effects to biological resources associated with aquatic systems.

Project Design Features (PDFs) incorporated into the project to address water quality and hydrologic impacts include site design, source control, treatment control, hydromodification control, and Best Management Practices (BMPs). Stormwater runoff from all urban areas within the proposed project will be routed to bioretention areas, media filtration, and/or dry extended detention basin treatment control PDFs. Catch basin inserts will also be used in high use parking lots to address trash and debris and petroleum hydrocarbons. A detailed discussion of the PDFs is contained in **Appendix 4.22, Draft Mission Village Water Quality Technical Report.**[505] Collectively, the water quality treatment control PDFs will treat the pollutants of concern in runoff from the project site.

The effectiveness of these proposed measures to maintain water quality in the Santa Clara River was analyzed by GeoSyntec Consultants.[506] The following summarizes the efficacy of these PDFs in reducing impacts on surface water quality; further details of each of these analyses are included in **Appendix 4.22**.

***Sediments*:** MS4 Permit, Construction General Permit, Dewatering General Permit, and SUSMP-compliant BMPs will be incorporated into the project to address sediment in both the construction phase and post-development phase. Mean total suspended solids concentration and loads are predicted to be less in the post-development condition than in the existing conditions. Turbidity in stormwater runoff will be controlled through implementation of a Construction SWPPP and will be permanently reduced through the stabilization of erodible soils with development. On this basis, the impact of the project on biological resources due to increased sediments is considered less than significant.

Nutrients (Phosphorous and Nitrogen (Nitrate+Nitrite-N and Ammonia-N)): MS4 Permit, Construction General Permit, Dewatering General Permit, and SUSMP-compliant BMPs will be incorporated into the project to address nutrients in both the construction phase and post-development. Although average annual loads for total phosphorous, nitrate plus nitrite, and ammonia are predicted to increase from the project (due to increased average annual runoff volumes), average concentrations are predicted to decrease. Average concentrations are also predicted

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[505] GeoSyntec Consultants, *Mission Village Water Quality Technical Report* (2006).

[506] GeoSyntec Consultants, *Mission Village Water Quality Technical Report* (**Appendix 4.3**).

to be below or in the low range of observed wet weather values for Santa Clara River Reach 5. Average nitrate-N plus nitrite-N and ammonia-N concentrations are predicted to decrease with development to values well below LA Basin Plan objectives and TMDL wasteload allocations. The predicted nutrient concentrations are not expected to cause increased algae growth. On this basis, the impact of the project on biological resources due to increased nutrients is considered less than significant.

***Trace Metals*:** MS4 Permit, Construction General Permit, General Dewatering Permit, and SUSMP-compliant BMPs will be incorporated into the project to address trace metals in both the construction phase and post-development phase. The average annual trace metal concentrations are predicted to decrease with project development (dissolved copper are predicted to be unchanged). Average annual trace metal loads are predicted to increase due to the increase in average annual runoff volume. Predicted average annual concentrations of dissolved copper, total lead, dissolved zinc, and total aluminum are below benchmark Basin Plan objectives, California Toxics Rule (CTR) criteria, and National Ambient Water Quality Criteria (NAWQC) criteria. Cadmium is not expected to be present at significant levels in runoff discharges from the project. On this basis, the impact of the project on biological resources due to increased trace metals is considered less than significant.

***Chloride*:** MS4 Permit, Construction General Permit, Dewatering General Permit, and SUSMP-compliant BMPs will be incorporated into the project to address chloride loads (via volume reduction) in both the construction phase and post-development phase. The mean predicted concentration and load of chloride is predicted to increase with development, although the predicted concentration is well below the LA Basin Plan objective and is near the low end of the range of observed values in the Santa Clara River Reach 5. On this basis, the impact of the project on biological resources due to increased chloride is considered less than significant.

***Pesticides*:** Pesticides in runoff may or may not increase in the post-development phase as a result of landscape applications. Proposed pesticide management practices, including source control, removal with sediments in treatment control PDFs, and advanced irrigation controls, in compliance with the requirements of the MS4 Permit and the SUSMP will minimize the presence of pesticides in runoff. During the Construction phase of the project, erosion and sediment control BMPs implemented per General Permit and General De-Watering Permit requirements will prevent pesticides associated with sediment from being discharged. Final site stabilization will limit mobility of legacy pesticides that may be present in pre-development conditions. On this basis, the impact of the project on biological resources due to increased pesticides is considered less than significant.

***Pathogens*:** Post-development pathogen sources include both natural and anthropogenic sources. The natural sources include bird and mammal excrement. Anthropogenic sources include leaking septic and sewer systems and pet wastes. A reduction in agriculture and open space within the project area will reduce the bacteria produced by wildlife. The project will not include septic systems and the sewer system will be designed to current standards which minimizes the potential for leaks. Thus pet wastes are the primary source of concern. The PDFs will include

source controls and treatment controls which in combination should help to reduce pathogen indicator levels in post-construction stormwater runoff. Pathogens are not expected to occur at elevated levels during the construction-phase of the project. On this basis, the project's impact on biological resources due to increased pathogen and pathogen indicators is considered less than significant.

***Hydrocarbons*:** Hydrocarbon concentrations will likely increase post-development because of vehicular emissions and leaks. In stormwater runoff, hydrocarbons are often associated with soot particles that can combine with other solids in the runoff. Such materials are subject to treatment in the proposed extended detention basins, bioretention areas, and vegetated swales. Source control BMPs incorporated in compliance with the MS4 Permit and the SUSMP requirements will also minimize the presence of hydrocarbons in runoff. During the construction phase of the project, pursuant to the Construction General Permit, the Construction Stormwater Pollution Prevention Plan must include BMPs that address proper handling of petroleum products on the construction site, such as proper petroleum product storage and spill response practices, and those BMPs must effectively prevent the release of hydrocarbons to runoff per the Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology standards. On this basis, the impact of the project on biological resources due to increased on hydrocarbons is considered less than significant.

***Trash and debris*:** Trash and debris in runoff are likely to increase post-development if left unaddressed. However, the project PDFs, including source control and treatment BMPs incorporated in compliance with the MS4 Permit and the SUSMP requirements, will minimize the adverse impacts of trash and debris. Source controls such as street sweeping, public education, fines for littering, covered trash receptacles, and storm drain stenciling are effective in reducing the amount of trash and debris that is available for mobilization during wet weather. Trash and debris will be captured in catch basin inserts in the commercial area parking lot and in the treatment control PDFs. During the Construction phase of the project, PDFs implemented per General Permit and General De-Watering Permit requirements will remove trash and debris through the use of BMPs such as catch basin inserts and by general good housekeeping practices. Trash and debris are not expected to significantly impact receiving waters or biological resources due to the implementation of the project PDFs.

Methylene Blue Activated Substances (MBAS): In the post-development phase, the presence of soap in runoff from the project will be controlled through the source control PDFs, including a public education program on residential and charity car washing and a centralized car wash area directed to sanitary sewer in the multi-family residential areas. Other sources of MBAS, such as cross connections between sanitary and storm sewers, are unlikely given modern sanitary sewer installation methods and inspection and maintenance practices. During the construction phase of the project, equipment and vehicle washing will not use soaps or any other MBAS sources. Therefore, MBAS are not expected to significantly impact the receiving waters or biological resources under the proposed project.

Cyanide: In addition to the expected relatively low level of cyanide in untreated stormwater, cyanide in runoff from the project would be readily removed by biological uptake, degradation by microorganisms, and by volatilization in the treatment PDFs, especially the dry extended detention basins. Therefore cyanide is not expected to significantly impact the receiving waters or biological resources under the project.

***Bioaccumulation*:** In the literature, the primary pollutants that are of concern with regard to bioaccumulation are mercury and selenium, neither of which will be introduced by the project or is naturally present at levels of concern in Santa Clara River watershed.[507] On this basis, the potential for bioaccumulation in the project PDFs or in the Santa Clara River and adverse effects on waterfowl and other species is considered less than significant.

(c) Increase in Populations of Non-Native Plant and Wildlife Species

After project completion, a number of non-native plant species that are more adapted to urban environments could increase in population and potentially displace native species within the riparian corridor because of the ability of non-natives to compete more effectively for resources. It is unknown to what degree non-native plant species will displace native species in adjacent habitat areas. However, because non-native and exotic plants are commonly included in landscaping plans of both common areas and private lots of new development projects, it is reasonable to expect that project development will result in identifiable increases in non-native and/or exotic plant populations.

In particular, these plant species are often more adapted to a wider variety of growing conditions and can out-compete native plant populations for available nutrients, prime growing locations and other resources. Because these plants reproduce so quickly and in such large numbers, these species can quickly replace many native plant populations, resulting in lower species diversity, loss of suitable breeding and/or nesting habitat for common and special-status wildlife species, changes to the riparian ecosystem and overall reductions in habitat values. Therefore, the impact on native biological resources as a result of increased non-native plant species is considered potentially significant. Implementation of proposed **Mitigation Measure MV 4.3-57** (review of plant palettes and inspection of container plants for use within 200 feet of native vegetation for pests and disease; restrictions on invasive plants and irrigation) would reduce the magnitude of impacts resulting from an increased non-native population to below a level of significance.

Urban development also tends to attract wildlife species that are more typical of, and more adaptable to, urban settings, including house sparrows, European starlings, rock doves, brown-headed cowbirds, American crows, ravens, striped skunks, opossum, red fox, raccoons, and Norway rats. An increase in meso-predators (i.e., skunk, opossum, fox) in an area can adversely impact native rodent and bird populations. Additionally, a number of native

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[507] GeoSyntec Consultants, *Mission Village Water Quality Technical Report*.

species are not adapted to urban development and their populations tend to decrease in the vicinity of residential or recreational developments.

Developed areas also attract and encourage non-native Argentine ants. These ants have the potential to negatively impact native ant populations, which serve as secondary pollinators and seed dispersers of many native flower species. Additionally, as coast horned lizard primarily feed on native ants, the reduction of native ant populations due to the introduction of Argentine ants could adversely affect the local coast horned lizard population. As discussed in the Newhall Ranch Specific Plan Program EIR, wildlife species typical of an urban environment currently occur in the area. Accordingly, development of the proposed project would further exacerbate an already adverse condition. Therefore, the impact on native biological resources as a result of increased non-native animal species is considered significant. Implementation of proposed Mitigation Measures **MV 4.3-21** (installation of waste and recycling receptacles that discourage wildlife foraging in common areas/parks)**, MV 4.3-45** (develop an integrated pest management plan that addresses pesticide use)**, MV 4.3-29** (monitoring and control of invasive, non-native aquatic wildlife species for up to 5 years)**, MV 4.3-48** (quarterly monitoring and control measures for Argentine ants for up to 5 years), **MV 4.3-77** (cowbird monitoring and trapping program); and **MV 4.3-79** (prevention of Argentine ant invasion) would reduce the magnitude of the project's contribution towards an already adverse condition to below a level of significance.

(d) Increased Human and Domestic Animal Presence

The proposed project would increase the number of people living and recreating adjacent to the Santa Clara River. The effect of this increase in human population would be the potential for increased human disturbances to, and ongoing degradation of, adjacent riparian habitats associated with the Santa Clara River. Increased recreation and other human activity along proposed trails and unauthorized entry into the riparian area could result in increased noise disturbances to wildlife (especially during the breeding season of birds) which can result in nest abandonment; the harassment and/or capture of slower moving species, including certain reptiles and amphibians; the displacement of other wildlife species; an increase in the amount of refuse and pollutants in the area; compaction of soils; and trampling of ground-dwelling flora and fauna.

Increased use of the project site by future residents of Mission Village would also result in a corresponding increase in use of the area by domestic animals. Dogs can disturb nesting or roosting sites and disrupt the normal foraging activities of wildlife in adjacent habitat areas. Should this activity occur frequently, and over a long period, these disturbances may have a long-term effect on the behavior of both common and special-status species and can result in their extirpation from the area. Feral cats and house cats can cause substantial damage to the species composition of natural areas, including the populations of special-status species, through predation. Additionally, the use of anticoagulant-based rodenticides to control pest animals attracted to development areas can lead to secondary poisoning of native wildlife. Implementation of Specific Plan Mitigation Measures SP 4.6-17 through 4.6-19

(standards for trail design and limitations on human and pet access to the River Corridor SMA/SEA 23; transition areas along the River Corridor SMA/SEA 23), as well as proposed Mitigation Measures **MV 4.3-21** (installation of waste and recycling receptacles that discourage wildlife foraging in common areas/parks)**, MV 4.3-45** through **MV 4.3-47** (develop an integrated pest management plan that addresses pesticide use; trash and debris removal from riparian habitats; and control of pet, stray, and feral cats and dogs in or near open space areas)**, MV 4.3-29** (monitoring and control of invasive, non-native aquatic wildlife species for up to 5 years)**,** ~~and~~ **MV 4.3-54** (permanent fencing along trails in the River Corridor SMA/SEA 23), and **MV 4.3-89** (trail signage and homeowner education regarding sensitive resources in preserved natural habitat areas) would reduce the magnitude of impacts related to increased human and domestic animal presence. The Newhall Ranch Specific Plan Program EIR concluded that impacts caused by increased human and domestic and feral animal presence would be significant. However, with implementation of the new mitigation measures, referenced above, the proposed project's impacts resulting from increased human, domestic, and pet animal presence is considered less than significant.

(e) Construction and Grading Activities

Construction and grading activities associated with project implementation that are proposed adjacent to or within the Santa Clara River ecosystem could adversely affect sensitive vegetation and wildlife within portions of the ecosystem not directly affected. These activities can result in the following impacts: (1) siltation and erosion into creek and river drainages that could adversely affect fish spawning and movement; (2) excessive dust accumulation on vegetation that could result in the degradation or loss of some plant species; and (3) soil compaction around remaining trees. These impacts will be minimized through implementation of construction BMPs that will meet or exceed measures required by the General Construction Permit. A Stormwater Pollution and Prevention Plan (SWPPP) will be developed as required by, and in compliance with, the General Construction Permit and Los Angeles County Standard Conditions. The General Permit requires the SWPPP to include a menu of BMPs to be selected, implemented and maintained based on the phase of construction and weather conditions to effectively control erosion and sediment to the Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology (BAT/BCT).[508] BMPs to be included in this menu include, among others: slope stabilization using rock or vegetation, re-vegetation, hydro-seeding or using tackifiers on exposed areas, installation of energy dissipaters, drop structures, catch basin inlet

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508 BAT/BCT are Clean Water Act technology-based standards that are applicable to construction site stormwater discharges. Federal law specifies factors relating to the assessment of BAT including: age of the equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; the cost of achieving effluent reduction; non-water quality environmental impacts (including energy requirements); and other factors as the administrator of the U.S. EPA deems appropriate. Clean Water Act ~~Section~~ §304(b)(2)(B). Factors relating to the assessment of BCT include reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived; comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources; the age of the equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; non-water quality environmental impact (including energy requirements); and other factors as the administrator deems appropriate. Clean Water Act ~~Section~~ §304(b)(4)(B). The administrator of the U.S. EPA has not issued regulations specifying BAT or BCT for construction site discharges.

protection, construction materials management, and cover and containment of construction materials and wastes. On this basis, the project's construction-related impacts to biological resources are considered less than significant.

10. PROJECT MITIGATION MEASURES

While development of the Newhall Ranch Specific Plan has the potential to result in significant biological impacts, the County of Los Angeles adopted mitigation measures to address these impacts as part of the Newhall Ranch Specific Plan. The mitigation measures are found in the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing these mitigation measures. **Table 4.3-9** identifies previously adopted Specific Plan mitigation measures as they relate to project-specific impacts. Plant communities to be protected in perpetuity are summarized in **Table 4.3-10, Total Conservation Area and Preserved Plant Communities**.

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

The Los Angeles County Board of Supervisors adopted the following mitigation measures in connection with its approval of the Newhall Ranch Specific Plan (May 2003). Those mitigation measures applicable to the Mission Village project will be implemented, as appropriate.

Table 4.3-9
Significant Impact and Mitigation Summary

Significant Impact	Relevant Previously Adopted Measures	Additional Measures Proposed by This EIR	Significance After Mitigation	Consistency with Findings of Newhall Ranch Specific Plan Program EIR
Impacts to Coastal Scrub	**SP 4.6-17 to SP 4.6-19, SP 4.6-21-27, SP 4.6-36** to **SP 4.6-42**. These measures would protect in perpetuity 1,311 acres of coastal scrub in the High Country SMA. The protection of the Salt Creek Area would preserve and additional 631 acres of this community type.	**MV 4.3-24, MV 4.3-82**	Less than Significant	Inconsistent
Impacts to Riparian Plant Communities (i.e., Herbaceous Wetland, River Wash, Big Sagebrush Scrub, Giant Reed, Arrow Weed Scrub, Mexican Elderberry Scrub, Mulefat Scrub, Southern Willow Scrub, Tamarisk Scrub and Woodland, Southern Cottonwood-Willow Riparian).	**SP 4.6-1** to **SP 4.6-26, SP 4.6-63**. These measures would protect in perpetuity 977.5 acres of habitat along the Santa Clara River.	**MV 4.3-1, MV 4.3-23, MV 4.3-30,** and **MV 4.3-31** through **MV 4.3-~~41~~ 43,** and **MV 4.3-80**	Less than Significant	Consistent
Impacts to Big Sagebrush Scrub	**SP 4.6-1** through **SP 4.6-16, SP 4.6-21** through **SP 4.6-26, SP 4.6-28**	**MV 4.3-1, MV 4.3-23, MV 4.3-26,** and **MV 4.3-31** through **MV 4.3-41**	Less than Significant	Consistent
Impacts to Wildlife Riparian Habitat, and Buffers/Setbacks from Riparian Habitat	**SP 4.6-1** through **SP 4.6-26, SP 4.6-56**	**MV 4.3-1, MV 4.3-21, MV 4.3-23, MV 4.3-29** through **MV 4.3-41, MV 4.3-45** through **MV 4.3-47**, and **MV 4.3-57**	Less than Significant	The Newhall Ranch Specific Plan Program EIR did not specifically address potential impacts to wildlife riparian habitat and buffers/setbacks from riparian habitat,
Impacts to Wildlife Upland Habitat	**SP 4.6-17, SP 4.6-20** through **SP 4.6-29, SP 4.6-33** through **SP 4.6-43**, and **SP 4.6-48**. The preservation of the River Corridor SMA and High Country SMA would protect approximately 5,182 acres of wildlife habitat in perpetuity. The preservation of the Salt Creek Area would protect an additional 1,518 acres of wildlife habitat in perpetuity.	**MV 4.3-15, MV 4.3-24, MV 4.3-28, MV 4.3-30,** and **MV 4.3-~~30~~85.**	Less than Significant	Inconsistent
Restrictions of Wildlife Movement Corridors/Habitat Linkages	**SP 4.6-1** to **SP 4.6-26, SP 4.6-37** to **SP 4.6-42**, **SP 4.6-56**. The preservation of the River Corridor SMA would protect a regionally important wildlife movement corridor. The preservation of the High Country SMA would protect a large area of habitat south of the River Corridor SMA (which would be linked to the River Corridor SMA by the preservation of the Salt Creek Area).	~~None proposed.~~**MV 4.3-81 and MV 4.3-84**	Less than Significant	Inconsistent. Given that the tract map site is currently used for agriculture and is frequently devoid of cover, the tract map site is not expected to be a substantial part of a regional north-south wildlife movement corridor.
Impacts to Slender Mariposa Lily	**SP 4.6-27, SP 4.6-29 to SP 4.6-32, SP 4.6-33, SP 4.6-34, SP 4.6-37 to SP 4.6-42, SP 4.6-53, SP 4.6-59**.	**MV 4.3-26** and **MV 4.3-27**. Approximately 559 acres considered suitable for slender mariposa lily mitigation have been identified in the High Country SMA/SEA 20 and Salt Creek Area[509].	Less than Significant	Consistent
Impacts to Southern California Black Walnut	**SP 4.6-1** to **SP 4.6-19**, **SP 4.6-21** to **SP 4.6-35**, **SP 4.6-37** to **SP 4.6-48**. The preservation of the River Corridor SMA and the High Country SMA would protect approximately 585 acres of oak woodland and 300 acres of valley oak/grass in perpetuity. The preservation of the Salt Creek Area would protect approximately 266 acres of oak woodland and 113 acres of valley oak/grassland in perpetuity. In total, conservation easements would be placed over 851 acres of oak woodland and 413 acres of oak savannah (including the River Corridor SMA, the High Country SMA, and the Salt Creek Area).	**MV 4.3-1, MV 4.3-23, MV 4.3-24, MV 4.3-26, MV 4.3-28,** and **MV 4.3-31** through **MV 4.3-41.**	Less than Significant	Consistent

[509] Dudek, *Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan*.

Table 4.3-9 (Continued)
Significant Impact and Mitigation Summary

Significant Impact	Relevant Previously Adopted Measures	Additional Measures Proposed by This EIR	Significance After Mitigation	Consistency with Findings of Newhall Ranch Specific Plan Program EIR
Impacts to Parish's Sagebrush	**SP 4.6-1** to **SP 4.6-16, SP 4.6-21** to **SP 4.6-26, SP 4.6-28.**	**MV 4.3-1, MV 4.3-26, MV 4.3-23, MV 4.3-24,** and **MV 4.3-31** through **MV 4.3**-41.	Less than Significant	The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species, given its limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.
Impacts to Undescribed Everlasting	**SP 4.6-16, SP 4.6-20, SP 4.6-24, SP 4.6-53, SP 4.6-59.**	**MV 4.3-26, MV 4.3-28, MV 4.3-75,** and **MV 4.3-76.**	Less than Significant	The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species as it was not known to occur on site; however, detection during more recent surveys warrants its inclusion in this analysis.
Impacts to San Fernando Valley Spineflower	**SP 4.6-65** to **SP 4.6-80.**	**MV 4.3-58** through **MV 4.3-74.**	Less than Significant	Consistent
Impacts to Newhall Sunflower	**SP 4.6-1** through **SP 4.6-16, SP 4.6-17** through **SP 4.6-19**, SP **4.6-21** through **SP 4.6-26.**	**MV 4.3-11, MV 4.3-26, MV 4.3-51** through **MV 4.3-57.**	Less than Significant	The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species as it was not known to occur on site; however, detection during more recent surveys warrants its inclusion in this analysis.
Impacts to Protected Oaks Coast Live Oak Woodland, and Southern Coast Live Oak Riparian Forest	**SP 4.6-1** to **SP 4.6-19, SP 4.6-21** to **SP 4.6-35, SP 4.6-37** to **SP 4.6-48**. The preservation of the River Corridor SMA and the High Country SMA would protect approximately 585 acres of oak woodland and 300 acres of oak savannah in perpetuity. The preservation of the Salt Creek Area would protect approximately 266 acres of oak woodland and 113 acres of oak savannah in perpetuity. In total, conservation easements would be placed over 851 acres of oak woodland and 413 acres of oak savannah (including the River Corridor SMA, the High Country SMA, and the Salt Creek Area).	**MV 4.3-1, MV 4.3-22, MV 4.3-26, MV 4.3-23, MV 4.3-30, MV 4.3-31** through **MV 4.3-41.**	Less than Significant	Consistent
Impacts to San Emigdio Blue Butterfly	**SP-4.6 21** through **SP-4.6 26** and **SP-4.6 36** through **SP-4.6 42**	**MV 4.3-86 through MV 4.3-88** and **MV 4.3-90**	Less than Significant	The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species as it was not known to occur on site; however, detection during more recent surveys warrants its inclusion in this analysis.
Impacts to Aquatic Mollusks (*Pyrgulopsis castaicensis* **n. sp.**)	**SP 4.6-1** through **SP 4.6-16, SP 4.6-17** through **SP 4.6-19**, SP **4.6-21** through **SP 4.6-26.**	**MV 4.3-11, MV 4.3-26, MV 4.3-51** through **MV 4.3-57, MV 4.3-44.**	Less than Significant	The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species as it was not known to occur on site; however, detection during more recent surveys warrants its inclusion in this analysis.
Impacts to Terrestrial Mollusks (Trask shoulderband snail)	**SP 4.6-1** through **SP 4.6-27,** SP **4.6-32** through **SP 4.6-42, SP 4.6-53, SP 4.6-59, SP 4.6-63,**	**MV 4.3-1, MV 4.3-23, MV 4.3-24, MV 4.3-31** through **MV 4.3-43, MV 4.3-45, MV 4.3-47, MV 4.3-48, MV 4.3-53, MV 4.3-54. MV 4.3-57.**	Less than Significant	The Newhall Ranch Specific Plan Program EIR did not address potential impacts to this species as it was not known to occur on site; however, detection of other shoulderband snails in the project area during more recent surveys warrants its inclusion in this analysis.
Impacts to Special-Status Fish Species (i.e., Santa Ana Sucker, Unarmored Threespine Stickleback, and Arroyo Chub)	**SP 4.6-53 SP 4.6-54, SP 4.6-57, SP 4.6-58, SP 4.6-59, SP 4.6-44.**	**MV 4.3-1, MV 4.3-2, MV 4.3-8** through **MV 4.3-10, MV 4.3-53.**	Less than Significant	Consistent
Impacts to Special-Status Amphibians and Aquatic-Associated Reptiles (i.e., Arroyo Toad, Two-Striped Garter Snake, South Coast Garter Snake, and Southwestern Pond Turtle)	**SP 4.6-53, SP 4.6-55, SP 4.6-58, SP 4.6-59.**	**MV 4.3-1, MV 4.3-2, MV 4.3-4** through **MV 4.3-8, MV 4.3-10,** and **MV 4.3-26.**	Less than Significant	Consistent
Impacts to Western Spadefoot Toad and California Red-Legged Frog	**SP 4.6-53, SP 4.6-55, SP 4.6-58, SP 4.6-59.**	**MV 4.3-3, MV 4.3-9, MV 4.3-10, MV 4.3-13, MV 4.3-25,** and **MV 4.3-26.**	Less than Significant	Consistent

Table 4.3-9 (Continued)
Significant Impact and Mitigation Summary

Significant Impact	Relevant Previously Adopted Measures	Additional Measures Proposed by This EIR	Significance After Mitigation	Consistency with Findings of Newhall Ranch Specific Plan Program EIR
Impacts to Upland-Associated Special-Status Reptiles (i.e., Coast Horned Lizard, Silvery Legless Lizard, Coastal Western Whiptail, Rosy Boa, San Bernardino Ringneck Snake, and Coast Patch-Nosed Snake)	**SP 4.6-37** to **SP 4.6-42, SP 4.6-53, SP 4.6-59**. The preservation of High Country SMA would protect in perpetuity 4,205 acres of habitat. The preservation of the Salt Creek Area would preserve an additional 1,518 acres of habitat.	**MV 4.3-7** and **MV 4.3-26.**	Less than significant	Inconsistent
Impacts to Special-Status Bird Species (i.e., Least Bell's Vireo, Willow Flycatcher, Southwestern Willow Flycatcher, Western Yellow-Billed Cuckoo, Cooper's Hawk, Sharp-Shinned Hawk, Ferruginous Hawk, Tricolored Blackbird, Lawrence's Goldfinch, Turkey Vulture, Northern Harrier, Yellow Warbler, White-Tailed Kite, Yellow-Breasted Chat, Southern California Rufous-Crowned Sparrow, Western Burrowing Owl, California Horned Lark, Merlin, Prairie Falcon, American Peregrine Falcon, California Condor, Loggerhead Shrike, Long-Eared Owl, Summer Tanager, Coastal California Gnatcatcher, Vermilion Flycatcher, Golden Eagle, Short-Eared Owl, Costa's Hummingbird, Yellow-Headed Blackbird, Allen's/Rufous Hummingbird, Nuttall's Woodpecker, Chipping Sparrow, Black-Crowned Night Heron, and Oak Titmouse)	**SP 4.6-53, SP 4.6-59**	**MV 4.3-15, MV 4.3-20, MV 4.3-24, MV 4.3-26, MV 4.3-81** through **MV 4.3-83, MV 4.3-91,** and **MV 4.3~~-26~~.92.**	Less than Significant	Inconsistent – the Tricolored Blackbird, Northern Harrier, White-Tailed Kite, Southern California Rufous-Crowned Sparrow, Western Burrowing Owl, Golden Eagle, Mountain Plover, Ferruginous Hawk and Sharp Shinned Hawk were found to be significantly impacted in the Newhall Ranch Specific Plan Program EIR, prior to the additional mitigation measures incorporated in this EIR.
Impacts to San Diego Desert Woodrat, San Diego Black-Tailed Jackrabbit, Mountain Lion, Mule Deer, American Badger, and Black Bear	**SP 4.6-53, SP 4.6-59**	**MV 4.3-14, MV 4.3-16, MV 4.3-26, MV 4.3-17,** and **MV 4.3-30.**	Less than Significant	Inconsistent
Impacts to Pallid Bat, Western Mastiff Bat, Western Red Bat, Long-Legged Myotis, Pocketed Free-Tailed Bat, Townsend's Big-Eared Bat, Western Small-Footed Myotis, Fringed Myotis, Yuma Myotis	No applicable measures.	**MV 4.3-18, MV 4.3-19,** and **MV 4.3-78.**	Less than Significant	Consistent (The Newhall Ranch Specific Plan Program EIR did not address potential impacts to each of these species, given their limited potential to occur on the project site; however, detection during more recent surveys warrants its inclusion in this analysis.)
Restriction of Wildlife Habitat Linkages	**SP 4.6-18**	~~None proposed.~~**MV 4.3-81** and **MV 4.3-84**	Less than Significant	Consistent
Increased Light and Glare	**SP 4.6-56**	None proposed.	Less than Significant	Consistent
Increase in Populations of Non-Native Plant and Wildlife Species	No applicable measures.	**MV 4.3-21, MV 4.3-45**, **MV 4.3-29, MV 4.3-48, MV 4.3-57, MV 4.3-77,** and **MV 4.3-79.**	Less than Significant	Consistent
Increased Human and Domestic Animal Presence	**SP 4.6-17** to **SP 4.6-19**	**MV 4.3-16, MV 4.3-17, MV 4.3-29, MV 4.3-47, MV 4.3-57, and MV 4.3-89**	Less than Significant	Inconsistent

Table 4.3-10
Total Conservation Area and Preserved Vegetation Communities, Floristic Alliances, Associations, and Land Cover Type

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	River Corridor SMA/SEA 23 Acreage[1]	High Country SMA/SEA 20 Acreage[2]	Salt Creek Acreage[3]	Total Conservation Area[4] Acreage
Grass and Herb Dominated Communities	Non-Native Grassland	California annual grassland	Not mapped to association level	9.4	465.0	187.9	662.3
	Native Grassland	Purple needlegrass	Not mapped to association level	0.0	0.6	0.0	0.6
Scrub and Chaparral	Coastal Scrub	California sagebrush scrub	Not mapped to association level	22.3	437.0	11.8	471.1
			Burned California sagebrush scrub	0.0	784.8	615.5	1,400.3
			California sagebrush	0.4	0.3	0.0	0.7
			California sagebrush–purple sage	31.4	84.1	2.1	117.6
				0	0	0	0
			Burned California sagebrush scrub–undifferentiated chaparral	2.6	5.2	0.0	7.8
		Coyote brush scrub	Not mapped to association level	0.0	2.2	0.0	2.2
	Undifferentiated Chaparral Scrubs	Not mapped to alliance level	Not mapped to association level	1.5	537.1	9.1	547.7
			Burned undifferentiated chaparral	0.0	831.2	115.5	946.7
	Chaparral with Oak	Scrub oak chaparral	Not mapped to association level	0.0	0.2	0.0	0.2
Broad Leafed Upland Tree Dominated	Upland Walnut Woodland and Forest	California walnut woodland and forest	California walnut woodland	0.0	6.8	20.4	27.2
	Oak Woodland and Forest	Coast live oak forest and woodland	Coast live oak woodland	16.1	446.7	148.0	610.8
		Mixed oak woodland and forest	Not mapped to association level	0.0	74.2	94.6	168.8
		Valley oak forest and woodland	Valley oak woodland	0.0	47.8	23.9	71.7
			Valley oak/grass	0.0	300.3	113.4	413.7
Bog and Marsh	Marsh	Bulrush–cattail wetland	Not mapped to association level	0.0	1.4	0.0	1.4
		Cismontane alkali marsh	Not mapped to association level	0.0	3.3	0.0	3.3
Riparian and Bottomland	Other Riparian/Wetland	Herbaceous wetland	Not mapped to association level	182.2	0.0	0.0	182.2

Table 4.3-10 (Continued)
Total Conservation Area and Preserved Vegetation Communities, Floristic Alliances, Associations, and Land Cover Types

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	River Corridor SMA/SEA 23 Acreage[1]	High Country SMA/SEA 20 Acreage[2]	Salt Creek Acreage[3]	Total Conservation Area[4] Acreage
Habitat		River wash	Not mapped to association level	201.1	33.3	7.4	241.8
		Alluvial scrub	Not mapped to association level	0.0	0.5	0.4	0.9
		Big sagebrush scrub	Big sagebrush-California buckwheat	2.7	8.5	0.0	11.2
		Giant reed	Not mapped to association level	5.6	0.0	0.0	5.6
	Low to High Elevation Riparian Scrub	Arrow weed scrub	Not mapped to association level	12.6	0.0	0.7	13.3
		Mexican elderberry	Not mapped to association level	0.0	3.2	1.4	4.6
		Mulefat scrub	Not mapped to association level	15.0	14.1	20.1	49.2
	Riparian Forest and Woodland	Southern willow scrub	Not mapped to association level	13.1	4.3	2.5	19.9
		Tamarisk scrub and woodland	Shrub tamarisk	2.3	0.0	0.2	2.5
		Coast live oak forest and woodland	Southern coast live oak riparian forest	0.6	0.0	0.0	0.6
		Fremont cottonwood riparian forest and woodland	Southern cottonwood–willow riparian	318.5	0.9	0.0	319.4
Manmade Land Cover Types		Agriculture	NA	101.8	59.8	99.1	260.7
		Disturbed land	NA	37.1	52.7	43.9	133.7
			Total	976.4	4,205.5	1517.9	6,699.8

[1] *The acreages and vegetation types depicted for the River Corridor SMA/SEA 23 were determined during field mapping.*[510]

[2] *The acreages and vegetation types depicted for the High Country SMA/SEA 20 were determined during field mapping.*[511]

[3] *The acreages and vegetation types depicted for Salt Creek were determined during field mapping.*[512]

[4] *The Conservation Area includes areas to be protected in perpetuity by conservation easements, inclusive of the River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek Area.*

510 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch Specific Plan Area*.

511 Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

512 Ibid.

Mitigation measures are separated into three categories. The first includes an overview of those design features that are incorporated as part of the Specific Plan to reduce the biological impact potential. The second category includes specific mitigation measures incorporated as part of the Resource Management Plan. The last category includes additional mitigation measures recommended as part of the Newhall Ranch Specific Plan Program EIR. The specific mitigation measures in each of these categories are defined below.

(1) Specific Plan Mitigation Measures

The Specific Plan was designed to partially mitigate potential impacts to sensitive biological resources through avoidance, thus allowing maximum conservation of important biological features at the site.

Under the Specific Plan design, development will take place in a way that minimizes the effects on sensitive biological resources. An important aspect of this approach was an analysis of the conservation value of habitats on the property, which used conservation principles and a GIS mapping methodology. An additional component of the conservation strategy was the consideration of the larger regional context in the design of biological preserves on the site. Newhall Ranch, which extends from the ridgeline of the Santa Susana Mountains across the Santa Clara River to the uplands on the north, offers the potential for significant habitat contributions to a Santa Susana Mountains open area and a key segment of the Santa Clara River system, as well as regionally important connections between these habitat areas and across the river.

The biological resource conservation strategy developed for the Newhall Ranch property addresses the sequencing recommended by the resource agencies: avoidance, minimization, and mitigation for unavoidable impacts to key sensitive resources. The proposed large, open areas on the Newhall Ranch property avoid impacts to many of the highly sensitive species present or potentially occurring on the site and their habitats. Further design, with respect to potential unavoidable impacts to biological resources, has minimized encroachments into key areas of the property, decreasing the overall impacts. Indirect impacts to biological resources are minimized through the dedication of large blocks of habitat that decreases the edge-area ratio, and thus, buffers the habitat from noise, lighting, and encroachment by domestic pets, non-native plants, and humans. As a result of these design priorities, the project's biological resource conservation efforts have been focused on two Special Management Areas and the habitat corridor that connects them:

- The Santa Clara River Corridor (River Corridor SMA/SEA 23);
- The large block of relatively undisturbed habitats on higher elevations into the Santa Susana Mountains (High Country SMA/SEA 20); and
- The connection between these two areas along the Salt Creek drainage.

In this design, the Conceptual Grading Plan (see **Appendix 4.1, Geotechnical and Soil Resources**) preserves large areas of sensitive native habitats associated with the natural drainage areas of the site and maintains major landforms. The Conceptual Grading Plan also avoids large contiguous blocks of valuable habitat while providing direct linkage between them. The Specific Plan places the two key habitat resource areas into consolidated blocks (connected by the Salt Creek drainage), resulting in minimal boundaries with developed areas. The assembly of these three elements allows them to be managed as a single resource system within the Specific Plan Area. It also facilitates coordination with other programs outside the boundary of Newhall Ranch. The transitions between development and the special management areas will be the focus of special design treatments to protect the integrity of the conserved areas. As indicated above, the "edges" of urban development areas have been minimized to reduce the indirect impacts of the Specific Plan. Native and compatible species will be used for landscaping in these areas.

The open area system for Newhall Ranch includes the most important habitat areas of the Santa Clara River (River Corridor SMA/SEA 23) and the areas which have been least affected by agricultural, oil, and natural gas production activities (High Country SMA/SEA 20). It also includes the largest, least fragmented patches of each habitat type that remain on Newhall Ranch. A critical component of the open area system within the Newhall Ranch property, and in the region as a whole, is the connection between the High Country and the River Corridor along Salt Creek. The corridor will provide continuity between the habitats and the wildlife populations within the property, as well as forming a permanent regional linkage between the Santa Clara River and the Santa Susana Mountains. Salt Creek is the most appropriate location for such a wildlife corridor connection because of several distinguishing characteristics. Specifically, Salt Creek (1) provides a direct link between the two major open areas; (2) is less disturbance than any of the other potential connections; (3) is bound through most of its length by open area on the north side and, therefore, will not be surrounded by development in the future; (4) is the only drainage that would provide more than a discontinuous, narrow connection; (5) includes both upland and riparian vegetation through most of the corridor; and (6) is topographically isolated from areas of development on Newhall Ranch. Currently, a portion of the wildlife corridor is situated in Ventura County. Future land use decisions will be required to define the corridor's final configuration in areas that occur outside the County of Los Angeles. The incorporation of the river, the mountains, and the connection between them provides for conservation of the entire range of terrain and vegetation types on Newhall Ranch. By connecting the open areas into two major blocks with a major linkage, the land use plan for the Ranch minimizes edge-to-area ratio within the Specific Plan area.

(2) Specific Plan Resource Management Plan Mitigation

Approval of the Specific Plan and its associated Resource Management Plan (RMP) involved an amendment to the Los Angeles County zoning ordinance such that the provisions of the Specific Plan and RMP are binding. Specific measures to mitigate impacts to biological resources are incorporated as part of the RMP that is part of the Newhall Ranch Specific Plan. These measures are identified below: These measures are preceded by "SP," which stands for Specific Plan.

(3) Santa Clara River (River Corridor) SMA/SEA 23

To mitigate impacts of the Specific Plan on riparian resources, riparian habitat will be restored and, where appropriate, enhanced. In addition, a mitigation bank may be established as discussed in this section. The general areas in which riparian mitigation activities may take place are shown on Exhibit 2.6-3, Candidate Riparian Restoration/Enhancement Areas, of the Specific Plan.

The mitigation of Specific Plan impacts through restoration of habitat and enhancement of existing habitat quality shall conform to the requirements set forth below:

(a) Mitigation through Restoration

In the Specific Plan, habitat restoration means the revegetation of native plant communities on sites that have had the habitat removed due to past activities, such as agricultural or oil and natural gas operations.

Affected riparian resources along the Santa Clara River will require restoration of similar habitat and values. Avoidance of impacts to riparian resources shall be the primary goal during the design of the individual stages of the Specific Plan. Unavoidable impacts to riparian resources shall be minimized through Specific Plan design, and then mitigated by the implementation of a revegetation plan. The revegetation plan may be prepared as part of a California Department of Fish and Game 1603 Streambed Alteration Agreement or Corps Section 404 Permit and shall include the following:

SP 4.6-1 The restoration mitigation areas located within the River Corridor SMA shall be in areas that have been disturbed by previous uses or activities. Mitigation shall be conducted only on sites where soils, hydrology, and microclimate conditions are suitable for riparian habitat. First priority will be given to those restorable areas that occur adjacent to existing patches (areas) of native habitat that support sensitive species, particularly Endangered or Threatened species. The goal is to increase habitat patch size and connectivity with other existing habitat patches while restoring habitat values that will benefit sensitive species.

SP 4.6-2 A qualified biologist shall prepare or review revegetation plans. The biologist shall also monitor the restoration effort from its inception through the establishment phase.

SP 4.6-3 Revegetation Plans may be prepared as part of a California Department of Fish and Game 1603 Streambed Alteration Agreement and/or an U.S. Army Corps of Engineers Section 404 Permit, and shall include:

- Input from both the Project proponent and resource agencies to assure that the Project objectives applicable to the River Corridor SMA and the criteria of this RMP are met.

- The identification of restoration/mitigation sites to be used. This effort shall involve an analysis of the suitability of potential sites to support the desired habitat, including a description of the existing conditions at the site(s) and such base line data information deemed necessary by the permitting agency.

SP 4.6-4 The revegetation effort shall involve an analysis of the site conditions such as soils and hydrology so that site preparation needs can be evaluated. The revegetation plan shall include the details and procedures required to prepare the restoration site for planting (i.e., grading, soil preparation, soil stockpiling, soil amendments, etc.), including the need for a supplemental irrigation system, if any.

SP 4.6-5 Restoration of riparian habitats within the River Corridor SMA shall use plant species native to the Santa Clara River. Cuttings or seeds of native plants shall be gathered within the River Corridor SMA or purchased from nurseries with local supplies to provide good genetic stock for the replacement habitats. Plant species used in the restoration of riparian habitat shall be listed on the approved project plant palette (Specific Plan Table 2.6-1, Recommended Plant Species for Habitat Restoration in the River Corridor SMA) or as approved by the permitting State and Federal agencies.

SP 4.6-6 The final revegetation plans shall include notes that outline the methods and procedures for the installation of the plant materials. Plant protection measures identified by the project biologist shall be incorporated into the planting design/layout.

SP 4.6-7 The revegetation plan shall include guidelines for the maintenance of the mitigation site during the establishment phase of the plantings. The maintenance program shall contain guidelines for the control of non-native plant species, the maintenance of the irrigation system, and the replacement of plant species.

SP 4.6-8 The revegetation plan shall provide for monitoring to evaluate the growth of the developing habitat. Specific performance goals for the restored habitat shall be defined by qualitative and quantitative characteristics of similar habitats on the river (e.g., density, cover, species composition, structural development). The monitoring effort shall include an evaluation of not only the plant material installed, but the use of the site by wildlife. The length of the monitoring period shall be determined by the permitting State and/or Federal agency.

SP 4.6-9 Monitoring reports for the mitigation site shall be reviewed by the permitting State and/or Federal agency.

SP 4.6-10 Contingency plans and appropriate remedial measures shall also be outlined in the revegetation plan.

(b) Mitigation through Enhancement

SP 4.6-11 Habitat enhancement as referred to in this document means the rehabilitation of areas of native habitat that have been moderately disturbed by past activities (e.g., grazing, roads, oil and natural gas operations, etc.) or have been invaded by non-native plant species such as giant cane (*Arundo donax*) and tamarisk (*Tamarix* sp.).

SP 4.6-12 Removal of grazing is an important means of enhancement of habitat values. Without ongoing disturbance from cattle, many riparian areas will recover naturally. Grazing except as permitted as a long-term resource management activity will be removed from the River Corridor SMA pursuant to the Long-Term Management Plan set forth in Section 4.6 of the Specific Plan EIR.

SP 4.6-13 To provide guidelines for the installation of supplemental plantings of native species within enhancement areas, a revegetation plan shall be prepared prior to implementation of mitigation (see guidelines for revegetation plans above). These supplemental plantings will be composed of plant species similar to those growing in the existing habitat patch (see Specific Plan Table 2.6-1).

SP 4.6-14 Not all enhancement areas will necessarily require supplemental plantings of native species. Some areas may support conditions conducive for rapid "natural" reestablishment of native species. The revegetation plan may incorporate means of enhancement to areas of compacted soils, poor soil fertility, trash or flood debris, and roads as a way of enhancing riparian habitat values.

SP 4.6-15 Removal of non-native species such as giant cane (*Arundo donax*), salt cedar or tamarisk (*Tamarix* sp.), tree tobacco (*Nicotiana glauca*), castor bean (*Ricans communis*), if included in a revegetation plan to mitigate impacts, shall be subject to the following standards:

- First priority shall be given to those habitat patches that support or have a high potential for supporting sensitive species, particularly Endangered or Threatened species.
- All non-native species removals shall be conducted according to a resource agency approved exotics removal program.

- Removal of non-native species in patches of native habitat shall be conducted in such a way as to minimize impacts to the existing native riparian plant species.

(c) Mitigation Banking

SP 4.6-16 Mitigation banking activities for riparian habitats will be subject to State and Federal regulations and permits. Mitigation banking for oak resources shall be conducted pursuant to the Oak Resources Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester.

(d) Management Requirements

(1) Recreation and Access

The quality of the habitat values that are conserved in the River Corridor SMA will benefit from the control of access to riparian areas. Guidelines for the control of access to the River Corridor SMA include the following:

SP 4.6-17 Access to the River Corridor SMA for hiking and biking shall be limited to the river trail system (including the Regional River Trail and various Local Trails) as set forth in this Specific Plan.

- The River trail system shall be designed to avoid impacts to existing native riparian habitat, especially habitat areas known to support sensitive species. Where impacts to riparian habitat are unavoidable, disturbance shall be minimized and mitigated as outlined above under Mitigation Measures 4.6-1 through 4.6-8.

- Access to the River Corridor SMA will be limited to day time use of the designated trail system.

- Signs indicating that no pets of any kind will be allowed within the River Corridor SMA, with the exception that equestrian use is permitted on established trails, shall be posted along the River Corridor SMA.

- No hunting, fishing, or motor or off-trail bike riding shall be permitted.

- The trail system shall be designed and constructed to minimize impacts on native habitats.

(2) Transition Areas

SP 4.6-18 Where development lies adjacent to the boundary of the River Corridor SMA a transition area shall be designed to lessen the impact of the development on the conserved area. Transition areas may be comprised of Open Area, natural or revegetated manufactured slopes, other planted areas, bank areas, and trails. Exhibits 2.6-4, 2.6-5, and 2.6-6 indicate the relationship between the River Corridor SMA and the development (disturbed) areas of the Specific Plan. The SMAs and the Open Area as well as the undisturbed portions of the development areas are shown in green. As indicated on the exhibits, on the south side of the river the River Corridor SMA is separated from development by the river bluffs, except in one location. The Regional River Trail will serve as transition area on the north side of the river where development areas adjoin the River Corridor SMA (excluding Travel Village).

SP 4.6-19 The following are the standards for design of transition areas:

- In all locations where there is no steep grade separation between the River Corridor SMA and development, a trail shall be provided along this edge.
- Native riparian plants shall be incorporated into the landscaping of the transition areas between the River Corridor SMA and adjacent development areas where feasible for their long-term survival. Plants used in these areas shall be those listed on the approved plant palette (Specific Plan Table 2.6-2 of the Resource Management Plan [Recommended Plants for Transition Areas Adjacent to the River Corridor SMA]).
- Roads and bridges that cross the River Corridor SMA shall have adequate barriers at their perimeters to discourage access to the River Corridor SMA adjacent to the structures.
- Where bank stabilization is required to protect development areas, it shall be composed of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other locations where public health and safety requirements necessitate concrete or other bank protection.
- A minimum 100-foot-wide buffer adjacent to the Santa Clara River should be required between the top river side of bank stabilization and development within the Land Use Designations Residential Low Medium, Residential Medium, Mixed-Use and Business Park unless, through Planning Director

review in consultation with the staff biologist, it is determined that a lesser buffer would adequately protect the riparian resources within the River Corridor, or that a 100-foot-wide buffer is infeasible for physical infrastructure planning. The buffer area may be used for public infrastructure, such as: flood control access; sewer, water, and utility easements; abutments; trails and parks, subject to findings of consistency with the Specific Plan and applicable County policies.

SP 4.6-20 The following guidelines shall be followed during any grading activities that take place within the River Corridor SMA:

- Grading perimeters shall be clearly marked and inspected by the project biologist prior to grading occurring within or immediately adjacent to the River Corridor SMA.
- The project biologist shall work with the grading contractor to avoid inadvertent impacts to riparian resources.

(4) Grading Activities Long-Term Management Plan

SP 4.6-21 Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the River Corridor SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3 of the Specific Plan.

SP 4.6-22 Upon completion of development of all land uses, utilities, roads, flood control improvements, bridges, trails, and other improvements necessary for implementation of the Specific Plan within the River Corridor in each subdivision allowing construction within or adjacent to the River Corridor, a permanent, non-revocable *conservation and public access easement* shall be offered to the County of Los Angeles pursuant to Mitigation Measure 4.6-23, below, over the portion of the River Corridor SMA within that subdivision.

SP 4.6-23 The River Corridor SMA *Conservation and Public Access Easement* shall be offered to the County of Los Angeles prior to the transfer of the River Corridor SMA ownership, or portion thereof to the management entity described in Mitigation Measure 4.6-26, below.

SP 4.6-24 The River Corridor SMA *Conservation and Public Access Easement* shall prohibit grazing, except as a long-term resource management activity, and agriculture within the River Corridor and shall restrict recreation use to the established trail system.

Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended in the event of the filing of any legal action against Los Angeles County challenging final approval of the Newhall Ranch Specific Plan and any related project approvals or certification of the Final EIR for Newhall Ranch. Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended by the time period between the filing of any such legal action and the entry of a final judgment by a court with appropriate jurisdiction, after exhausting all rights of appeal, or execution of a final settlement agreement between all parties to the legal action, whichever occurs first.

SP 4.6-25 The River Corridor SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to State or Federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.

SP 4.6-26 Prior to the recordation of the River Corridor SMA *Conservation and Public Access Easement* as specified in Mitigation Measure 4.6-23, above, the land owner shall provide a plan to the County for the permanent ownership and management of the River Corridor SMA, including any necessary financing. This plan shall include the transfer of ownership of the River Corridor SMA to the Center for Natural Lands Management, or if the Center for Natural Lands Management is declared bankrupt or dissolved, ownership will transfer or revert to a *joint powers authority* consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members).

(5) High Country Special Management Area (SMA)

SP 4.6-26a Two types of habitat restoration may occur in the High Country SMA: (1) riparian revegetation activities principally in Salt Creek Canyon; and (2) oak tree replacement in, or adjacent to, existing oak woodlands and savannahs.

- Mitigation requirements for riparian revegetation activities within the High Country SMA are the same as those for the River Corridor SMA and are set forth in Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16, above.

- Mitigation requirements for oak tree replacement are set forth in Mitigation Measure 4.6-48, below.

(a) Mitigation Requirements

Mitigation activities that may occur in the High Country SMA, either for impacts associated with the construction of Estate lots, trails, or access roads, or for impacts identified during the subdivision process in other portions of the Specific Plan Area, include restoration of habitat and enhancement to existing habitat (see discussion below). Mitigation banking may be established as provided below. In addition, Salt Creek Canyon is a high priority area for riparian mitigation.

(1) Mitigation through Restoration

Two types of habitat restoration may occur in the High Country SMA: (1) riparian revegetation activities principally in Salt Creek Canyon; and (2) oak resource replacement in, or adjacent to, existing oak woodlands and savannas.

Mitigation requirements for riparian revegetation activities within the High Country SMA are the same as those for the River Corridor SMA and are set forth above.

Mitigation requirements for oak resource replacement are set forth in Specific Plan Section 2.6, paragraph 3b of the Oak Tree Replacement Program of the Resource Management Program.

(2) Enhancement of Habitat

SP 4.6-27 Removal of grazing from the High Country SMA except for those grazing activities associated with long-term resource management programs, is a principal means of enhancing habitat values in the creeks, brushland, and woodland areas of the SMA. The removal of grazing in the High Country SMA is discussed below under (b)4 Long Term Management. All enhancement activities for riparian habitat within the High Country SMA shall be governed by the same provisions as set forth for enhancement in the River Corridor SMA. Specific Plan Table 2.6-3 of the Resource Management Plan provides a list of appropriate plant species for use in enhancement areas in the High Country SMA.

(3) Mitigation Banking

SP 4.6-28 Mitigation banking activities for riparian habitats will be subject to State and Federal regulations and permits. Mitigation banking for oak resources shall be conducted pursuant to the Oak Resource Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. *(This measure is not applicable to the Mission Village project because the measure addresses management activities in the High Country SMA, which is located outside the boundaries of the proposed Mission Village project.)*

(b) Management Requirements

(1) Recreation and Access

A major public benefit of the High Country SMA is that it provides excellent recreational opportunities. However, recreational needs must be balanced with the preservation of the habitat values, which are conserved in the SMA. Recreation and access will be governed by the following standards:

SP 4.6-29 Access to the High Country SMA will be limited to day time use of the designated trail system. *(This measure is not applicable to the Mission Village project because the measure addresses access and management activities in the High Country SMA, which is located outside the boundaries of the proposed Mission Village project.)*

SP 4.6-30 No pets of any kind will be allowed within the High Country SMA, with the exception that equestrian use is permitted on established trails. *(This measure is not applicable to the Mission Village project because the measure addresses access and management activities in the High Country SMA, which is located outside the boundaries of the proposed Mission Village project.)*

SP 4.6-31 No hunting, fishing, or motor or trail bike riding shall be permitted. *(This measure is not applicable to the Mission Village project because the measure addresses access and management activities in the High Country SMA, which is located outside the boundaries of the proposed Mission Village project.)*

SP 4.6-32 The trail system shall be designed and constructed to minimize impacts on native habitats. *(This measure is not applicable to the Mission Village project because the measure addresses management activities in the High Country SMA, which is located outside the boundaries of the proposed Mission Village project.)*

(2) Transition/Fuel Modification Areas

Development areas are generally separated from the High Country SMA by steep slopes. Specific Plan Exhibit 2.6-7 of the Resource Management Program, Salt Creek Wildlife Corridor Land Use Perspective, illustrates that development adjacent to the Salt Creek Wildlife Corridor is significantly separated vertically from the corridor.

SP 4.6-33 Construction of buildings and other structures (such as patios, decks, etc.) shall only be permitted upon developed pads within Planning Areas OV-04, OV-10, PV-02, and PV-28 and shall not be permitted on southerly slopes facing the High Country SMA (Planning Area HC-01) or in the area between the original SEA 20 boundary and the High Country boundary. If disturbed by grading, all southerly facing slopes which adjoin the High Country SMA within those Planning Areas shall

have the disturbed areas revegetated with compatible trees, shrubs, and herbs from the list of plant species for south and west facing slopes as shown in Table 2.6-3, Recommended Plant Species For Use In Enhancement Areas In The High Country.

Transition from the development edge to the natural area shall also be controlled by the standards of wildfire fuel modification zones as set forth in Mitigation Measure 4.6-49. Within fuel modification areas, trees and herbs from Table 2.6-3 of the Resource Management Plan should be planted toward the top of slopes; and trees at lesser densities and shrubs planted on lower slopes. *(This measure is not applicable to the Mission Village project because the measure addresses access and management activities in the High Country SMA, which is located outside the boundaries of the proposed Mission Village project.)*

(3) Grading Activities

SP 4.6-34 Grading perimeters shall be clearly marked and inspected by the project biologist prior to impacts occurring within or adjacent to the High Country SMA.

SP 4.6-35 The project biologist shall work with the grading contractor to avoid inadvertent impacts to biological resources outside of the grading area.

(4) Long-Term Management

SP 4.6-36 Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the High Country SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3. *(This measure is not applicable to the Mission Village project because the measure addresses access and management activities in the High Country SMA, which is located outside the boundaries of the proposed Mission Village project.)*

SP 4.6-37 The High Country SMA shall be offered for dedication in three approximately equal phases of approximately 1,400 acres each proceeding from north to south, as follows:

1. The first offer of dedication will take place with the issuance of the 2,000th residential building permit of Newhall Ranch;

2. The second offer of dedication will take place with the issuance of the 6,000th residential building permit of Newhall Ranch; and

3. The remaining offer of dedication will be completed by the 11,000th residential building permit of Newhall Ranch.

4. The Specific Plan applicant shall provide a quarterly report to the Departments of Public Works and Regional Planning which indicates the number of residential building permits issued in the Specific Plan area by subdivision map number.

SP 4.6-38 Prior to dedication of the High Country SMA, a *conservation and public access easement* shall be offered to the County of Los Angeles and a conservation and management easement offered to the Center for Natural Lands Management. The High Country SMA *Conservation and Public Access Easement* shall be consistent in its provisions with any other *conservation easement*s to State or Federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.

SP 4.6-39 The High Country SMA conservation and public access easement shall prohibit grazing within the High Country, except for those grazing activities associated with the long-term resource management programs, and shall restrict recreation to the established trail system.

SP 4.6-40 The High Country SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to State or Federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.

SP 4.6-41 The High Country SMA shall be offered for dedication in fee to a *joint powers authority* consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). The *joint powers authority* will have overall responsibility for recreation within and conservation of the High Country.

SP 4.6-42 An appropriate type of service or assessment district shall be formed under the authority of the Los Angeles County Board of Supervisors for the collection of up to $24 per single family detached dwelling unit per year and $15 per single family attached dwelling unit per year, excluding any units designated as Low and Very Low affordable housing units pursuant to Section 3.10, Affordable Housing Program of the Specific Plan. This revenue would be assessed to the homeowner beginning with the occupancy of each dwelling unit and distributed to the *joint powers authority* for the purposes of recreation, maintenance, construction, conservation and related activities within the *High Country Special Management Area*.

(6) Open Area Mitigation Requirements

SP 4.6-43 Suitable portions of *Open Area* may be used for mitigation of riparian, *oak resources*, or elderberry scrub. Mitigation activities within *Open Area* shall be subject to the following requirements, as applicable.

- River Corridor SMA Mitigation Requirements, including: Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16; and

- High Country SMA Mitigation Requirements, including: Mitigation Measures 4.6-27, 4.6-29 through 4.6-42, and

- Mitigation Banking—Mitigation Measure 4.6-16.

(a) Management Requirements

SP 4.6-44 Drainages with flows greater than 2,000 cfs will have soft bottoms. Bank protection will be of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other areas where public health and safety considerations require concrete or other stabilization. SP 4.6-45 The precise alignments and widths of major drainages will be established through the preparation of drainage studies to be approved by the County at the time of subdivision maps which permit construction.

SP 4.6-46 While Open Area is generally intended to remain in a natural state, some grading may take place, especially for parks, major drainages, trails, and roadways. Trails are also planned to be within Open Area.

SP 4.6-47 At the time that final subdivision maps permitting construction are recorded, the *Open Area* within the map will be offered for dedication to the Center for Natural Lands Management. Community Parks within *Open Area* are intended to be public parks. Prior to the offer of dedication of *Open Area* to the Center for Natural Lands Management, all necessary *conservation and public access easements*, as well as easements for infrastructure shall be offered to the County.

(b) Mitigation Banking

SP 4.6-47a Mitigation Banking will be permitted within the River Corridor SMA, the High Country SMA, and the *Open Area land use designations*, subject to the following requirements:

- Mitigation banking activities for riparian habitats will be subject to State and Federal regulations, and shall be conducted pursuant to the mitigation requirements set forth in Mitigation Measure 4.6-1 through 4.6-15 above.

- Mitigation banking for oak resources shall be conducted pursuant to 4.6-48, below.

- Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester.

(c) Oak Resources Replacement Program

SP 4.6-48 Standards for the restoration and enhancement of oak resources within the High Country SMA and the Open Area include the following (oak resources include oak trees of the sizes regulated under the County Oak Tree Ordinance, Southern California black walnut trees, and mainland cherry trees/shrubs):

- To mitigate the impacts to oak resources that may be removed as development occurs in the Specific Plan Area, replacement trees shall be planted in conformance with the oak tree ordinance in effect at that time.

- Oak resource species obtained from the local gene pool shall be used in restoration or enhancement.

- Prior to recordation of construction-level final subdivision maps, an oak resource replacement plan shall be prepared that provides the guidelines for the oak tree planting and/or replanting. The Plan shall be reviewed by the Los Angeles Department of Regional Planning and the County Forester and shall include the following: site selection and preparation, selection of proper species including sizes and planting densities, protection from herbivores, site maintenance, performance standards, remedial actions, and a monitoring program.

- All plans and specifications shall follow County oak tree guidelines, as specified in the County Oak Tree Ordinance.

(7) Wildfire Fuel Modification

The Specific Plan Area is located within the extreme and moderate fire hazard zones as identified in the County of Los Angeles General Plan. The moderate fire hazard zone extends to those areas of Newhall Ranch where native brush can be found growing in its natural state. This is most common in the hillside areas. The extreme fire hazard zone includes high brush and woodlands, and all steep slopes regardless of vegetation (refer to **Section 4.12, Fire Protection Services**, for a detailed description of on-site fire zones).

Development of Newhall Ranch will reduce the amount of native flammable vegetation present within the Specific Plan Area. Fire fighting capabilities will be provided by two fire stations on the Specific Plan site, other nearby

stations, a network of improved roads and an urban water system with fire flows as required by the County Fire Department. Existing and proposed off-site fire facilities will also serve the Specific Plan Area.

Property damage and public safety risks associated with wildfire are greatest where homes and other structures will be located adjacent to large open areas dominated by native vegetation. This condition will occur primarily in the southern portion of the Specific Plan site and where portions of the development area in the northwest section of Riverwood Village abut large natural open areas.

Emergency access to the site is currently provided to the Los Angeles County Fire Department for fire prevention control of the Specific Plan Area. Access will continue to be provided as the Specific Plan is implemented.

Fuel modification mitigation includes:

SP 4.6-49 To minimize the potential exposure of the development areas, Open Area, and the SMAs to fire hazards, the Specific Plan is subject to the requirements of the Los Angeles County Fire Protection District (LACFPD), which provides fire protection for the area. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a wildfire fuel modification plan shall be prepared in accordance with the fuel modification ordinance standards in effect at that time and shall be submitted for approval to the County Fire Department.

SP 4.6-50 The wildfire fuel modification plan shall depict a fuel modification zone the size of which shall be consistent with the County fuel modification ordinance requirements. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the fuel modification ordinance.

SP 4.6-51 In order to enhance the habitat value of plant communities that require fuel modification, fire retardant plant species containing habitat value may be planted within the fuel modification zone. Typical plant species suitable for Fuel Modification Zones are indicated in Specific Plan Table 2.6-5 of the Resource Management Plan. Fuel modification zones adjacent to SMAs and Open Areas containing habitat of high value such as oak woodland and savannas shall utilize a more restrictive plant list, which shall be reviewed by the County Forester.

SP 4.6-52 The wildfire fuel modification plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to the County Fire Department requirements.

(8) EIR Mitigation Measures

To further reduce impacts to biological resources that would result from Specific Plan implementation the following mitigation measures are proposed:

SP 4.6-53 If, at the time any subdivision map proposing construction is submitted, the County determines through an Initial Study, or otherwise, that there may be Rare, Threatened or Endangered, plant or animal species on the property to be subdivided, then, in addition to the prior surveys conducted on the Specific Plan site to define the presence or absence of sensitive habitat and associated species, current, updated site-specific surveys for all such animal or plant species shall be conducted in accordance with the consultation requirements set forth in Mitigation Measure 4.6-59 within those areas of the Specific Plan where such animal or plant species occur or are likely to occur.

The site-specific surveys shall include the unarmored three-spine stickleback, the arroyo toad, the Southwestern pond turtle, the California red-legged frog, the southwestern willow flycatcher, the least Bell's vireo, the San Fernando Valley spineflower and any other Rare, Sensitive, Threatened, or Endangered plant or animal species occurring, or likely to occur, on the property to be subdivided. All site-specific surveys shall be conducted during appropriate seasons by qualified botanists or qualified wildlife biologists in a manner that will locate any Rare, Sensitive, Threatened, or Endangered animal or plant species that may be present. To the extent there are applicable protocols published by either the United States Fish and Wildlife Service or the California Department of Fish and Game, all such protocols shall be followed in preparing the updated site-specific surveys.

All site-specific survey work shall be documented in a separate report containing at least the following information: (a) project description, including a detailed map of the project location and study area; (b) a description of the biological setting, including references to the nomenclature used and updated vegetation mapping; (c) detailed description of survey methodologies; (d) dates of field surveys and total person-hours spent on the field surveys; (e) results of field surveys, including detailed maps and location data; (f) an assessment of potential impacts; (g) discussion of the significance of the Rare, Threatened or Endangered animal or plant populations found in the project area, with consideration given to nearby populations and species distribution; (h) mitigation measures, including avoiding impacts altogether, minimizing or reducing impacts, rectifying or reducing impacts through habitat restoration, replacement or enhancement, or compensating for impacts by replacing or providing substitute resources or environments,

consistent with CEQA;[1027] (i) references cited and persons contacted; and (j) other pertinent information, which is designed to disclose impacts and mitigate for such impacts."

SP 4.6-54 Prior to development within or disturbance to occupied unarmored threespine stickleback habitat, a formal consultation with the USFWS shall occur.

SP 4.6-55 Prior to development or disturbance within wetlands or other sensitive habitats, permits shall be obtained from pertinent Federal and State agencies and the Specific Plan shall conform to the specific provisions of said permits. Performance criteria shall include that described in Mitigation Measures 4.6-1 through 4.6-16 and 4.6-42 through 4.6-47 for wetlands, and Mitigation Measures 4.6-27, 4.6-28, and 4.6-42 through 4.6-48 for other sensitive habitats.

SP 4.6-56 All lighting along the perimeter of natural areas shall be downcast luminaries with light patterns directed away from natural areas.

SP 4.6-57 Where bridge construction is proposed and water flow would be diverted, blocking nets and seines shall be used to control and remove fish from the area of activity. All fish captured during this operation would be stored in tubs and returned unharmed back to the river after construction activities were complete.

SP 4.6-58 To limit impacts to water quality the Specific Plan shall conform with all provisions of required NPDES permits and water quality permits that would be required by the State of California Regional Water Quality Control Board.

SP 4.6-59 Consultation shall occur with the County of Los Angeles ("County") and California Department of Fish and Game ("CDFG") at each of the following milestones:

1. Before Surveys. Prior to conducting sensitive plant or animal surveys at the Newhall Ranch subdivision map level, the applicant, or its designee, shall consult with the County and CDFG for purposes of establishing and/or confirming the appropriate survey methodology to be used.

2. After Surveys. After completion of sensitive plant or animal surveys at the subdivision map level, draft survey results shall be made available to the County and CDFG within sixty (60) calendar days after completion of the field survey work.

[1027] *State CEQA Guidelines* Sec. 15370.

3. Subdivision Map Submittal. Within thirty (30) calendar days after the applicant, or its designee, submits its application to the County for processing of a subdivision map in the Mesas Village or Riverwood Village, a copy of the submittal shall be provided to CDFG. In addition, the applicant, or its designee, shall schedule a consultation meeting with the County and CDFG for purposes of obtaining comments and input on the proposed subdivision map submittal. The consultation meeting shall take place at least thirty (30) days prior to the submittal of the proposed subdivision map to the County.

4. Development/Disturbance and Further Mitigation. Prior to any development within, or disturbance to, habitat occupied by Rare, Threatened, or Endangered plant or animal species, or to any portion of the Spineflower Mitigation Area Overlay, as defined below, all required permits shall be obtained from both USFWS and CDFG, as applicable. It is further anticipated that the Federal and State permits will impose conditions and mitigation measures required by Federal and State law that are beyond those identified in the Newhall Ranch Final EIR (March 1999), the Newhall Ranch DAA (April 2001) and the Newhall Ranch Revised DAA (2002). It is also anticipated that conditions and mitigation measures required by Federal and State law for project-related impacts on Endangered, Rare or Threatened species and their habitat will likely require changes and revisions to Specific Plan development footprints, roadway alignments, and the limits, patterns, and techniques associated with project-specific grading at the subdivision map level.

SP 4.6-60 If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be elderberry scrub vegetation on the property being subdivided, then a site-specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied.

SP 4.6-61 If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be mainland cherry trees and/or mainland cherry shrubs on the property being subdivided, then a site-specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied. *(This measure is not applicable to Mission Village because the project would not impact "mainland cherry trees and/or mainland cherry shrubs.")*

SP 4.6-62 When a map revision or Substantial Conformance determination on any subdivision map or Conditional Use Permit would result in changes to an approved oak tree permit, then the oak tree report for that oak tree permit must be amended for the area of change, and the addendum must be

approved by the County Forester prior to issuance of grading permits for the area of the map or CUP being changed. *(This measure is not applicable to the Mission Village project because the project does not propose any change to an existing oak tree permit.)*

SP 4.6-63 Riparian resources that are impacted by buildout of the Newhall Ranch Specific Plan shall be restored with similar habitat at the rate of 1 acre replaced for each acre lost

SP 4.6-64 The operator of the golf course shall prepare a Golf Course Maintenance Plan which shall include procedures to control storm water quality and ground water quality as a result of golf course maintenance practices, including irrigation, fertilizer, pesticide and herbicide use. This Plan shall be prepared in coordination with the County biologist and approved by the County Planning Director prior to the issuance of a Certificate of Occupancy. *(This measure is not applicable to the Mission Village project because the project does not include construction and operation of a golf course.)*

(9) Spineflower Special Study Mitigation Overlay

To address the Specific Plan's potential to adversely affect on-site populations of the state-listed San Fernando Valley spineflower, the County of Los Angeles, as a condition of plan approval, required the Applicant to develop a Spineflower Special Study Area Overlay, which includes the mitigation measures set forth below. Note that the Spineflower Conservation Plan (SCP) prepared as part of the RMDP/SCP project currently under review by CDFG and the Corps, has been designed to implement the terms and mandates of the overlay. In addition, the spineflower-related mitigation measures that are specific to the Mission Village site are also consistent with the overlay and SCP.

SP 4.6-65 In order to facilitate the conservation of the spineflower on the Newhall Ranch Specific Plan site, the applicant, or its designee, shall, concurrent with Specific Plan approval, agree to the identified special study areas shown below in Figure 2.6-8, Spineflower Mitigation Area Overlay. The applicant, or its designee, further acknowledges that, within and around the Spineflower Mitigation Area Overlay (Figure 2.6-8), changes will likely occur to Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading at the subdivision map level. The applicant, or its designee, shall design subdivision maps that are responsive to the characteristics of the spineflower and all other Endangered plant species that may be found on the Specific Plan site.

(a) Spineflower Preserves

SP 4.6-66 Direct impacts to known spineflower populations within the Newhall Ranch Specific Plan area shall be avoided or minimized through the establishment of one or more on-site preserves that are

configured to ensure the continued existence of the species in perpetuity. Preserve(s) shall be delineated in consultation with the County and CDFG, and will likely require changes and revisions to Specific Plan development footprints for lands within and around the Spineflower Mitigation Area Overlay (Figure 2.6-8).

Delineation of the boundaries of Newhall Ranch spineflower preserve(s) for the entire Specific Plan area shall be completed in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesas Village, or that portion of Riverwood Village in which the San Martinez spineflower population occurs.

A sufficient number of known spineflower populations shall be included within the Newhall Ranch spineflower preserve(s) in order to ensure the continued existence of the species in perpetuity. The conservation of known spineflower populations shall be established in consultation with the County and CDFG, and as consistent with standards governing issuance of an incidental take permit for spineflower pursuant to Fish and Game Code Section 2081, subdivision (b).

In addition to conservation of known populations, spineflower shall be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s). The creation of introduced populations shall require seed collection and/or top soil at impacted spineflower locations and nursery propagation to increase seed and sowing of seed. The seed collection activities, and the maintenance of the bulk seed repository, shall be approved in advance by the County and CDFG.

Once the boundaries of the Newhall Ranch spineflower preserve(s) are delineated, the project applicant, or its designee, shall be responsible for conducting a spineflower population census within the Newhall Ranch spineflower preserve(s) annually for 10 years. (These census surveys shall be in addition to the surveys required by Mitigation Measure 4.6-53, above.) The yearly spineflower population census documentation shall be submitted to the County and CDFG, and maintained by the project applicant, or its designee. If there are any persistent population declines documented in the annual population census reports, the project applicant, or its designee, shall be responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. In no event, however, shall project-related activities jeopardize the continued existence of the Newhall Ranch spineflower populations. If a persistent population decline is documented, such as a trend in steady population decline that persists for a period of 5 consecutive years, or a substantial drop in population is detected over a 10-year period, spineflower may be introduced in consultation with CDFG in appropriate habitat and soils in the Newhall Ranch preserve(s),

utilizing the bulk spineflower seed repository, together with other required management activity or activities. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County and CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, including monitoring, as approved by the County and CDFG.

Annual viability reports shall be submitted to the County and CDFG for 10 years following delineation of the Newhall Ranch spineflower preserve(s) to ensure long-term documentation of the spineflower population status within the Newhall Ranch preserve(s). In the event annual status reports indicate the spineflower population within the Newhall Ranch preserve(s) is not stable and viable 10 years following delineation of the spineflower preserve(s), the project applicant, or its designee, shall continue to submit annual status reports to the County and CDFG for a period of no less than an additional 5 years.

(b) Connectivity, Reserve Design, and Buffers

SP 4.6-67 Indirect impacts associated with the interface between the preserved spineflower populations and planned development within the Newhall Ranch Specific Plan shall be avoided or minimized by establishing open space connections with Open Area, River Corridor, or High Country land use designations. In addition, buffers (i.e., setbacks from developed, landscaped or other use areas) shall be established around portions of the delineated preserve(s) not connected to Open Area, the River Corridor or the High Country land use designations. The open space connections and buffer configurations shall take into account local hydrology, soils, existing and proposed adjacent land uses, the presence of non-native invasive plant species, and seed dispersal vectors.

Open space connections shall be configured such that the spineflower preserves are connected to Open Area, River Corridor, or High Country land use designations to the extent practicable. Open space connections shall be of adequate size and configuration to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). Open space connections for the spineflower preserve(s) shall be configured in consultation with the County and CDFG. Open space connections for the spineflower preserve(s) shall be established for the entire Specific Plan area in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs.

For preserves and/or those portions of preserves not connected to Open Area, River Corridor, or High Country land use designations, buffers shall be established at variable distances of between 80 and 200 feet from the edge of development to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). The buffer size/configuration shall be guided by the analysis set forth in the "*Review of Potential Edge Effects on the San Fernando Valley Spineflower*," prepared by Conservation Biology Institute, January 19, 2000, and other sources of scientific information and analysis, which are available at the time the preserve(s) and buffers are established. Buffers for the spineflower preserve(s) shall be configured in consultation with the County and CDFG for the entire Specific Plan area. Buffers for the spineflower preserve(s) shall be established in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs.

Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. No other development or disturbance of native habitat shall be allowed within the spineflower preserve(s) or buffer(s).

The project applicant, or its designee, shall be responsible for revegetating open space connections and buffer areas of the Newhall Ranch spineflower preserve(s) to mitigate temporary impacts due to grading that will occur within portions of those open space connections and buffer areas. The impacted areas shall be reseeded with a native seed mix to prevent erosion, reduce the potential for invasive non-native plants, and maintain functioning habitat areas within the buffer area. Revegetation seed mix shall be reviewed and approved by the County and CDFG.

(c) Preserve Protection/Fencing

SP 4.6-68 To protect the preserved Newhall Ranch spineflower populations, and to further reduce potential direct impacts to such populations due to unrestricted access, the project applicant, or its designee, shall erect and maintain temporary orange fencing and prohibitive signage around the Newhall Ranch preserve(s), open space connections and buffer areas, which are adjacent to areas impacted by proposed development prior to and during all phases of construction. The areas behind the temporary fencing shall not be used for the storage of any equipment, materials, construction debris, or anything associated with construction activities.

Following the final phase of construction of any Newhall Ranch subdivision map adjacent to the Newhall Ranch spineflower preserve(s), the project applicant, or its designee, shall install and maintain permanent fencing along the subdivision tract bordering the preserve(s). Permanent signage shall be installed on the fencing along the preservation boundary to indicate that the fenced area is a biological preserve, which contains protected species and habitat, that access is restricted, and that trespassing and fuel modification are prohibited within the area. The permanent fencing shall be designed to allow wildlife movement.

The plans and specifications for the permanent fencing and signage shall be approved by the County and CDFG prior to the final phase of construction of any Newhall Ranch subdivision map adjacent to a Newhall Ranch spineflower preserve(s).

(d) Preserve Protection/Hydrological Alterations

SP 4.6-69 Indirect impacts resulting from changes to hydrology (i.e., increased water runoff from surrounding development) at the interface between spineflower preserve(s) and planned development within the Newhall Ranch Specific Plan shall be avoided or mitigated to below a level of significance.

Achievement of this standard will be met through the documented demonstration by the project applicant, or its designee, that the storm drain system achieves pre-development hydrological conditions for the Newhall Ranch spineflower preserve(s). To document such a condition, the project applicant, or its designee, shall prepare a study of the pre- and post-development hydrology, in conjunction with Newhall Ranch subdivision maps adjacent to spineflower preserve(s). The study shall be used in the design and engineering of a storm drain system that achieves pre-development hydrological conditions. The study must conclude that proposed grade changes in development areas beyond the buffers will maintain pre-development hydrology conditions within the preserve(s). The study shall be approved by the Planning Director of the County, and the resulting conditions confirmed by CDFG.

The storm drain system for Newhall Ranch subdivision maps adjacent to any spineflower preserves must be approved by the County prior to the initiation of any grading activities.

(e) Road Construction Measures

SP 4.6-70 Consistent with the Spineflower Mitigation Area Overlay reflected in Mitigation Measure 4.6-65, direct impacts to known Newhall Ranch spineflower populations associated with proposed road construction or modifications to existing roadways shall be further assessed for proposed road

construction at the Newhall Ranch subdivision map level, in conjunction with the tiered EIR required for each subdivision map. To avoid or substantially lessen direct impacts to known spineflower populations, Specific Plan roadways shall be redesigned or realigned, to the extent practicable, to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in Mitigation Measures 4.6-66 and 4.6-67. The project applicant, or its designee, acknowledges that that road redesign and realignment is a feasible means to avoid or substantially lessen potentially significant impacts on the now known Newhall Ranch spineflower populations. Road redesign or alignments to be considered at the subdivision map level include:

(a) Commerce Center Drive;

(b) Magic Mountain Parkway;

(c) Chiquito Canyon Road;

(d) Long Canyon Road;

(e) San Martinez Grande Road;

(f) Potrero Valley Road;

(g) Valencia Boulevard; and

(h) Any other or additional roadways that have the potential to significantly impact known Newhall Ranch spineflower populations.

Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch, unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process.

(f) Engineering, Design and Grading Modifications

SP 4.6-71 Consistent with the Spineflower Mitigation Area Overlay reflected in Mitigation Measure 4.6-65, direct impacts to known Newhall Ranch spineflower populations shall be further assessed at the Newhall Ranch subdivision map level, in conjunction with the required tiered EIR process. To avoid or substantially lessen impacts to known spineflower populations at the subdivision map level, the project applicant, or its designee, may be required to adjust Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-

specific grading to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in Mitigation Measures 4.6-66 and 4.6-67 for all future Newhall Ranch subdivision maps that encompass identified spineflower populations.

(g) Fire Management Plan

SP 4.6-72 A Fire Management Plan shall be developed to avoid and minimize direct and indirect impacts to the spineflower, in accordance with the adopted Newhall Ranch Resource Management Plan (RMP), to protect and manage the Newhall Ranch spineflower preserve(s) and buffers.

The Fire Management Plan shall be completed by the project applicant, or its designee, in conjunction with approval of any Newhall Ranch subdivision map adjacent to a spineflower preserve.

The final Fire Management Plan shall be approved by the County of Los Angeles Fire Department through the processing of subdivision maps.

Under the final Fire Management Plan, limited fuel modification activities within the spineflower preserves will be restricted to selective thinning with hand tools to allow the maximum preservation of Newhall Ranch spineflower populations. No other fuel modification or clearance activities shall be allowed in the Newhall Ranch spineflower preserve(s). Controlled burning may be allowed in the future within the Newhall Ranch preserve(s) and buffers, provided that it is based upon a burn plan approved by the County of Los Angeles Fire Department and CDFG. The project applicant, or its designee, shall also be responsible for annual maintenance of fuel modification zones, including, but not limited to, removal of undesirable non-native plants, revegetation with acceptable locally indigenous plants and clearing of trash and other debris in accordance with the County of Los Angeles Fire Department.

(h) Water Flow Diversion and Management

SP 4.6-73 At the subdivision map level, the project applicant, or its designee, shall design and implement project-specific design measures to minimize changes in surface water flows to the Newhall Ranch spineflower preserve(s) for all Newhall Ranch subdivision maps adjacent to the preserve(s) and buffers, and avoid and minimize indirect impacts to the spineflower. Prior to issuance of a grading permit for each such subdivision map, the project applicant, or its designee, shall submit for approval to the County plans and specifications that ensure implementation of the following design measures:

(a) During construction activities, drainage ditches, piping or other approaches will be put in place to convey excess storm water and other surface water flows away from the Newhall Ranch spineflower preserve(s) and connectivity/preserve design/buffers, identified in Mitigation Measures 4.6-66 and 4.6-67;

(b) Final grading and drainage design will be developed that does not change the current surface and subsurface hydrological conditions within the preserve(s);

(c) French drains will be installed along the edge of any roadways and fill slopes that drain toward the preserve(s);

(d) Roadways will be constructed with slopes that convey water flows within the roadway easements and away from the preserve(s);

(e) Where manufactured slopes drain toward the preserve(s), a temporary irrigation system would be installed to the satisfaction of the County in order to establish the vegetation on the slope area(s). This system shall continue only until the slope vegetation is established and self sustaining;

(f) Underground utilities will not be located within or through the preserve(s). Drainage pipes installed within the preserve(s) away from spineflower populations to convey surface or subsurface water away from the populations will be aligned to avoid the preserve(s) to the maximum extent practicable; and

(g) Fencing or other structural type barriers that will be installed to reduce intrusion of people or domestic animals into the preserve(s) shall incorporate footing designs that minimize moisture collection.

(i) Biological Monitor

SP 4.6-74 A knowledgeable, experienced botanist/biologist, subject to approval by the County and CDFG, shall be required to monitor the grading and fence/utility installation activities that involve earth movement adjacent to the Newhall Ranch spineflower preserve(s) to avoid the incidental take through direct impacts of conserved plant species, and to avoid disturbance of the preserve(s). The biological monitor will conduct biweekly inspections of the project site during such grading activities to ensure that the mitigation measures provided in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section) are implemented and adhered to.

Monthly monitoring reports, as needed, shall be submitted to the County verifying compliance with the mitigation measures specified in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section).

The biological monitor will have authority to immediately stop any such grading activity that is not in compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section), and to take reasonable steps to avoid the take of, and minimize the disturbance to, spineflower populations within the preserve(s).

(j) Construction Impact Avoidance Measures

SP 4.6-75 The following measures shall be implemented to avoid and minimize indirect impacts to Newhall Ranch spineflower populations during all phases of project construction:

(a) Water Control. Watering of the grading areas would be controlled to prevent discharge of construction water into the Newhall Ranch preserve(s) or on ground sloping toward the preserve(s). Prior to the initiation of grading operations, the project applicant, or its designee, shall submit for approval to the County an irrigation plan describing watering control procedures necessary to prevent discharge of construction water into the Newhall Ranch preserve(s) and on ground sloping toward the preserve(s).

(b) Storm Water Flow Redirection. Diversion ditches would be constructed to redirect storm water flows from graded areas away from the Newhall Ranch preserve(s). To the extent practicable, grading of areas adjacent to the preserve(s) would be limited to spring and summer months (May through September) when the probability of rainfall is lower. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County a storm water flow redirection plan that demonstrates the flow of storm water away from the Newhall Ranch spineflower preserve(s).

(c) Treatment of Exposed Graded Slopes. Graded slope areas would be trimmed and finished as grading proceeds. Slopes would be treated with soil stabilization measures to minimize erosion. Such measures may include seeding and planting, mulching, use of geotextiles and use of stabilization mats. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County the treatments to be applied to exposed graded slopes that would ensure minimization of erosion.

(k) Reassessment Requirement

SP 4.6-76 In conjunction with submission of the first Newhall Ranch subdivision map in either Mesas Village or that portion of Riverwood Village in which the San Martinez spineflower location occurs, the project applicant, or its designee, shall reassess project impacts, both direct and indirect, to the spineflower populations using subdivision mapping data, baseline data from the Newhall Ranch Final EIR and data from the updated plant surveys (see, Specific Plan EIR Mitigation Measure 4.6-53).

This reassessment shall take place during preparation of the required tiered EIR for each subdivision map. If the reassessment results in the identification of new or additional impacts to Newhall Ranch spineflower populations, which were not previously known or identified, the mitigation measures set forth in this program, or a Fish and Game Code Section 2081 permit(s) issued by CDFG, shall be required, along with any additional mitigation required at that time.

(l) Newhall Ranch Monitoring and Management

SP 4.6-77 Direct and indirect impacts to the preserved Newhall Ranch spineflower populations shall require a monitoring and management plan, subject to the approval of the County. The applicant shall consult with CDFG with respect to preparation of the Newhall Ranch spineflower monitoring/management plan. This plan shall be in place when the preserve(s) and connectivity/preserve design/buffers are established (see Mitigation Measures 4.6-66 and 4.6-67). The criteria set forth below shall be included in the plan.

Monitoring. The purpose of the monitoring component of the plan is to track the viability of the Newhall Ranch spineflower preserve(s) and its populations, and to ensure compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section).

The monitoring component of the plan shall investigate and monitor factors such as population size, growth or decline, general condition, new impacts, changes in associated vegetation species, pollinators, seed dispersal vectors, and seasonal responses. Necessary management measures will be identified. The report results will be sent annually to the County, along with photo documentation of the assessed site conditions.

The project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, with the concurrence of CDFG, to conduct quantitative monitoring over the life of the Newhall Ranch Specific Plan. The botanist/biologist shall have a minimum of three years experience with established monitoring techniques and familiarity with Southern California flora

and target taxa. Field surveys of the Newhall Ranch spineflower preserve(s) will be conducted each spring. Information to be obtained will include: (a) an estimate of the numbers of spineflowers in each population within the preserve(s); (b) a map of the extent of occupied habitat at each population; (c) establishment of photo monitoring points to aid in documenting long-term trends in habitat; (d) aerial photographs of the preserved areas at five-year intervals; (e) identification of significant impacts that may have occurred or problems that need attention, including invasive plant problems, weed problems and fencing or signage repair; and (f) overall compliance with the adopted mitigation measures.

For a period of three years from Specific Plan re-approval, all areas of potential habitat on the Newhall Ranch site will be surveyed annually in the spring with the goal of identifying previously unrecorded spineflower populations. Because population size and distribution limits are known to vary depending on rainfall, annual surveys shall be conducted for those areas proposed for development in order to establish a database appropriate for analysis at the project-specific subdivision map level (rather than waiting to survey immediately prior to proceeding with the project-specific subdivision map process). In this way, survey results gathered over time (across years of varying rainfall) will provide information on ranges in population size and occupation. New populations, if they are found, will be mapped and assessed for inclusion in the preserve program to avoid impacts to the species.

Monitoring/Reporting. An annual report will be submitted to the County and CDFG by December 31st of each year. The report will include a description of the monitoring methods, an analysis of the findings, effectiveness of the mitigation program, site photographs, and adoptive management measures, based on the findings. Any significant adverse impacts, signage, fencing or compliance problems identified during monitoring visits will be reported to the County and CDFG for corrective action by the project applicant, or its designee.

Management. Based on the outcome of ongoing monitoring and additional project-specific surveys addressing the status and habitat requirements of the spineflower, active management of the Newhall Ranch spineflower preserve(s) will be required in perpetuity. Active management activities will be triggered by a downward population decline over five consecutive years, or a substantial drop in population over a 10-year period following County re-approval of the Specific Plan. Examples of management issues that may need to be addressed in the future include, but are not limited to, control of exotic competitive non-native plant species, herbivory predation, weed control, periodic controlled burns, or fuel modification compliance.

After any population decline documented in the annual populations census following County re-approval of the Specific Plan, the project applicant, or its designee, shall be responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. If a persistent population decline is documented, such as a trend in steady population decline persistent for a period of 5 consecutive years, or a substantial drop in population detected over a 10-year period, spineflower may be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the bulk spineflower seed repository, together with other required management activity or activities. In connection with this monitoring component, the project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, to complete: (a) a study of the breeding and pollination biology of the spineflower, including investigation into seed physiology to assess parameters that may be important as management tools to guarantee self-sustainability of populations, which may otherwise have limited opportunity for germination; and (b) a population genetics study to document the genetic diversity of the Newhall Ranch spineflower population. The criteria for these studies shall be to develop data to make the Newhall Ranch spineflower management program as effective as possible. These studies shall be subject to approval by the County's biologist, with the concurrence of CDFG. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County with the concurrence of CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, as approved by the County and CDFG.

The length of the active management components set forth above shall be governed by attainment of successful management criteria set forth in the plan rather than by a set number of years.

(m) Translocation/Reintroduction Program

SP 4.6-78 To the extent project-related direct and indirect significant impacts on spineflower cannot be avoided or substantially lessened through establishment of the Newhall Ranch spineflower preserve(s), and other avoidance, minimization, or other compensatory mitigation measures, a translocation and reintroduction program may be implemented in consultation with CDFG to further mitigate such impacts. Direct impacts (i.e., take) to occupied spineflower areas shall be fully mitigated at a 4:1 ratio. Impacts to occupied spineflower areas caused by significant indirect effects shall be mitigated at a 1:1 ratio.

Introduction of new spineflower areas will be achieved through a combination of direct seeding and translocation of the existing soil seed bank that would be impacted by grading. Prior to any

development within, or disturbance to, spineflower populations, on-site and off-site mitigation areas shall be identified and seed and top soil shall be collected. One-third of the collected seed shall be sent to the Rancho Santa Ana Botanical Garden for storage. One third of the seed shall be sent to the USDA National Seed Storage Lab in Fort Collins, Colorado for storage. One third shall be used for direct seeding of the on-site and off-site mitigation areas.

Direct seeding. Prior to the initiation of grading, the project applicant, or its designee, shall submit to the County a program for the reintroduction of spineflower on Newhall Ranch. The reintroduction program shall include, among other information: (a) location map with scale; (b) size of each introduction polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for seed collection and application; and (f) monitoring and reporting. The program shall be submitted to CDFG for input and coordination. The project applicant, or its designee, shall implement the reintroduction program prior to the initiation of grading. At least two candidate spineflower reintroduction areas will be created within Newhall Ranch and one candidate spineflower reintroduction area will be identified off site. Both on-site and off-site reintroduction areas will be suitable for the spineflower in both plant community and soils, and be located within the historic range of the taxon. Success criteria shall be included in the monitoring/management plan, with criteria for the germination, growth, and production of viable seeds of individual plants for a specified period.

Although the reintroduction program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the reintroduction program.

Translocation. Prior to the initiation of grading, the project applicant, or its designee, shall submit to the County a translocation program for the spineflower. Translocation would salvage the topsoil of spineflower areas to be impacted due to grading. Salvaged spineflower soil seed bank would be translocated to the candidate spineflower reintroduction areas. The translocation program shall include, among other information: (a) location map with scale; (b) size of each translocation polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for topsoil collection and application; and (f) monitoring and reporting. The translocation program shall be submitted to CDFG for input and coordination. Translocation shall occur within the candidate spineflower reintroduction areas on site and off site. Successful criteria for each site shall be included in the monitoring/management plan/with criteria for the germination and growth to reproduction of individual plants for the first year a specified period.

Although the translocation program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the translocation program.

(n) Ongoing Agricultural Activities

SP 4.6-79 The project applicant, or its designee, shall engage in regular and ongoing consultation with the County and CDFG in connection with its ongoing agricultural operations in order to avoid or minimize significant direct impacts to the spineflower.

In addition, the project applicant, or its designee, shall provide 30 days advance written notice to the County and CDFG of the proposed conversion of its ongoing rangeland operations on Newhall Ranch to more intensive agricultural uses. The purpose of the advance notice requirement is to allow the applicant, or its designee, to coordinate with the County and CDFG to avoid or minimize significant impacts to the spineflower prior to the applicant's proposed conversion of its ongoing rangeland operations to more intensive agricultural uses. This coordination component will be implemented by or through the County's Department of Regional Planning and/or the Regional Manager of CDFG. Implementation will consist of the County and/or CDFG conducting a site visit of the proposed conversion area(s) within the 30-day period, and making a determination of whether the proposed conversion area(s) would destroy or significantly impact spineflower population in or adjacent to those areas. If it is determined that the conversion area(s) do not destroy or significantly impact spineflower populations, then the County and/or CDFG will authorize such conversion activities in the proposed conversion area(s). However, if it is determined that the conversion area(s) may destroy or significantly impact spineflower populations, then the County and/or CDFG will issue a stop work order to the applicant, or its designee. If such an order is issued, the applicant, or its designee, shall not proceed with any conversion activities in the proposed conversion area(s). However, the applicant, or the designee, may take steps to relocate the proposed conversion activities in an alternate conversion area(s). In doing so, the applicant, or its designee, shall follow the same notice and coordination provisions identified above. This conversion shall not include ordinary pasture maintenance and renovation or dry land farming operations consistent with rangeland management. *(This measure is not applicable to the Mission Village project because the project does not include an agricultural component.)*

(o) San Martinez Population

SP 4.6-80 Upon approval of tentative tract map(s) impacting the San Martinez portion of the Specific Plan site, the applicant shall work with the Department of Regional Planning staff and SEATAC to establish an appropriately sized preserve area to protect the spineflower population at San Martinez Canyon. *(This measure is not applicable to the Mission Village project because the project is not proposed within the San Martinez portion of the Newhall Ranch Specific Plan.)*

b. Additional Mitigation Measures Proposed by This EIR

The following project-specific mitigation measures are recommended to reduce the potentially significant biological impacts that may occur with implementation of the Mission Village project. These mitigation measures are in addition to those adopted in the certified Newhall Ranch Specific Plan Program EIR. All mitigation measures that relate specifically to the Mission Village project are identified with the designation "MV."

MV 4.3-1 Temporary impacts from construction activities in the riverbed shall be restricted to the following areas of disturbance: (1) an 85-foot-wide zone that extends into the river from the base of the rip-rap or gunite bank protection where it intercepts the river bottom; (2) 100 feet on either side of the outer edge of a new bridge or bridge to be modified; (3) a 60-foot-wide corridor for utility lines; (4) 20-foot-wide temporary access ramps; and (5) 60-foot roadway width temporary construction haul routes. The locations of these temporary construction sites and the routes of all access roads shall be shown on maps submitted with the sub-notification letter submitted to the Corps and CDFG for individual project approval. Any variation from these limits shall be submitted, with a justification for a variation for Corps and CDFG approval. The construction plans should indicate what type of vegetation, if any, would be temporarily disturbed or removed and the post-construction activities to facilitate revegetation of the temporarily impacted areas. The boundaries of the construction site and any temporary access roads within the riverbed shall be marked in the field with stakes and flagging. No construction activities, vehicular access, equipment storage, stockpiling, or significant human intrusion shall occur outside the work area and access roads.

MV 4.3-2 Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities that result in any disturbance to the banks or wetted channel, aquatic habitats within construction sites and access roads, as well as all aquatic habitats within 300 feet of construction sites and access roads, shall be surveyed by a qualified biologist for the presence of the unarmored threespine stickleback, arroyo chub, and Santa Ana sucker. The Corps and CDFG shall be notified at least 14 days prior to the survey and shall have

the option of attending. The biologist shall file a written report of the survey with both agencies within 14 days of the survey and no later than 10 days prior to any construction work in the riverbed. If there is evidence that fish spawn has occurred in the survey area, then surveys shall cease unless otherwise authorized by USFWS. If surveys determine that gravid fish are present, that spawning has recently occurred, or that juvenile fish are present in the proposed construction areas, all activities within aquatic habitat will be suspended. Construction within aquatic habitats shall only occur when it is determined that juvenile fish are not present within the project area.

MV 4.3-3 Conduct focused surveys for California red-legged frogs. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed at the appropriate season for California red-legged frogs. The applicant shall contract with a qualified biologist to conduct focused surveys for California red-legged frogs. If detected in or adjacent to the project area, no work will be authorized within 500 feet of occupied habitat until the applicant provides concurrence from the USFWS to CDFG and Corps. If present, the applicant shall implement measures required by the USFWS Biological Opinion for California red-legged frog that either supplement or supercede these measures. If present, the applicant shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG.

1) The applicant shall retain a qualified biologist with demonstrated expertise with California red-legged frogs to monitor all construction activities in potential red-legged frog habitat and assist the applicant in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of California red-legged frogs.

2) Prior to the onset of construction activities, the applicant shall provide all personnel who will be present on work areas within or adjacent to the project area the following information:

    a. A detailed description of the California red-legged frogs, including color photographs;

b. The protection the California red-legged frog receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act;

c. The protective measures being implemented to conserve the California red-legged frogs and other species during construction activities associated with the proposed project; and

d. A point of contact if California red-legged frogs are observed.

3) All trash that may attract predators of the California red-legged frogs will be removed from work sites or completely secured at the end of each work day.

4) Prior to the onset of any construction activities, the applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the California red-legged frogs and the actions taken to reduce impacts to this species. Because California red-legged frogs may occur in various locations during different seasons of the year, the applicant, USFWS, and authorized biologist will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on California red-legged frogs. The goal of this effort is to reduce the level of mortality of California red-legged frogs during construction.

5) Work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG. All workers will be advised that equipment and vehicles must remain within the fenced work areas.

6) The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any California red-legged frogs from within the fenced area to suitable habitat outside of the fence. If California red-legged frogs are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS/CDFG.

7) Fencing to exclude California red-legged frogs will be at least 24 inches in height.

8) The type of fencing must be approved by the authorized biologist and the USFWS/CDFG.

9) Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of California red-legged frogs may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the applicant in scheduling its work activities accordingly.

10) If California red-legged frogs are found within an area that has been fenced to exclude California red-legged frogs, activities will cease until the authorized biologist moves the California red-legged frog(s).

11) If California red-legged frogs are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the California red-legged frogs. The authorized biologist in consultation with USFWS/CDFG will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS.

12) Any California red-legged frogs found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, access to deep perennial pools, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.

13) The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.

14) Staging areas for all construction activities will be located on previously disturbed upland areas, if possible, designated for this purpose. All staging areas will be fenced.

15) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.

MV 4.3-4 Focused surveys for arroyo toad shall be conducted. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed at the appropriate season for arroyo toad. The applicant shall contract with a qualified biologist to conduct focused surveys for arroyo toad. If detected in or adjacent to the project area, no work will be authorized within 500 feet of occupied habitat until the applicant provides concurrence from the USFWS to CDFG and the Corps. The applicant shall implement measures required by the USFWS Biological Opinion that either supplement or supercede these measures. If arroyo toads are determined to be present, the applicant shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG:

1) The applicant shall retain a qualified biologist with demonstrated expertise with arroyo toads to monitor all construction activities in potential arroyo toad habitat and assist the applicant in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of arroyo toad.

2) Prior to the onset of construction activities, the applicant shall provide all personnel who will be present on work areas within or adjacent to the project area the following information:

    a. A detailed description of the arroyo toad, including color photographs;

    b. The protection the arroyo toad receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act;

    c. The protective measures being implemented to conserve the arroyo toad and other species during construction activities associated with the proposed project; and

    d. A point of contact if arroyo toads are observed.

3) All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each work day.

4) Prior to the onset of any construction activities, the applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, the applicant, USFWS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads. The goal of this effort is to reduce the level of mortality of arroyo toads during construction. The parties realize that, if arroyo toads are present, complete prevention of all mortality is likely not possible because some arroyo toads may occur anywhere within suitable habitat during any given season; the detection of every individual over large areas is impossible because of the small size, fossorial habits, and cryptic coloration of the arroyo toad.

5) Where construction can occur in habitat where arroyo toads are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG. All workers will be advised that equipment and vehicles must remain within the fenced work areas.

6) The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any arroyo toads from within the fenced area to suitable habitat outside of the fence. If arroyo toads are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS/CDFG.

7) Fencing to exclude arroyo toads will be at least 24 inches in height.

8) The type of fencing must be approved by the authorized biologist and the USFWS/CDFG.

9) Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of arroyo toads may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the applicant in scheduling its work activities accordingly.

10) If arroyo toads are found within an area that has been fenced to exclude arroyo toads, activities will cease until the authorized biologist moves the arroyo toads.

11) If arroyo toads are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the arroyo toads. The authorized biologist in consultation with USFWS/CDFG will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS.

12) Any arroyo toads found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.

13) The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.

14) Staging areas for all construction activities will be located on previously disturbed upland areas designated for this purpose. All staging areas will be fenced within potential toad habitat.

15) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.

16) Drift fence/pitfall trap surveys will be implemented in toad sensitive areas prior to construction in an effort to reduce potential mortality to this species. Prior to any construction activities in the project area, silt fence shall be installed completely around the proposed work area and a qualified biologist should conduct a preconstruction/clearance survey of the work area for arroyo toads. Any toads found in the work area should be relocated to suitable habitat. The silt fence shall be maintained for the duration of the work activity.

17) The applicant shall restrict work to daylight hours, except during an emergency, in order to avoid nighttime activities when arroyo toads may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area.

MV 4.3-5 Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 500 feet of construction sites and access roads shall be surveyed at the appropriate season for southwestern pond turtle. Focused surveys shall consist of a minimum of four daytime surveys, to be completed between April 1 and June 1. The survey schedule may be adjusted in consultation with CDFG to reflect the existing weather or stream conditions. The applicant shall develop a Plan to address the relocation of southwestern pond turtle. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for this species; identify the locations where more intensive efforts should be conducted; identify the habitat and conditions in the proposed relocation site(s); the methods that would be utilized for trapping and relocating individuals; and provide for the documentation/recordation of the numbers of animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground-disturbing activities within potentially occupied habitat.

If southwestern pond turtles are detected in or adjacent to the project, nesting surveys shall be conducted. Focused surveys for evidence of southwestern pond turtle nesting shall be conducted in, or adjacent to, the project when suitable nesting habitat exists within 1,300 feet of occupied habitat in an area where project-related ground disturbance will occur (*e.g.*, development, ground disturbance). If both of those conditions are met, a qualified biologist shall conduct focused, systematic surveys for southwestern pond turtle nesting sites. The survey area shall include all suitable nesting habitat within 1,300 feet of occupied habitat in which project-related ground disturbance will occur. This area may be adjusted based on the existing topographical features on a case-by-case basis with the approval of CDFG. Surveys will entail searching for evidence of pond turtle nesting, including remnant eggshell fragments, which may be found on the ground following nest depredation.

If a southwestern pond turtle nesting area would be adversely impacted by construction activities, the applicant shall avoid the nesting area. If avoidance of the nesting area is determined to be infeasible, the authorized biologist shall coordinate with CDFG to identify if it is possible to relocate the pond turtles. Eggs or hatchlings shall not be moved without written authorization from CDFG.

The qualified biologist shall be present during all activities immediately adjacent to or within habitat that supports populations of southwestern pond turtle. Clearance surveys for pond turtles shall be conducted within 500 feet of potential habitat by the authorized biologist prior to the

initiation of construction each day. The resume of the proposed biologist will be provided to CDFG for approval prior to conducting the surveys.

MV 4.3-6 Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 300 feet of construction sites and access roads shall be surveyed at the appropriate season for two-striped garter snake and south coast garter snake. Focused surveys shall consist of a minimum of four daytime surveys, to be completed between April 1 and September 1. The survey schedule may be adjusted in consultation with CDFG to reflect the existing weather or stream conditions. If located, the species will be relocated to suitable pre-approved locations identified in the two-striped garter snake and/or south coast garter snake Relocation Plan.

The applicant shall develop a Plan to address the relocation of two-striped garter snake and south coast garter snake. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for each species, identify the locations where more intensive efforts should be conducted, identify the habitat and conditions in the proposed relocation site(s), identify the methods that would be utilized for trapping and relocating the individual species, and provide for the documentation/recordation of the species and number of animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground-disturbing activities, within potentially occupied habitat.

The qualified biologist shall be present during all activities immediately adjacent to or within habitat that supports populations of two-striped garter snake and/or south coast garter snake. Clearance surveys for garter snakes shall be conducted within 200 feet of potential habitat by the authorized biologist prior to the initiation of construction each day. The resume of the proposed biologists will be provided to CDFG for approval prior to conducting the surveys.

MV 4.3-7 Prior to construction the applicant shall develop a relocation plan for coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch-nosed snake. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for each species; identify the locations where more intensive efforts should be conducted; identify the habitat and conditions in the proposed relocation site(s); the methods that would be utilized for trapping and relocating the individual species; and provide for the documentation/recordation of the species and number of the animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground disturbing activities within potentially occupied habitat.

The Plan shall include the specific survey and relocation efforts that would occur for construction activities that occur both during the activity period of the special status species (generally March to November) and for periods when the species may be present in the work area but difficult to detect due to weather conditions (generally December through February). Thirty days prior to construction activities in coastal scrub, chaparral, oak woodland, riparian habitats, or other areas supporting these species qualified biologists shall conduct surveys to capture and relocate individual coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch-nosed snake in order to avoid or minimize take of these special-status species. The plan shall require a minimum of three (3) surveys conducted during the time of year/day when each species is most likely to be observed. Individuals shall be relocated to nearby undisturbed areas with suitable habitat. If construction is scheduled to occur during the low activity period (generally December through February) the surveys shall be conducted prior to this period if possible and exclusion fencing shall be placed to limit the potential for re-colonization of the site prior to construction. The qualified biologist will be present during ground-disturbing activities immediately adjacent to or within habitat that supports populations of these species. Clearance surveys for special-status reptiles shall be conducted by a qualified biologist prior to the initiation of construction each day.

Results of the surveys and relocation efforts shall be provided to CDFG in the annual mitigation status report. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.

MV 4.3-8 During any stream diversion or culvert installation activity, a qualified biologist(s) shall be present and shall patrol the areas within, upstream, and downstream of the work area. The biologists shall inspect the diversion and inspect for stranded fish or other aquatic organisms. Under no circumstances shall the unarmored threespine stickleback be collected or relocated, unless USFWS personnel or their agents implement this measure. Any event involving stranded fish shall be recorded and reported to CDFG and USFWS within 24 hours.

MV 4.3-9 Temporary bridges, culvert crossings, or other feasible methods of providing access across the river shall be constructed outside of the winter season and not during periods when spawning is occurring. Prior to the construction of any temporary or permanent crossing of the Santa Clara River, the applicant shall develop a Stream Crossing and Diversion Plan. The plan shall include the following elements: the timing and methods for pre-construction aquatic species surveys; a detailed description of the diversion methods (e.g., berms shall be constructed of on-site alluvium materials of low silt content, inflatable dams, sand bags, or other approved materials); special-status species

relocation; fish exclusion techniques, including the use of block netting and fish relocation; methods to maintain fish passage during construction; channel habitat enhancement, including the placement of vegetation, rocks, and boulders to produce riffle habitat; fish stranding surveys; and the techniques for the removal of crossings prior to winter storm flows. The Plan shall be submitted to the USFWS and CDFG for approval at least 30 days prior to implementation.

If adult special-status fishes are present and spawning has not occurred, they shall be relocated prior to the diversion or crossing. Block nets of 0.125-inch woven mesh will be set upstream and downstream. On days with possible high temperature or low humidity (temperatures in excess of 80° F), work will be done in the early morning hours, as soon as sufficient light is available, to avoid exposing fishes to high temperatures and/or low humidity. If high temperatures are present, the fishes will be herded to downstream areas past the block net. Once the fishes have been excluded by herding, a USFWS staff member or his or her agents shall inspect the site for remaining or stranded fish. A USFWS staff member or his or her agents shall relocate the fish to suitable habitat outside the project area (including those areas potentially subject to high turbidity). During the diversion/relocation of fishes, the USFWS or his or her agents shall be present at all times.

MV 4.3-10 Installation of bridges, culverts, or other structures shall not impair the movement of fish and aquatic life. Bottoms of temporary culverts shall be placed at or below channel grade. Bottoms of permanent culverts shall be placed below channel grade. Culvert crossings shall include provisions for a low flow channel where velocities are less than two feet per second to allow fish passage.

MV 4.3-11 a. **Stream diversion bypass channels:**

Stream diversion bypass channels will be constructed when the active wetted channel is within the work zone. Diversion bypass channels will be built in accordance with **MV 4.3-9** and in consultation with CDFG/USFWS. Equipment shall not be operated in areas of ponded or flowing water unless authorized by CDFG/USFWS.

The diversion channel shall be of a width and depth comparable to the natural river channel. In all cases where flowing water is diverted from a segment of the stream channel, the bypass channel will be constructed prior to the diversion of the active stream. The bypass channel will be constructed prior to diverting the stream, beginning in the downstream area and continuing in an upstream direction. Where feasible and in consultation with CDFG/USFWS, the configuration of the diversion channel will be curved (sinuous) with multiple sets of obstructions (*i.e.*, boulders,

large logs, or other CDFG/USFWS-approved materials) placed in the channel at the point of each curve (*i.e.*, on alternating sides of the channel). If emergent aquatic vegetation is present in the original channel, the applicant will transplant suitable vegetation into the diversion channel and on the banks prior to or at the time of the water diversion. A qualified restoration ecologist will supervise the construction of the diversion channels on site. The integrity of the channel and diversion shall be maintained throughout the intended diversion period. Channel bank or barrier construction shall be adequate to prevent seepage into or from the work area.

Construction of diversion channels shall not occur if surveys determine that gravid fish are present, spawning has recently occurred, or juvenile fish are present in the proposed construction areas.

At the conclusion of the diversion, either at the commencement of the winter season, or the completion of construction, the applicant will coordinate with CDFG/USFWS to determine if the diversion should be left in place or the stream returned to the original channel. If CDFG/USFWS determine the stream should be diverted to the original channel, the original channel will be modified prior to re-diversion (*i.e.*, while dry) to construct curves (sinuosity) into that channel, including the placement of obstructions (*i.e.*, boulders, large logs, or other CDFG/USFWS-approved materials). The original channel will be replanted with emergent vegetation as the diversion channel was planted. If the diversion channel is abandoned, the boulders will remain in place.

b. **Dewatering:**

Construction dewatering in close proximity to stream flow shall implement the following:

Assess local stream and groundwater conditions, including flow depths, groundwater elevations, and anticipated dewatering cone of influence (radius of draw down).

Assess surface water elevations upstream, adjacent to, and downstream of the extraction points, to assess any critical flow regimes susceptible to excessive draw down and therefore fish stranding issues.

Assess surface water elevations downstream of the discharge locations (if discharge is proposed to the flowing stream) to assess any flow regimes and overbank areas that may be susceptible to flooding and therefore fish stranding at the cessation of discharge. Discharge locations shall also be assessed for potential channel bed erosion from dewatering discharge, and appropriate BMPs must be implemented to prevent excessive erosion or turbidity in the discharge.

The information above shall be summarized and provided in a plan approved by CDFG and Corps.

Fish shall be excluded from any artificial flowing channels from dewatering discharge. Methods to ensure separation may include, but are not limited to: block netting at the confluence; creation of a physical drop greater than 4 inches at the confluence; or maintaining a velocity range unsuitable for fish passage, such as a berm at the confluence with small diameter pipes for discharge.

MV 4.3-12 Slow-moving water habitats shall be constructed upstream and downstream of any river crossing or bridge construction area to provide refuge for special-status fishes during construction. Where feasible and in consultation with CDFG and USFWS, the applicant shall enhance slow-moving water habitats for each linear foot disturbed by hand-excavating shallow side channels and placing multiple sets of obstructions (*e.g.*, boulders, large logs, or other CDFG- and USFWS-approved materials) in the channel.

MV 4.3-13 Water containing mud, silt, or other pollutants from construction activities shall not be allowed to enter a flowing stream or be placed in locations that may be subject to normal storm flows during periods when storm flows can reasonably be expected to occur.

MV 4.3-14 Thirty days prior to construction activities, a qualified biologist shall conduct a pre-construction survey for mountain lion natal dens. The survey area shall include the construction footprint and the area within 2,000 feet of the project disturbance boundaries. Should an active natal den be located, the applicant shall cease work within 2,000 feet and inform CDFG within 24 hours. No construction activities shall occur in the 2,000-foot buffer until a qualified biologist in consultation with CDFG establishes an appropriate setback from the den that would not adversely affect the successful rearing of the cubs. No construction activities or human intrusion shall occur within the established setback until the cubs have been successfully reared or the cats have left the area.

MV 4.3-15 Within 30 days of ground-disturbing activities associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically March through August in the project region, or as determined by a qualified biologist), the applicant shall have weekly surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone. Pre-construction surveys shall include nighttime surveys to identify active rookery sites. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 7 days prior to initiation of disturbance work. If ground-disturbing activities are

delayed, then additional pre-disturbance surveys shall be conducted such that no more than 7 days will have elapsed between the survey and ground-disturbing activities.

If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist in consultation with CDFG, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. In the event that golden eagles establish an active nest in the River Corridor SMA/SEA 23, the buffers will be established in consultation with CDFG. Potential golden eagle nesting will be reported to CDFG within 24 hours. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts to these nests occur. Results of the surveys shall be provided to CDFG in the annual mitigation status report.

For listed riparian songbirds (least Bell's vireo, southwestern willow flycatcher, yellow-billed cuckoo) USFWS protocol surveys shall be conducted. If active nests are found, clearing and construction within 300 feet of the nest shall be postponed or halted, at the discretion of the biologist in consultation with CDFG and USFWS, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. If no active nests are observed, construction may proceed. If active nests are found, work may proceed provided that construction activity is located at least 300 feet from active nests (or as authorized through the context of the Biological Opinion and 2081b Incidental Take Permit). This buffer may be adjusted provided noise levels do not exceed 60 dB(A) hourly L_{eq} at the edge of the nest site as determined by a qualified biologist in coordination with a qualified acoustician.

If the noise meets or exceeds the 60 dB(A) L_{eq} threshold, or if the biologist determines that the construction activities are disturbing nesting activities, the biologist shall have the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) L_{eq} hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. The qualified biologist shall be responsible for documenting the results of the surveys and the ongoing monitoring and for reporting these results to CDFG and USFWS.

For coastal California gnatcatcher, the applicant shall conduct USFWS protocol surveys in suitable habitat within the project area and all areas within 500 feet of access or construction-related disturbance areas. Suitable habitats, according to the protocol, include "coastal sage scrub, alluvial fan, chaparral, or intermixed or adjacent areas of grassland and riparian habitats." A permitted biologist shall perform these surveys according to the USFWS' (1997a) Coastal California Gnatcatcher Presence/Absence Survey Guidelines. If a territory or nest is confirmed, the USFWS and CDFG shall be notified immediately. If present, a 500-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. No project activities may occur in these areas unless otherwise authorized by USFWS and CDFG. Construction activities in suitable gnatcatcher habitat will be monitored by a full-time qualified biologist. The monitoring shall be of a sufficient intensity to ensure that the biologist could detect the presence of a bird in the construction area.

MV 4.3-16 Thirty days prior to construction activities in grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for San Diego black-tailed jackrabbit and San Diego desert woodrat.

If San Diego black-tailed jackrabbits are present, non-breeding rabbits shall be flushed from areas to be disturbed. Dens, depressions, nests, or burrows occupied by pups shall be flagged and ground-disturbing activities avoided within a minimum of 200 feet during the pup-rearing season (February 15 through July 1). This buffer may be reduced based on the location of the den upon consultation with CDFG. Occupied maternity dens, depressions, nests, or burrows shall be flagged for avoidance, and a biological monitor shall be present during construction. If unattended young are discovered, they shall be relocated to suitable habitat by a qualified biologist. The applicant shall document all San Diego black-tailed jackrabbit identified, avoided, or moved and provide a written report to CDFG within 72 hours. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.

If active San Diego desert woodrat nests (stick houses) are identified within the disturbance zone or within 100 feet of the disturbance zone, a fence shall be erected around the nest site adequate to provide the woodrat sufficient foraging habitat at the discretion of the qualified biologist in consultation with CDFG. Clearing and construction within the fenced area will be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. If avoidance is not possible, the applicant will take the following sequential steps: (1) all understory vegetation will be cleared in the area immediately

surrounding active nests followed by a period of one night without further disturbance to allow woodrats to vacate the nest, (2) each occupied nest will then be disturbed by a qualified wildlife biologist until all woodrats leave the nest and seek refuge off site, and (3) the nest sticks shall be removed from the project site and piled at the base of a nearby hardwood tree (preferably a coast live oak or California walnut). Relocated nests shall not be spaced closer than 100 feet apart, unless a qualified wildlife biologist has determined that a specific habitat can support a higher density of nests. The applicant shall document all woodrat nests moved and provide a written report to CDFG.

All woodrat relocation shall be conducted by a qualified biologist in possession of a scientific collecting permit.

MV 4.3-17 Thirty days prior to construction activities in grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for American badger.

If American badgers are present, occupied habitat shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during the pup-rearing season (February 15 through July 1) and a minimum 200 foot buffer established. This buffer may be reduced based on the location of the den upon consultation with CDFG. Maternity dens shall be flagged for avoidance, identified on construction maps, and a qualified biologist shall be present during construction. If avoidance of a non-maternity den is not feasible, badgers shall be relocated either by trapping or by slowly excavating the burrow (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more than 4 inches at a time) before or after the rearing season (February 15 through July 1). Any relocation of badgers shall occur only after consultation with CDFG. A written report documenting the badger removal shall be provided to CDFG within 30 days of relocation.

Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.

MV 4.3-18 No earlier than 30 days prior to the commencement of construction activities, a pre-construction survey shall be conducted by a qualified biologist to determine if active roosts of special-status bats are present on or within 300 feet of the project disturbance boundaries. Should an active maternity roost be identified (in California, the breeding season of native bat species is generally from April 1 through August 31), the roost shall not be disturbed and construction within 300 feet

shall be postponed or halted, until the roost is vacated and juveniles have fledged. Surveys shall include rocky outcrops, caves, structures, and large trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities). Trees and rocky outcrops shall be surveyed by a qualified bat biologist (i.e., a biologist holding a CDFG collection permit and a Memorandum of Understanding with CDFG allowing the biologist to handle bats). If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed) by the project. If avoidance of the maternity roost must occur, the bat biologist shall survey (through the use of radio telemetry or other CDFG approved methods) for nearby alternative maternity colony sites. If the bat biologist determines in consultation with and with the approval of CDFG that there are alternative roost sites used by the maternity colony and young are not present then no further action is required.

If a maternity roost will be impacted by the project, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the project site no less than three months prior to the eviction of the colony. Large concrete walls (e.g., on bridges) on south or southwestern slopes that are retrofitted with slots and cavities are an example of structures that may provide alternative potential roosting habitat appropriate for maternity colonies. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. CDFG shall also be notified of any hibernacula or active nurseries within the construction zone.

If non-breeding bat hibernacula are found in trees scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted, under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). In situations requiring one-way doors, a minimum of one week shall pass after doors are installed and temperatures should be sufficiently warm for bats to exit the roost because bats do not typically leave their roost daily during winter months in southern coastal California. This action should allow all bats to leave during the course of one week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in the judgment of the qualified bat biologist in consultation with CDFG shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (*i.e.*, there shall be no less or more than one night between initial disturbance and the grading or tree removal). These actions should allow bats to leave during nighttime hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight.

If an active maternity roost is located on the project site, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (*i.e.*, prior to March 1) or after young are flying (i.e., after July 31) using the exclusion techniques described above.

MV 4.3-19 Any common or special-status species bat day roost sites found by a qualified biologist during pre-construction surveys conducted per **MV 4.3-18**, to be directly (within project disturbance footprint) or indirectly (within 300 feet of project disturbance footprint) impacted are to be mitigated with creation of artificial roost sites. The project applicant shall establish (an) alternative roost site(s) within suitable preserved open space located at an adequate distance from sources of human disturbance.

MV 4.3-20 Thirty days prior to construction activities, a qualified biologist shall conduct CDFG protocol surveys to determine whether the burrowing owl is present at the site. The surveys shall consist of three site visits and shall be conducted in areas dominated by field crops, disturbed habitat, grasslands, and along levee locations, or if such habitats occur within 500 feet of a construction zone. If located, occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. If the burrowing owl is detected but nesting is not occurring, construction work can proceed after any owls have been evacuated from the site using CDFG-approved burrow closure procedures and after alternative nest sites have been provided in accordance with the CDFG Staff Report on Burrowing Owl Mitigation (10-17-95).

Unless otherwise authorized by CDFG, a 500-foot buffer, within which no activity will be permissible, will be maintained between project activities and nesting burrowing owls during the nesting season. This protected area will remain in effect until August 31 or at CDFG's discretion and based upon monitoring evidence, until the young owls are foraging independently.

Results of the surveys and relocation efforts shall be provided to CDFG in the annual mitigation status report.

MV 4.3-21 Waste and recycling receptacles that discourage foraging by wildlife species adapted to urban environments shall be installed in common areas and parks throughout the Mission Village site.

MV 4.3-22 All oaks that will not be removed that are regulated under CLAOTO with driplines within 50 feet of land clearing (including brush clearing) or areas to be graded shall be enclosed in a temporary

fenced zone for the duration of the clearing or grading activities. Fencing shall extend to the root protection zone (i.e., the area at least 15 feet from the trunk or 5 feet beyond the drip line, whichever distance is greater). No parking or storage of equipment, solvents, or chemicals that could adversely affect the trees shall be allowed within 25 feet of the trunk at any time. Removal of the fence shall occur only after the project arborist or qualified biologist confirms the health of preserved trees.

MV 4.3-23 Mitigation Measures **SP 4.6-1** through **SP 4.6-16** specify requirements for riparian mitigation conducted in the High Country SMA/SEA 20, Salt Creek area, and Open Area. The applicant will prepare and implement a plan for mitigation of both riparian and upland habitats (such as riparian adjacent big sagebrush scrub), and incorporates these Mitigation Measures (**SP 4.6-1** through **SP 4.6-16**). A Comprehensive Mitigation Implementation Plan (CMIP) has been developed by Applicant that provides an outline of mitigation to offset impacts. The CMIP demonstrates the feasibility of creating the required mitigation acreage to offset project impacts (see **MV 4.3-31**). However, the CMIP does not identify mitigation actions specifically for impacts to waters of the United States. But since these waters are a subset of CDFG jurisdiction, the applicable Corps mitigation requirements would be met or exceeded.[1028]

Detailed riparian/wetland mitigation plans, in accordance with the CMIP, shall be submitted to, and are subject to the approval of, the Corps and CDFG as part of the sub-notification letters for individual projects. Individual project submittals shall include applicable CMIP elements, complying with the requirements outlined below. The detailed wetlands mitigation plan shall specify, at a minimum, the following: (1) the location of mitigation sites; (2) site preparation, including grading, soils preparation, irrigation installation, (2a) the quantity (seed or nursery stock) and species of plants to be planted (all species to be native to region); (3) detailed procedures for creating additional vegetation communities; (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the enhancement/restoration area; (6) a list of criteria by which to measure success of the mitigation sites (*e.g.*, percent cover and richness of native species, percent survivorship, establishment of self-sustaining native plantings, maximum allowable percent of non-native species); (7) measures to exclude unauthorized entry into the creation/enhancement areas; and (8) contingency measures in the event that mitigation efforts are not successful. The detailed wetlands mitigation plans shall also classify the biological value (as "high," "moderate," or "low") of the vegetation communities to be

[1028] For detailed information concerning the Corps compensatory mitigation program for impacts to waters of the United States, please reference Appendix 11.0 of the Section 404(b)1 Alternatives Analysis, included in Appendix F1.0 of the Final EIS/EIR.

disturbed as defined in these conditions, or may be based on an agency-approved method (e.g., Hybrid Assessment of Riparian Communities (HARC)). The biological value shall be used to determine mitigation replacement ratios required under **MV 4.3-31** and **MV 4.3-39**. The detailed wetlands mitigation plans shall provide for the 3:1 replacement of any Southern California black walnut to be removed from the riparian corridor for individual projects. The plan shall be subject to the approval of the CDFG and the Corps and approved prior to the impact to riparian resources. **MV 4.3-33** describes that the functions and values will be assessed for the riparian areas that will be removed, and **MV 4.3-31** and **MV 4.3-39** describe the replacement ratios for the habitats that will be impacted.

MV 4.3-24 Approximately 616.3 acres of coastal scrub shall be preserved on site within Open Area and/or off site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village. This measure ensures that preserved areas will be part of a greater managed preserved system of numerous natural vegetation communities meant to support both common and special-status wildlife species. These areas support the same types of habitat that would be lost through construction and would be further enhanced through management and monitoring activities.

MV 4.3-25 Prior to ground disturbance, construction, or site preparation activities, the applicant shall retain the services of a qualified biologist to conduct pre-construction surveys for western spadefoot toad within all portions of the project site containing suitable breeding habitat. Surveys shall be conducted during a time of year when the species could be detected (e.g., the presence of rain pools). If western spadefoot toad is identified on the project site, the following measures will be implemented:

(1) Under the direct supervision of the qualified biologist, western spadefoot toad habitat shall be created within suitable natural sites on the Specific Plan site outside of the proposed development envelope. The amount of occupied breeding habitat to be impacted by the project shall be replaced at a 2:1 ratio. The actual relocation site design and location shall be approved by CDFG. The location shall be in a suitable habitat as far away as feasible from any of the homes and roads to be built. The relocation ponds shall be designed such that they only support standing water for several weeks following seasonal rains in order that aquatic predators (e.g., fish, bullfrogs, and crayfish) cannot become established. Terrestrial habitat surrounding the proposed relocation site shall be as similar in type, aspect, and density to the location of the existing ponds as feasible. No site preparation or construction activities shall be permitted in the vicinity of the currently occupied ponds until the design and construction of the pool habitat in preserved areas of

the site has been completed and all western spadefoot toad adult, tadpoles, and egg masses detected are moved to the created pool habitat.

(2) Based on appropriate rainfall and temperatures, generally between the months of February and April, the biologist shall conduct pre-construction surveys in all appropriate vegetation communities within the development envelope. Surveys will include evaluation of all previously documented occupied areas and a reconnaissance-level survey of the remaining natural areas of the site. All western spadefoot adults, tadpoles, and egg masses encountered shall be collected and released in identified/created relocation ponds described above.

(3) The qualified biologist shall monitor the relocation site for five years, involving annual monitoring during and immediately following peak breeding season such that surveys can be conducted for adults as well as for egg masses and larval and post-larval toads. Further, survey data will be provided to CDFG by the monitoring biologist following each monitoring period and a written report summarizing the monitoring results will be provided to CDFG at the end of the monitoring effort. Success criteria for the monitoring program shall include verifiable evidence of toad reproduction at the relocation site.

MV 4.3-26 Prior to ground disturbance, vegetation clearing, construction, or site preparation activities, a qualified biologist shall be retained to conduct a Worker Environmental Awareness Program (WEAP) for all construction/contractor personnel. A list of construction personnel who have completed training prior to the start of construction shall be maintained on site and this list shall be updated as required when new personnel start work. No construction worker may work in the field for more than five days without participating in the WEAP. The qualified biologist shall provide ongoing guidance to construction personnel and contractors to ensure compliance with environmental/permit regulations and mitigation measures. The qualified biologist shall perform the following:

- Provide training materials and briefings to all personnel working on site. The material shall include but not be limited to the identification and status of plant and wildlife species, significant natural plant community habitats (e.g., riparian), fire protection measures, and review of mitigation requirements.

- A discussion of the federal and state Endangered Species Acts, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, other state or federal permit requirements and the legal consequences of non-compliance with these acts.

- Attend the pre-construction meeting to ensure that timing/location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds, pre-construction surveys, or relocation efforts).

- Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas. Maps showing the location of special-status wildlife or populations of rare plants, exclusion areas, or other construction limitations (e.g., limitations on nighttime work) will be provided to the environmental monitors and construction crews prior to ground disturbance. This applies to preconstruction activities, such as site surveying and staking, natural resources surveying or reconnaissance, establishment of water quality BMPs, and geotechnical or hydrological investigations.

- Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction and provide a contact person in the event of the discovery of dead or injured wildlife.

- Review/designate the construction area in the field with the contractor in accordance with the final grading plan.

- Ensure that haul roads, access roads, and on-site staging and storage areas are sited within grading areas to minimize degradation of vegetation communities adjacent to these areas (if activities outside these limits are necessary, they shall be evaluated by the biologist to ensure that no special-status species habitats will be affected).

- Conduct a field review of the staking (to be set by the surveyor) designating the limits of all construction activity.

- Flag or temporarily fence any construction activity areas immediately adjacent to riparian areas.

- Ensure and document that required pre-construction surveys and/or relocation efforts have been implemented.

- To reduce the potential for the spread of exotic invasive invertebrates (e.g., New Zealand mud snails) and weeds (including weed seeds) during project ~~preconstruction~~ clearing and construction, all heavy equipment proposed for use on the project site shall be verified cleaned (including wheels, tracks, undercarriages, and bumpers, as applicable) before delivery to the project site. Equipment must be documented as exotic invasive invertebrate (e.g., mud snail) and weed free upon delivery to the project site initial staging area, including: (1) vegetation clearing equipment (skid steer loaders, loaders, dozers, backhoes, excavators, chippers, grinders, and any hauling equipment, such as off-road haul trucks, flat bed, or other vehicles); (2) earth-moving equipment (scrapers, dozers, excavators, loaders, motor-graders, compactors, backhoes, off-road water trucks, and off-road haul trucks); and (3) all project-associated vehicles (including personal vehicles) that, upon inspection by the monitoring biologist, are deemed to present a risk for spreading exotic invasive invertebrates (e.g., mud snails) or weeds. Equipment shall be cleaned at existing construction yards or at a wash station. The biological monitor shall document that all construction equipment (as described above) has been cleaned prior to working within the project work site. Any equipment/vehicles determined to not be free of exotic invasive invertebrates (e.g., mud snails) and weeds shall immediately be sent back to the originating construction yard for washing, or wash station where rinse water is collected and disposed of in either a sanitary sewer or other legal point of disposal. Equipment/vehicles moved from the site must be inspected, and re-washed as necessary, prior to re-engaging in construction activities in the project work area. A written daily log shall be kept for all vehicle/equipment washing that states the date, time, location, type of equipment washed, methods used, and location of work;

- Be present during initial vegetation clearing and grading.

- Submit to the CDFG an immediate report (within 72 hours) of any conflicts or errors resulting in impacts to special-status biological resources.

MV 4.3-27 The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan (Dudek 2007) shall be revised and submitted to CDFG for review and approval prior to ground disturbance to occupied habitat. Upon approval, the plan will be implemented by the applicant or its designee. The revised plan will demonstrate the feasibility of enhancing or restoring slender mariposa lily habitat in selected areas to be managed as natural open space (i.e., the Salt Creek area or High Country

SMA/SEA 20, spineflower preserves, or River Corridor SMA/SEA 23) without conflicting with other resource management objectives. Habitat replacement/enhancement will be at a 1:1 ratio (acres restored/enhanced to acres impacted).

The revised plan will describe habitat improvement/restoration measures to be completed prior to introducing slender mariposa lily. Habitat improvement/restoration will be based on native occupied slender mariposa lily habitat. The revised plan will specify: (1) the location of mitigation sites (may be selected from among 559 acres of suitable mitigation land in the High Country SMA/SEA 20 and Salt Creek area identified in the Draft Newhall Ranch Mitigation Feasibility Study (Dudek 2007); (2) a description of "target" vegetation (native shrubland or grassland) to include estimated cover and abundance of native shrubs and grasses in occupied slender mariposa lily habitat on Newhall Ranch land (either at sites to be destroyed by construction or at sites to be preserved); (3) site preparation measures to include topsoil treatment, soil decompaction, erosion control, temporary irrigation systems, or other measures as appropriate; (4) methods for the removal of non-native plants (*e.g.*, mowing, weeding, raking, herbicide application, or burning); (5) the source of all plant propagules (seed, potted nursery stock, *etc.*), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful.

Habitat restoration/enhancement will be judged successful when (1) percent cover and species richness of native species reach 50 percent of their cover and species richness at undisturbed occupied slender mariposa lily habitat at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation. At that point slender mariposa lily propagules (seed or bulbs) will be introduced onto the site.

The revised plan will specify methods to collect propagules and introduce slender mariposa lily into these mitigation sites. Introductions will use source material (seeds or bulbs) from no more than 1.0 mile distant, similar slope exposures, and no more than 500 ft. elevational difference from the mitigation site, unless otherwise approved by CDFG. Bulbs may be salvaged and transplanted from slender mariposa lily occurrences to be lost; alternately, seed may be collected from protected occurrences, following CDFG-approved seed collection guidelines (*i.e.*, MOU for rare

plant seed collection). No bulbs will be translocated into areas within 300 feet of proposed or existing development. The Applicant or its designee will monitor the reintroduction sites for no fewer than five additional years to estimate slender mariposa lily survivorship (for bulbs) or seedling establishment (for seeded sites).

Annual monitoring reports will be prepared and submitted to CDFG and will be made available to the public to guide future mitigation planning for slender mariposa lily. Monitoring reports will describe all restoration/enhancement measures taken in the preceding year; describe success and completion of those efforts and other pertinent site conditions (erosion, trespass, animal damage) in qualitative terms; and describe mariposa lily survival or establishment in quantitative terms.

A minimum of 133 acres of slender mariposa lily cumulative occupied area will be conserved and managed in the RMDP and SCP project boundaries. Of these 133 acres, approximately 103 acres of slender mariposa lily cumulative occupied area will be conserved and managed in the RMDP and SCP project boundary in the High Country SMA/SEA 20 and Salt Creek area, and 2 acres occur within the River Corridor SMA/SEA 23 and/or proposed spineflower preserves. Additional cumulative occupied area will be conserved and managed in the San Martinez Grande Canyon area at a 1:1 ratio (acres conserved and managed to acres impacted) based on impacts to cumulative occupied area within the Entrada planning area, as a means to ensure regional biodiversity of the species. Up to an additional 28 acres of slender mariposa lily cumulative occupied area can be conserved and managed in the San Martinez Grande Canyon area for this purpose.

MV 4.3-28 The Oak Resource Replacement Plan to be prepared (as described in Newhall Ranch Specific Plan Program EIR Mitigation Measure SP 4.6-48) shall include measures to create, enhance, and/or restore 9.7 acres of coast live oak woodland and valley/oak savannah within the High Country SMA/SEA 20. The plan shall be subject to the requirements outlined in **SP 4.6-48**.

The applicant shall prepare an Oak Resource Management Plan that incorporates the findings of the Draft Newhall Ranch Mitigation Feasibility Report (Dudek 2007) and areas identified (in the technical report) as being suitable for oak woodland enhancement and creation shall be used as mitigation. Other mitigation sites may be used upon approval by the County. The plan shall be reviewed by the County Forester. The plan shall include the following: (1) site selection and preparation; (2) selection of proper species, including sizes and planting densities; (3) protection from herbivores; (4) site maintenance; (5) success criteria; (6) remedial actions; and (7) a monitoring program.

MV 4.3-29 The project applicant will retain a qualified biologist to develop an Exotic Wildlife Species Control Plan and implement a control program for bullfrog, African clawed frog, and crayfish. The program will require the control of these species during construction within the River corridor and modified tributaries (bridges, diversions, bank stabilization, drop structures). The Plan shall include a description of the species targeted for eradication, the methods of harvest that will be employed, the disposal methods, and the measures that would be employed to avoid impacts to sensitive wildlife (*e.g.*, stickleback, arroyo toad, nesting birds) during removal activities (*i.e.*, timing, avoidance of specific areas). Annual monitoring shall occur for the first five years after construction of project facilities. Monitoring will be conducted within sentinel locations along the River Corridor SMA/SEA 23 and where the project provides potential habitat for these species (*e.g.*, future ponds and water features). Control shall be conducted within project facilities where monitoring results indicate that exotic species have colonized an area. After the first 5 years, the NLMO or other entity will be responsible for controlling exotic aquatic species.

MV 4.3-30 In order to reduce impacts to biological resources from grading and construction activities, all related activities will be conducted to facilitate the escape of animals to natural areas. Construction and grading activities will begin in disturbed areas in order to avoid stranding animals in isolated patches of vegetation. Trenches will be covered at night or escape routes provided to prevent animals from falling into and being trapped in trenches. If escape routes are provided in lieu of covering trenches, the excavations will be inspected by a qualified biologist prior to restart of work.

MV 4.3-31 The permanent removal of existing habitats in Corps and/or CDFG jurisdictional areas in the Santa Clara River and tributaries shall be replaced by creating habitats of similar functions and values/services (see **MV 4.3-33)** on the project site, or as allowed under **MV 4.3-39**. The riparian habitat mitigation will meet CDFG mitigation requirements listed in **Table 4.3-11**, consistent with success criteria for mitigation in **MV 4.3-36**.

MV 4.3-32 Creation of new vegetation communities and restoration of impacted vegetation communities shall occur at suitable sites in or adjacent to jurisdictional areas or in areas where bank stabilization would occur. Locations where the excavation of uplands for bank protection/stabilization results in creation of new, unvegetated riverbed or other disturbance shall receive the highest level of priority for vegetation community restoration. Restoration sites may also occur at locations outside the riverbed where there are appropriate hydrologic conditions to create a self-sustaining riparian vegetation community and where upland and riparian vegetation community values are absent or very low. All sites shall contain suitable hydrological conditions and surrounding land uses to ensure a self-sustaining functioning riparian vegetation community. Candidate restoration sites

shall be described in the annual mitigation status report (see **MV 4.3-43**). Sites will be approved when the detailed wetlands mitigation plans are submitted to the Corps and CDFG as part of the sub-notification letters submitted for individual projects. Status of the sites will be addressed through agency review of the annual mitigation status report and mitigation accounting form. Each mitigation plan will include acreages, maps and site specific descriptions of the proposed revegetation site, including analysis of soils, hydrologic suitability, and present and future adjacent land uses.

Table 4.3-11
CDFG Jurisdictional Permanent Impacts Mitigation Ratios

Ratios Listed by Vegetation Types & Quality				
Vegetation Community	**Veg Code / ID**	**HIGH Reach Value*** **(Mit. Ratio)**	**MEDIUM Reach Value**** **(Mit. Ratio)**	**LOW Reach Value***** **(Mit. Ratio)**
Southern Cottonwood–Willow Riparian Forrest	SCRWF	4:1	3:1	2:1
Southern Willow Scrub	SWS	3:1	2.5:1	2:1
Oak Woodland (Coast Live, Valley)	CLOW / VOW	3:1	2.5:1	2:1
Big Sagebrush Scrub	BSS	2.5:1	2:1	1.5:1
Mexican Elderberry Scrub	MES	2.5:1	2:1	1.5:1
Cismontane Alkaline Marsh	CAM	2.5:1	2:1	1.5:1
Coastal and Valley Fresh Water Marsh	CFWM	2:1	1.5:1	1:1
Mulefat Scrub	MFS	2:1	1.5:1	1.25:1
Arrowweed Scrub	AWS	2:1	1.5:1	1:1
California Sagebrush scrub, and CSB-dominated habitats	CSB, CSB-A, -BS, -CB, -CHP, and -PS	2:1	1.5:1	1:1
Herbaceous Wetland	HW	1.5:1	1.25:1	1:1
River Wash, emergent veg.	RW	1.5:1	1.25:1	1:1
Chaparral, Chamise Chaparral	CHP, CC	1.5:1	1.25:1	1:1
Coyote Brush Scrub	CYS	1.5:1	1.25:1	1:1
Eriodictyon Scrub	EDS	1.5:1	1.25:1	1:1
California Grass Lands	CGL	1:1	1:1	1:1
Agricultural/Disturbed/Developed	AGR/DL/DEV	1:1	1:1	1:1

Notes:
** HIGH reach value indicates a portion of the Santa Clara River or main tributary that scored above 0.79 Total Score utilizing the HARC methodology described in **Section 4.2**, Geomorphology and Riparian Resources, of the Draft RMDP-SCP EIS/EIR.*
*** MEDIUM reach value indicates a portion of the Santa Clara River or main tributary that scored between 0.4 and 0.79 Total Score utilizing the HARC methodology described in **Section 4.2.***
**** LOW reach value indicates a portion of the Santa Clara River or main tributary that scored below 0.4 Total Score utilizing the HARC methodology described in **Section 4.2.***

MV 4.3-33 Replacement vegetation communities shall be designed to replace the functions and values of the vegetation communities being removed. The replacement vegetation communities shall have similar dominant trees and understory shrubs and herbs (excluding exotic species) to those of the affected vegetation communities (see **Table 4.3-12** for example of recommended plant species for the River Corridor SMA/SEA 23 and tributaries). In addition, the replacement vegetation

communities shall be designed to replicate the density and structure of the affected vegetation communities once the replacement vegetation communities have met the mitigation success criteria.

Table 4.3-12
Potential Plant Species for Vegetation Community Restoration in the River Corridor SMA/SEA 23 and Tributaries

Trees	
red willow	*Salix laevigata*
arroyo willow	*Salix lasiolepis*
Fremont cottonwood	*Populus fremontii*
black cottonwood	*Populus balsamifera* ssp. *Trichocarpa*
western sycamore	*Platanus racemosa*
Shrubs	
Mulefat	*Baccharis salicifolia*
sandbar willow	*Salix exigua*
arrow weed	*Pluchea sericea*
Herbs	
Mugwort	*Artemisia douglasiana*
western ragweed	*Ambrosia psilostachya*
Cattail	*Typha latifolia*
Bulrush	*Scirpus americanus*
prairie bulrush	*Scirpus maritimus*

Note: This is a recommended list. Other species may be found suitable based on site conditions and state and federal permits.

MV 4.3-34 Average plant spacing shall be determined based on an analysis of vegetation communities to be replaced. The applicant shall develop plant spacing specifications for all riparian vegetation communities to be restored. Plant spacing specifications shall be reviewed and approved by the Corps and CDFG when restoration plans are submitted to the agencies as part of the sub-notification letters submitted to the Corps and CDFG for individual projects or as part of the annual mitigation status report and mitigation accounting form.

MV 4.3-35 If at any time prior to CDFG/Corps approval of the restoration area, the site is subject to an act of God (flood, fires, or drought), the applicant shall be responsible for replanting the damaged area. The site will be subject to the same success criteria as provided for **MV 4.3-36**. Should a second act of God occur prior to CDFG/Corps approval of the restoration area, the applicant shall coordinate with the CDFG/Corps to develop an alternative restoration strategy(ies) to meet success requirements. This may include restoration elsewhere in the River corridor or tributaries.

MV 4.3-36 The revegetation site will be considered "complete" upon meeting all of the following success criteria. In a sub-notification letter, the applicant may request modification of success criteria on a

project by project basis. Acceptance of such request will be at the discretion of CDFG and the Corps.

1. Regardless of the date of initial planting, any restoration site must have been without active manipulation by irrigation, planting, or seeding for a minimum of three years prior to Agency consideration of successful completion.

2. The percent cover and species richness of native vegetation shall be evaluated based on local reference sites established by CDFG and the Corps for the plant communities in the impacted areas.

3. Native shrubs and trees shall have at least 80 percent survivorship after two years beyond the beginning of the success evaluation start date. This may include natural recruitment.

4. Non-native species cover will be no more than 5 percent absolute cover through the term of the restoration.

5. Giant reed (*Arundo donax*), tamarisk (*Tamarix ramosissima*), perennial pepperweed (*Lepidium latifolium*), tree of heaven (*Ailanthus altissimus*), pampas grass (*Cortaderia selloana)* and any species listed on the California State Agricultural list, or Cal-IPC list of noxious weeds will not be present on the revegetation site as of the date of completion approval.

6. Using the HARC assessment methodology, the compensatory mitigation site shall meet or exceed the baseline functional scores of the impact area in Corps' jurisdictional waters, as described in the Conceptual Mitigation Plan[1029] for Waters of the United States.

MV 4.3-37 Temporary irrigation shall be installed as necessary for plant establishment. Irrigation shall continue as needed until the restoration site becomes self sustaining regarding survivorship and growth. Irrigation shall be terminated in the fall to provide the least stress to plants. Following irrigation termination, the irrigation piping will be removed where not destructive to the established plants.

[1029] For detailed information concerning the Corps compensatory mitigation program for impacts to waters of the United States, please reference Appendix 11.0 of the Section 404(b)1 Alternatives Analysis, included in Appendix F1.0 of the Final EIS/EIR.

MV 4.3-38 In areas where invasive exotic plant species control is authorized by CDFG in lieu of creating or restoring other riparian habitat mitigation (**MV 4.3-31**), removal areas shall be kept free of exotic plant species for 5 years after initial treatment. In areas where extensive exotic removal occurs, revegetation with native plants or natural recruitment shall be documented.

MV 4.3-39 The exotics control program may utilize methods and procedures in accordance with the provisions in the Upper Santa Clara River Watershed Arundo/Tamarisk Removal Plan Final Environmental Impact Report, dated February 2006, or the applicant may propose alternative methods and procedures for Corps and CDFG review and approval pursuant to a sub-notification letter. By example: a 10-acre site occupied by 10% exotic species will be credited for 1 acre of mitigation.

MV 4.3-40 All native riparian trees with a 3-inch diameter at breast height (dbh) or greater in temporary construction areas shall be replaced using 1- or 5-gallon container plants, containered trees, or pole cuttings in the temporary construction areas in the winter following the construction disturbance. The growth and survival of the replacement trees shall meet the performance standards specified in **MV 4.3-36**. In addition, the growth and survival of the planted trees shall be monitored until they meet the self-sustaining success criteria in accordance with the methods and reporting procedures specified in **MV 4.3-36, MV 4.3-42,** and **MV 4.3-43.**

MV 4.3-41 Vegetation communities temporarily impacted by the proposed project shall be revegetated as described in **MV 4.3-31**. Large trunks of removed trees may also remain on site to provide habitat for invertebrates, reptiles, and small mammals or may be anchored within the project site for erosion control. To facilitate restoration, mulch, or native topsoil (the top 6- to 12-inch deep layer containing organic material), may be salvaged from the work area prior to construction. Following construction, salvaged topsoil shall be returned to the work area and placed in the restoration site. Within one year, the project biologist will evaluate the progress of restoration activities in the temporary impact areas to determine if natural recruitment has been sufficient for the site to reach performance goals. In the event that native plant recruitment is determined by the project biologist to be inadequate for successful habitat establishment, the site shall be revegetated in accordance with the methods designed for permanent impacts (i.e., seeding, container plants, and/or a temporary irrigation system may be recommended). This will help ensure the success of mitigation areas. The applicant shall restore the temporary construction area per the success criteria and ratios described in **MV 4.3-23, MV 4.3-31**, and **MV 4.3-36**. Annual monitoring reports on the status of the recovery of~~f~~ temporarily impacted areas shall be submitted to the Corps and CDFG as part of the annual mitigation status report (**MV 4.3-42** and **MV 4.3-43**).

MV 4.3-42 To provide an accurate and reliable accounting system for mitigation, the applicant shall file a mitigation accounting form annually with the Corps and CDFG by April 1.

MV 4.3-43 An annual mitigation status report shall be submitted to the Corps and CDFG by April 1 of each year until satisfaction of success criteria identified in **MV 4.3-36**. This report shall include any required plans for plant spacing, locations of candidate restoration and weed control sites or proposed "in-lieu fees," restoration methods, and vegetation community restoration performance standards. For active vegetation community creation sites, the report shall include the survival, percent cover, and height of planted species; the number by species of plants replaced; an overview of the revegetation effort and its success in meeting performance criteria; the method used to assess these parameters; and photographs. For active exotics control sites, the report shall include an assessment of weed control; a description of the relative cover of native vegetation, bare areas, and exotic vegetation; an accounting of colonization by native plants; and photographs. The report shall also include the mitigation accounting form (see **MV 4.3-42**), which outlines accounting information related to species planted or exotics control and mitigation credit remaining. The annual mitigation and monitoring report shall document the current functional capacity of the compensatory mitigation site using the HARC assessment methodology, as well as documenting the baseline functional scores of the impact site in jurisdictional waters of the United States.

MV 4.3-44 Require focused surveys for the spring snail (*Pyrgulopsis castaicensis* **n. sp.**) by a qualified biologist prior to the commencement of grading/construction activities in any drainage area supporting perennial flow. Any individuals of the *Pyrgulopsis castaicensis* **n. sp.** found within the Middle Canyon drainage shall be relocated to appropriate habitat within Middle Canyon Spring. If *Pyrgulopsis castaicensis* **n. sp.** are discovered during aquatic and semi-aquatic pre-construction surveys in any other perennial flowing water, the applicant shall consult with CDFG prior to initiating disturbance of the area. A report documenting the number of *Pyrgulopsis castaicensis* **n. sp.** located, the conditions of the area, and where the species has been relocated to, if applicable, shall be submitted to CDFG within 60 days following the relocation.

MV 4.3-45 An Integrated Pest Management (IPM) plan that addresses the use of pesticides (including rodenticides and insecticides) on site will be prepared prior to the issuance of building permits for the initial tract map. The IPM will implement appropriate Best Management Practices to avoid and minimize adverse effects on the natural environment, including vegetation communities, special-status species, species without special status, and associated habitats, including prey and food resources (*e.g.*, insects, small mammals, seeds). Potential management practices include cultural (*e.g.*, planting pest-free stock plants), mechanical (*e.g.*, weeding, trapping), and biological controls

(*e.g.*, natural predators or competitors of pest species, insect growth regulators, natural pheromones, or biopesticides), and the judicious use of chemical controls, as appropriate (*e.g.*, targeted spraying versus broadcast applications). The IPM will establish management thresholds (*i.e.*, not all incidences of a pest require management); prescribe monitoring to determine when management thresholds have been exceeded; and identify the most appropriate and efficient control method that avoids and minimizes risks to natural resources. Preparation of the covenants, conditions, and restrictions (CC&Rs) for each tract map shall include language that prohibits the use of anticoagulant rodenticides in the project site.

MV 4.3-46 The Natural Lands Management Organization (NLMO) shall fund or otherwise coordinate the regular removal of trash and debris from riparian habitats on or adjacent to the project site. The removal of trash shall be conducted in a manner as to not disturb sensitive habitats.

MV 4.3-47 Each tract map Home Owners' Association shall supply educational information to future residents regarding pets, wildlife, and open space areas. The material shall discuss the presence of native animals (e.g., coyote, bobcat, mountain lion), indicate that those native animals could prey on pets, indicate that no actions shall be taken against native animals should they prey on pets allowed outdoors, ~~indicate that residents should not feed wildlife intentionally or unintentionally by leaving pet food outside,~~ and indicate that pets must be leashed while using the designated trail system and/or in any areas within or adjacent to open space. Control of stray and feral cats and dogs will be conducted in open space areas on an as-needed basis by the NLMO(s) or the Newhall Ranch *joint powers authority* (JPA) managing the River Corridor SMA/SEA 23, High Country SMA/SEA 20, or Salt Creek area or by the HOAs managing the Open Areas. Feral cats and dogs may be trapped and deposited with the local Society for the Prevention of Cruelty to Animals or the Los Angeles County Department of Animal Control.

MV 4.3-48 Upon ~~completion of~~initiating of landscaping within a development area, quarterly monitoring shall be initiated for Argentine ants along the urban–open space interface at sentinel locations where invasions could occur (e.g., where moist microhabitats that attract Argentine ants may be created). A qualified biologist shall determine the monitoring locations. Ant pitfall traps will be placed in these sentinel locations and operated on a quarterly basis to detect invasion by Ar~~e~~gentine ants. If Argentine ants are detected during monitoring, direct control measures will be implemented immediately to help prevent the invasion from worsening. These direct controls may include but are not limited to nest/mound insecticide treatment, or available natural control methods being developed. A general reconnaissance of the infested area would also be conducted to identify and correct the possible source of the invasion, such as uncontrolled urban runoff, leaking pipes, or

collected water. Monitoring and control of Argentine ants would occur for a 5-year period. After the first 5 years, the NLMO or other entity will be responsible for controlling Argentine ants.

MV 4.3-49 Thirty days prior to construction activities, a qualified biologist shall conduct a preconstruction survey for ringtail. The survey area shall include suitable riparian and woodland habitat (southern coast live oak riparian forest, southern cottonwood–willow riparian forest, southern willow scrub, coast live oak woodland, valley oak woodland, and mixed oak woodland) within the construction disturbance zone and a 300-foot buffer around the construction site. Should the ringtail be observed in the breeding and rearing period of February 1 through August 31, no construction-related activities shall occur within 300 feet of the occupied area for the period of February 1 through August 31 or until the ringtail has been determined by a qualified biologist (in consultation with CDFG) to no longer occupy areas within 300 feet of the construction zone and/or that construction activities would not adversely affect the successful rearing of young. If the ringtail is observed within the construction disturbance zone or in the 300-foot buffer around the construction site in the nonbreeding/rearing period of September 1 through January 31, and avoidance is not possible, denning ringtail shall be safely evicted under the direction of a qualified biologist (as determined by a Memorandum of Understanding with CDFG). All activities that involve the ringtail shall be documented and reported to CDFG.

MV 4.3-50 Any Southern California black walnut and mainland cherry trees or shrubs outside riparian areas greater than 1-inch dbh shall be replaced in the ratio of at least 2:1. Multi-trunk trees/shrub dbh shall be calculated based on combined trunk dbh. Mitigation shall be deemed complete when each replacement tree attains at least 1 inch in diameter 1 foot above the base.

MV 4.3-51 Bridges over the Santa Clara River shall be designed to minimize impacts to natural areas and riparian resources from associated lighting and stormwater runoff. All lighting will be designed to be directed away from natural areas (pursuant to SP-4.6-56) using shielded lights, low sodium-vapor lights, bollard lights, or other available light and glare minimization methods. Bridges will be designed to minimize normal vehicular lighting from trespassing into natural areas using side walls a minimum of 24 inches high. All stormwater from the bridges will be directed to water treatment facilities for water quality treatment.

MV 4.3-52 Construction plans shall include necessary design features and construction notes to ensure protection of vegetation communities and special-status plant and aquatic wildlife species adjacent to construction. In addition to applicable erosion control plans and performance under SCAQMD Rule 403d dust control (SCAQMD 2005), the project stormwater pollution prevention plan (SWPPP) shall include the following minimum BMPs. Together, the implementation of these

requirements shall ensure protection of adjacent habitats and wildlife species during construction. At a minimum, the following measures/restrictions shall be incorporated into the SWPPP, and noted on construction plans where appropriate, to avoid impacting special-status species during construction:

- Avoid planting or seeding invasive species in development areas within 200 feet of native vegetation communities.
- Provide location and details for any dust control fencing along project boundaries (**MV 4.3-53**).
- Vehicles shall not be driven or equipment operated in areas of ponded or flowing water, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as otherwise provided for in the 404 Permit or 1603 Agreement.
- Silt settling basins installed during the construction process shall be located away from areas of ponded or flowing water to prevent discolored, silt-bearing water from reaching areas of ponded or flowing water during normal flow regimes.
- If a stream channel has been altered during the construction and/or maintenance operations, its low flow channel shall be returned as nearly as practical to pre-project topographic conditions without creating a possible future bank erosion problem or a flat, wide channel or sluice-like area. The gradient of the streambed shall be returned to pre-project grade, to the extent practical, unless it represents a wetland restoration area.
- Temporary structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the high water mark before such flows occur.
- Staging/storage areas for construction equipment and materials shall be located outside of the ordinary high water mark.
- Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily, to prevent leaks of materials that could be deleterious to aquatic life if introduced to water.

- Stationary equipment such as motors, pumps, generators, and welders which may be located within the riverbed construction zone shall be positioned over drip pans. No fuel storage tanks shall be allowed in the riverbed.

- No debris, bark, slash sawdust, rubbish, cement or concrete or washing thereof, oil, petroleum products, or other organic material from any construction, or associated activity of whatever nature, shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into, watercourses included in the permit. When construction operations are completed, any excess materials or debris shall be removed from the work area.

- No equipment maintenance shall be done within or near any stream where petroleum products or other pollutants from the equipment may enter these areas with stream flow.

- The operator shall install and use fully covered trash receptacles to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash will be regularly picked up in construction areas.

- The operator shall not permit pets on or adjacent to the construction site.

- No guns or other weapons are allowed on the construction site during construction, with the exception of the security personnel and only for security functions. No hunting shall be authorized/permitted during construction.

MV 4.3-53 Development areas shall have dust control measures implemented and maintained to prevent dust from impacting vegetation communities and special-status plant and aquatic wildlife species. Dust control shall comply with SCAQMD Rule 403d (SCAQMD 2005). Where construction activities occur within 100 feet of known special-status plant species locations, chemical dust suppression shall not be utilized. Where determined necessary by a qualified biologist, a screening fence (*i.e.*, a six-foot-high chain link fence with green fabric up to a height of 5 feet) shall be installed to protect special-status species locations. See **MV 4.3-65** for dust control requirements related to spineflower preserves.

MV 4.3-54 Permanent fencing shall be installed along all River Corridor SMA/SEA 23 trails adjacent to the Santa Clara River, or other sensitive resources, in order to minimize impacts associated with increased human presence on protected vegetation communities and special-status plant and wildlife species. The fencing will be split rail to avoid inhibiting wildlife movement. Viewing

platforms will be located in land covers currently mapped as agriculture, disturbed land, or developed land.

MV 4.3-55 To protect Middle Canyon Spring and to reduce potential direct impacts to any special-status species that may be located within the spring complex due to unrestricted access, the project applicant or its designee shall avoid all construction-related activities within the Middle Canyon Spring complex and erect and maintain temporary orange fencing and prohibitive signage around the Middle Canyon Spring prior to and during all phases of construction within 200 feet of the spring and, if applicable, around the Middle Canyon drainage within 100 feet of flowing water. A qualified biologist will be present to monitor construction activities within 200 feet of the spring and, if applicable, around the Middle Canyon drainage within 100 feet of flowing water. The areas behind the temporary fencing shall not be used for the storage of any equipment, materials, construction debris, or anything associated with construction activities. Any upslope runoff from construction areas will be directed away from the Middle Canyon Spring.

Following the final phase of construction of any Newhall Ranch subdivision tract adjacent to Middle Canyon Spring, the project applicant or its designee shall install and maintain permanent fencing along the subdivision tract bordering the spring. Permanent signage shall be installed on the fencing along the spring boundary to indicate that the fenced area is a biological preserve that contains protected species and habitat. No trail shall be constructed that passes within 100 feet of the Middle Canyon Spring (see **Figure 4.3-4B** above).

a. As described in MV 4.3-51, t~~T~~he Commerce Center Drive Bridge will be designed to minimize secondary impacts associated with lighting and water quality impacts through the installation of indirect and downcast lighting, and routing of stormwater to water quality treatment facilities.

MV 4.3-56 A Middle Canyon Spring Habitat Management Plan will be developed that details the measures to be implemented to maintain the populations of the spring snail (*Pyrgulopsis castaicensis* **n. sp.**) and Newhall sunflower species. The plan shall be subject to the approval of CDFG and implemented by the Applicant prior to disturbance within 100 feet of flowing water in Middle Canyon Creek and/or 200 feet of Middle Canyon Spring.

.MV 4.3-57 Plant palettes proposed for use on landscaped slopes, street medians, park sites, and other public landscaped and fuel modification zone (FMZ) areas within 200 feet of native vegetation communities shall be reviewed by a qualified restoration specialist to ensure that the proposed landscape plants will not naturalize and require maintenance or cause vegetation community

degradation in the open space areas (River Corridor SMA/SEA 23, High Country SMA/SEA 20, Salt Creek area, and natural portions of the Open Area). Container plants to be installed within public areas within 200 feet of the open space areas shall be inspected by a qualified restoration specialist for the presence of disease, weeds, and pests, including Argentine ants. Plants with pests, weeds, or diseases shall be rejected. In addition, landscape plants within 200 feet of native vegetation communities shall not be on the Cal-IPC California Invasive Plant Inventory (most recent version) or on the list of Invasive Ornamental Plants listed in Appendix B of the Spineflower Conservation Plan (SCP). The current Cal-IPC list can be obtained from the Cal-IPC web site (http://www.cal-ipc.org/ip/inventory/index.php). Landscape plans will include a plant palette composed of native or non-native, non-invasive species that do not require high irrigation rates. Except as required for fuel modification, irrigation of perimeter landscaping shall be limited to temporary irrigation (*i.e.*, until plants become established).

MV 4.3-58 A final SCP shall be adopted and implemented after approval by CDFG, including the permanent dedication of preserves (see draft in Appendix 4.3). The proposed spineflower preserve areas shall be offered to CDFG as a permanent conservation easement within one year after issuance of the requested 2081 Permit to ensure long-term protection. The conservation easement shall be to CDFG and contain appropriate funding and restrictions to help ensure that the spineflower preserve lands are protected in perpetuity.

MV 4.3-59 The spineflower preserves shall be managed by Applicant and their preserve manager(s) and/or natural lands management organization(s) (NLMO). Applicant shall submit a statement of qualifications for their proposed preserve manager(s)/NLMO(s) for approval by CDFG. Applicant will fund in full all implementation of spineflower preserve management as described in the SCP and all mitigation measures listed in this document.

MV 4.3-60 Spineflower preserve temporary fencing shall be shown on construction plans and installed prior to initiating construction clearing and grubbing activities within 500 feet of spineflower preserves, including the buffers. The spineflower preserve manager or a qualified biologist shall monitor fence installation. Clearing for fence installation shall be minimized to what is necessary to install the fence and, where possible, shall leave the roots of native plants in place to allow regrowth. As necessary, native vegetation will be restored and weed management will be performed following fence installation to ensure temporarily cleared native plant areas do not become weed dominated after installation. General project clearing and grubbing within 500 feet of the fence may commence upon verification by the spineflower preserve manager or the qualified biologist that protective fencing is in place and is adequate. Appropriate BMPs shall be installed at the edge of

development manufactured slopes when the spineflower preserve is within 500 feet and down-slope of proposed development.

MV 4.3-61 Construction documents shall indicate that the grading contractor is responsible for protecting spineflower preserves during construction work. The construction documents shall indicate that the contractor is responsible for informing all employees and subcontractors of the environmentally sensitive areas and the proper conduct of work when working near (e.g., within 500 feet) of these areas. The construction documents shall require a pre-construction meeting to perform an "environmental education session" with the grading contractor/contractor's employees, subcontractors, and equipment operators prior to commencing construction work within 500 feet of the spineflower preserves. The environmental education session shall be conducted by the spineflower preserve manager or a qualified biologist and focus on informing workers of the location and sensitivity of the spineflower and the requirements for protecting it. The construction documents shall indicate that the grading contractor shall be responsible for mitigating any impacts to spineflower preserves due to the negligence of the grading contractor/contractor's employees, subcontractors, or equipment operators. If accidental trespass into a spineflower preserve occurs during construction, the violation shall be documented by the preserve manager and immediately reported to CDFG. Follow-up action will be taken in accordance with the Section 2081 of the Fish and Game Code, Incidental Take Permit issued by CDFG.

MV 4.3-62 Construction plans shall include necessary design features and construction notes to demonstrate consistency of development in the vicinity of spineflower preserves with the Spineflower Conservation Plan (SCP). In addition to applicable erosion control plans and performance under SCAQMD Rule 403d dust control (SCAQMD 2005), the project stormwater pollution prevention plan (SWPPP). Together, the implementation of these requirements shall ensure that spineflower preserve populations are protected during construction. At a minimum, the following measures/restrictions shall be incorporated into the SWPPP and noted on construction plans, where appropriate, to avoid impacting spineflower preserves during construction:

- Avoid planting or seeding invasive species in development areas during construction phases.
- Do not use erosion control devices that may contain weeds, such as hay bales, etc., within 200 feet of spineflower preserves, or anywhere upstream of spineflower preserves.

- Do not windrow or stockpile soil within 200 feet of spineflower preserve boundaries or anywhere upstream of spineflower preserves.
- Do not locate staging areas, maintenance, or concrete washout areas within 500 feet (unless otherwise authorized by CDFG, and no closer than 200 feet in any instance), where adjacent to or anywhere upstream of spineflower preserves.
- Do not store toxic compounds, including fuel, oil, lubricants, paints, release agents, or any other construction materials that could damage spineflower habitat if spilled near spineflower preserve areas, or anywhere upstream of spineflower preserves, or along spineflower preserve boundaries.
- Provide location and details for any fencing for temporary and permanent access control along preserve boundaries (per **MV 4.3-64** for temporary fencing and **MV 4.3-69** for permanent fencing).
- Provide location and details for any dust control fencing along preserve boundaries (per **MV 4.3-65**).
- Provide location and details for any stormwater run-on controls/BMPs coming from development area to spineflower preserve (per **MV 4.3-71** and **MV 4.3-72**).

MV 4.3-63 The spineflower preserve manager or qualified biologist shall review construction plans and specifications, SWPPP, and, where appropriate, erosion control plans and implementation of SCAQMD Rule 403d dust control measures (SCAQMD 2005) prior to construction within 500 feet of spineflower preserves for compliance with the Spineflower Conservation Plan and associated permits and project-related environmental documents. A copy of the SWPPP and associated monitoring reports will be provided to CDFG.

MV 4.3-64 Spineflower preserves shall be protected prior to clearing and during construction with temporary construction fencing as described in **MV 4.3-60**. Openings shall be included in the fence when located within wildlife corridors and vegetation community connectivity areas to allow for the safe passage of wildlife. The spineflower preserve manager or a qualified biologist shall indicate the location and width of each of these openings. The fencing shall be three-strand non-barbed wire fence or bright orange ultraviolet stabilized polyethylene construction “snow” fencing, attached to metal t-posts that extend at least 4 feet above grade or equivalent. Protective fencing shall be maintained in good condition until completion of project construction. Where construction activities occur within 500 feet of a spineflower preserve, the spineflower preserve manager or

qualified biologist shall review fencing weekly during construction monitoring visits and note any fencing that is in need of repair. Repairs shall be completed within three working days of notification by the spineflower preserve manager or qualified biologist.

MV 4.3-65 Development areas shall have dust control measures implemented and maintained to prevent dust from impacting vegetation within the spineflower preserve areas. Dust control shall be implemented during construction in compliance with SCAQMD Rule 403d (SCAQMD 2005). Where construction activities occur within 100 feet of a spineflower location, chemical dust suppression shall not be utilized. Where determined necessary by the spineflower preserve manager or qualified biologist, a screening fence (i.e., a 6-foot-high chain link fence with green fabric up to a height of 5 feet) shall be installed to protect spineflower locations.

MV 4.3-66 The spineflower preserve manager or qualified biologist shall perform weekly construction monitoring for all construction activities within 500 feet of spineflower preserve areas. The spineflower preserve manager's or qualified biologist's construction monitoring tasks shall include reviewing and approving protective fencing, dust control measures, and erosion control devices before construction work begins; conducting a contractor education session at the preconstruction meeting; reviewing the site weekly (minimum) during construction to ensure the fencing, dust control, and BMP measures are in place and functioning correctly and that work is not directly or indirectly impacting spineflower plants; and quarterly monitoring shall be initiated for Argentine ants along the construction–open space interface at sentinel locations where invasions could occur (*e.g.*, where moist microhabitats that attract Argentine ants may be created). A qualified biologist shall determine the monitoring locations. Ant pitfall traps will be placed in these sentinel locations and operated on a quarterly basis to detect invasion by Argentine ants. If Argentine ants are detected during monitoring, direct control measures will be implemented immediately to help prevent the invasion from worsening. These direct controls may include but are not limited to nest/mound insecticide treatment, or available natural control methods being developed. A general reconnaissance of the infested area would also be conducted to identify and correct the possible source of the invasion, such as uncontrolled urban runoff, leaking pipes, or collected water. Each site visit shall be followed up with a summary monitoring report sent electronically to Applicant indicating the status of the site. Monthly monitoring reports, as needed, shall be submitted to CDFG and the County of Los Angeles). Monitoring reports shall include remedial recommendations and issue resolution discussions when necessary.

MV 4.3-67 Plant palettes proposed for use on landscaped slopes, street medians, park sites, and other public landscaped and FMZ areas within 200 feet of a spineflower preserve shall be reviewed and approved within 30 days by the spineflower preserve manager or qualified biologist and CDFG to

ensure that the proposed landscape plants will not naturalize and require maintenance or cause vegetation community degradation in the spineflower preserve and buffer areas. Container plants to be installed within public areas within 200 feet of the spineflower preserves shall be inspected by the spineflower preserve manager or qualified biologist for the presence of disease, weeds, and pests, including Argentine ants. Plants with pests, weeds, or diseases shall be rejected. In addition, for public areas within 200 feet of spineflower preserves, landscape plants shall not be on the Cal-IPC California Invasive Plant Inventory (most recent version) or on the list of Invasive Ornamental Plants listed in Appendix B of the SCP. The current Cal IPC list can be obtained from the Cal-IPC web site (http://www.cal-ipc.org/ip/inventory/index.php).

MV 4.3-68 All portions of the spineflower preserves shall be closed, with the exception of pre-identified existing dirt roads and utility easements. The pre-identified existing dirt roads and utility easement access roads shall function as access routes for the spineflower preserve manager, spineflower preserve maintenance personnel, utility personnel, and emergency services vehicles only (e.g., police, fire, and medical). No other vehicle or foot traffic, including nature or recreational trails, will be permitted in the preserve, including the buffer. The dirt roads shall be gated and locked at the outside edges of the buffer zone. Signs discouraging unauthorized access shall be posted. The only persons or entities issued gate keys shall be the spineflower preserve managers and their employees, easement holding utility companies, emergency services, the Applicant, and CDFG.

MV 4.3-69 Fencing shall be installed along the outside edge of the spineflower preserve and buffer areas adjacent to proposed developments, parks, golf courses, or other “active land uses” to prevent unauthorized access. Specific areas that are adequately protected by steep terrain (1.5:1 or steeper) and/or dense vegetation may not require fencing but would require signage. The determination of the need for fencing in these areas shall be subject to the approval of the spineflower preserve manager or qualified biologist. If monitoring determines that slope and/or vegetation is not effective at deterring unauthorized access, additional fencing may be required to be added by the spineflower preserve manager or qualified biologist. Fencing is not required in areas bordered by large parcels of conserved natural open space areas or the Santa Clara River riparian corridor, as installing fencing in these areas would be unnecessary and damaging to existing vegetation and wildlife corridors.

Fencing must extend a minimum of 4 feet above grade and include wood-doweled split rail fencing, exterior grade heavy-duty vinyl three-railed fencing, three-strand non-barbed wire, or approved alternate. Fencing installed adjacent to native vegetation communities and natural open space areas will allow for the passage of animals.

MV 4.3-70 Outdoor all-weather signs measuring approximately 12 by 16 inches shall be posted on all spineflower preserve access gates and along spineflower preserve fencing at approximately 800 feet on center, except adjacent to road crossings, where signs will be posted. The placement will take topography into account, emphasizing placement on ridgelines where signs will be visible to emergency fire personnel and others. Signs shall state in English and Spanish that the area is a biological preserve that hosts a state-listed endangered and federal candidate plant species and that trespassing is prohibited (in accordance with Newhall Ranch Specific Plan Program EIR Mitigation Measure SP 4.6-68). Signs shall indicate that fuel modification and management work is not allowed within the spineflower preserve (including buffer areas). The signage shall state that people who do not abide by these rules or who damage the protected species will be subject to prosecution, including fines and/or imprisonment. All signage shall include emergency contact information and shall be reviewed and approved by the spineflower preserve manager or qualified biologist.

MV 4.3-71 Storm drain outfalls from proposed development areas shall only be installed uphill from spineflower preserve areas where necessary to retain pre-construction hydrological conditions within the spineflower preserves, sustain existing riparian and wetland vegetation communities, and/or allow for the restoration of currently disturbed areas to native riparian/alluvial vegetation communities. When located in a spineflower preserve area, storm drains must meet the following criteria:

- Storm drains must not impact spineflower either directly or indirectly, and
- Under no circumstances shall storm drains daylight onto steeply sloped areas or other areas that would cause erosion.

MV 4.3-72 Any surface water entering a spineflower preserve area from development areas during construction is required to pass through BMP measures, which will be described in the SWPPP. Storm drain outlets must contain hydrologic controls (e.g., adequate energy dissipaters) to prevent downstream erosion and stream channel down-cutting. Additionally, storm drain outlets must be designed based on pre- and post-construction hydrological studies (in accordance with Newhall Ranch Specific Plan Program EIR Mitigation Measure SP 4.6-69). Storm drains and permanent structural BMPs shall be designed by a licensed civil engineer. Requirements of MV 4.3-62 and MV 4.3-71, where applicable, shall be incorporated into the facility design and shall be subject to approval by the spineflower manager or qualified biologist. Long-term maintenance of storm drain BMPs will be the responsibility of the designated maintenance entity.

MV 4.3-73 Disturbed portions (*i.e.*, agricultural lands, disturbed lands, and developed lands) of the spineflower preserves, including buffers, will be restored through revegetation with native plant communities. In summary, areas that have greater than 30 percent relative cover by weeds will be restored to have relative cover comparable to that of existing occupied spineflower habitat. Habitat restoration and enhancement plans (including restoration plans) for areas within the preserves shall be prepared at the direction of the preserve manager by a qualified biologist and submitted to the County and CDFG for approval prior to implementation. In addition, Cal-IPC List A and B plants that are present within the spineflower preserve will be controlled. Restoration and enhancement efforts within the spineflower preserve areas shall be in conformance with the Spineflower Conservation Plan and will not include permanent irrigation.

MV 4.3-74 In the event that a spineflower preserve, or buffer, or a portion of a spineflower preserve, or buffer burns in a wildfire or suffers from mass movements (*e.g.*, landslides, slope sloughing, or other geologic events), the spineflower preserve manager and the Applicant shall promptly review the site and determine what action, if any, should be taken. The primary anticipated post-fire spineflower preserve management activity involves monitoring the site and controlling annual weeds that may invade burned areas following a fire event, especially when such weeds (that were not previously present or not present in similar densities) exceed the 30 percent maximum threshold (see **MV 4.3-73**). If fire-control lines or other forms of bulldozer damage occur in the spineflower preserves, these areas will be repaired and revegetated to pre-burn conditions or better. An emergency fire response plan will be prepared (in accordance with Mitigation Measure SP-4.6-72) prior to the establishment of the spineflower preserves and approved by CDFG and Los Angeles County Fire Department. The preserve manager will contact the Los Angeles County Fire Department at least once every 5 years to review the plan and consult with them on implementation of the plan.

The same methods will be applied to mass-movement, landslide, or slope-sloughing types of events. This measure shall be implemented in conformance with the Spineflower Conservation Plan.

MV 4.3-75 Focused surveys for the undescribed species of everlasting (a special-status plant species) shall be conducted by a qualified botanist prior to the commencement of grading/construction activities wherever suitable habitat (primarily river terraces) could be affected by direct, indirect, or secondary construction impacts. The surveys shall be conducted no more than one year prior to commencement of construction activities within suitable habitat, and the surveys shall be conducted at a time of year when the plants can be located and identified. Should the species be documented within the project boundary, avoidance measures shall be implemented to minimize

impacts to individual plants wherever feasible. These measures shall include minor adjustments to the boundaries/location of haul routes and other project features. If, due to project design constraints, avoidance of all plants is not possible, then further measures, described in **MV 4.3-76**, shall be implemented to salvage seeds and/or transplant individual plants. All seed collection and/or transplantation methods, as well as the location of the receptor site for seeds/plants (assumed to be within preserved open space areas of Newhall Ranch along the Santa Clara River), shall be coordinated with CDFG prior to impacting known occurrences of the undescribed everlasting.

MV 4.3-76 For any individual project, or any phase of an individual project, to be located where undescribed everlasting plants may occur, the Applicant shall prepare and implement an Undescribed Everlasting Mitigation and Monitoring Plan prior to the issuance of grading permits.

The Plan shall provide for replacement of individual plants to be removed at a minimum 1:1 ratio, within suitable habitat at a site where no future construction-related disturbance will occur. The plan shall specify the following: (1) the location of the mitigation site in protected/preserved areas within the Specific Plan site; (2) methods for harvesting seeds or salvaging and transplantation of individual plants to be impacted; (3) measures for propagating plants (from seed or cuttings) or transferring living specimens from the salvage site to the introduction site; (4) site preparation procedures for the mitigation site; (5) a schedule and action plan to maintain and monitor the mitigation area; (6) the list of criteria and performance standards by which to measure the success of the mitigation site (below); (7) measures to exclude unauthorized entry into the mitigation areas; and (8) contingency measures such as erosion control, replanting, or weeding to implement in the event that mitigation efforts are not successful. The performance standards for the Undescribed Everlasting Mitigation and Monitoring Plan shall be the following:

(a) Within four years after reintroducing the undescribed everlasting to the mitigation site, the extent of occupied acreage and the number of established, reproductive plants will be no smaller than at the site lost for project construction.

(b) Non-native species cover will be no more than 5 percent absolute cover through the term of the restoration.

(c) Giant reed (*Arundo donax*), tamarisk (*Tamarix ramosissima*), perennial pepperweed (*Lepidium latifolium*), tree of heaven (*Ailanthus altissimus*), pampas grass (*Cortaderia selloana*), and any species listed on the California State Agricultural list (CDFA 2009) or Cal-

IPC list of noxious weeds (Cal-IPC 2006, 2007) will not be present on the revegetation site as of the date of completion approval.

MV 4.3-77 A cowbird trapping program shall be implemented once vegetation clearing begins and maintained throughout the construction, maintenance, and monitoring period of the riparian restoration sites. A minimum of five traps shall be utilized, with at least one trap adjacent to the project site and one or two traps located at feeding areas or other CDFG-approved location. The trapping contractor may consult with CDFG to request modification of the trap location(s). CDFG must approve any relocation of the traps. Traps will be maintained beginning each year on April 1 and concluding on/or about November 1 (may conclude earlier, depending upon weather conditions and results of capture). The trapping contractor may also consult CDFG on a modified, CDFG-approved trapping schedule modification. The applicant shall follow CDFG and USFWS protocol. In the event that trapping is terminated after the first few years, subsequent phases of the development will require initiation of trapping surveys to determine whether re-establishment of the trapping program is necessary.

MV 4.3-78 Bridge and culvert designs, where practicable, shall provide roosting habitat for bats. A qualified biologist shall work with the project engineer in identifying and incorporating structures into the design that provide suitable roosting habitat for bat species occurring in the project area. The final design of the roosting structures would be chosen in consultation with CDFG.

MV 4.3-79 To preclude the invasion of Argentine ants into the spineflower preserves and their associated buffers, controls will be implemented using an integrated pest management (IPM) approach in accordance with the approved SCP. The controls include:

(1) P~~p~~roviding "dry zones" between urban development and spineflower populations, where typical soil moistures are maintained at levels below about 10% soil saturation, which will deter the establishment of nesting colonies of ants; and providing dry zone buffers of sufficient width to reduce the potential for Argentine ant activity within core habitat areas.~~;~~

(2) Where feasible, and/or appropriate, dry areas such as parking lots and roadways shall be built next to preserve boundaries. These will be designed to slope away from the preserve to avoid runoff entering the preserve.~~building dry areas such as parking lots and roadways next to preserve boundaries, and sloping these areas away from the spineflower preserves.;~~

(3) ~~constructing~~ P~~p~~edestrian pathways placed next to preserves shall consist of decomposed granite or other gravel to minimize the holding of moisture, thereby preventing establishment

of suitable habitat for Argentine ant colonies.~~out of decomposed granite or other gravel to minimize the holding of moisture;~~

(4) E~~e~~nsuring that landscape container plants installed within 200 feet of spineflower preserves are ant free prior to installation~~;~~ to reduce the chance of colonies establishing in areas close to the preserves.

(5) M~~m~~aintaining natural hydrological conditions in the spineflower preserves, including the buffers, through project design features~~; and~~ for roadways, French drains, irrigation systems, underground utilities, drainage pipes and fencing, storm drains, and any other BMP measures that apply to surface water entering the preserve areas.

(6) U~~u~~sing drought-resistant plants in FMZs and minimizing irrigation to the extent feasible.

MV 4.3-80 The mitigation program shall incorporate applicable principles from the interagency Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks (60 FR 58605–58614) to the extent feasible and appropriate, particularly the guidance on administration and accounting. Nothing in the section 404 or section 2081 Permit or section 1605 Agreement shall preclude the applicant from selling mitigation credits to other parties wishing to use those permits or that agreement for a project and/or maintenance activity included in the permits/agreement.

MV 4.3-81 The 1,518-acre Salt Creek area shall be offered for phased dedication to the public pursuant to Condition 42 of the approved Specific Plan. Using a "rough step" land dedication approach, irrevocable offers of dedication will be provided to CDFG for identified impact offsets in accordance with the Comprehensive Mitigation Implementation Plan (**MV 4.3-23**). The Salt Creek area includes approximately 629 acres of coastal scrub communities within both Ventura and Los Angeles counties. This land dedication shall be managed in conjunction with the 4,205-acre High Country SMA (containing 1,314 acres of coastal scrub communities).

a. To facilitate wildlife movement between the north side of SR-126 and the Salt Creek area, enhancements will be made to the existing agricultural undercrossing and to the agricultural land at the base of Salt Creek as discussed in **MV 4.3-84**. A Wildlife Movement Enhancement Plan shall be submitted to the Corps and CDFG for approval prior to implementation. The plan shall include at the minimum the following:

i. A portion of the agricultural field on the north side of SR-126 will be dedicated to wildlife movement. Trees and/or scrubs will be planted in the agricultural field to guide wildlife into the existing undercrossing.

ii. On the south side of SR-126 two rows of trees/scrubs will be planted to guide wildlife to the Santa Clara River.

iii. A wildlife corridor will be created through the agricultural fields at the base of Salt Creek Canyon.

(The second part of this mitigation measure (a.i. through a.iii.) has been identified to offset cumulative impacts to wildlife habitat, including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area but is not required for implementation with the Mission Village tract map.)

MV 4.3-82 Supplemental restoration of coastal scrub shall be conducted as an adaptive management measure pursuant to **MV 4.3-24**. Eight areas were identified in the Draft Newhall Ranch Mitigation Feasibility Report in the High Country SMA, Salt Creek area, and River Corridor SMA (Dudek 2007A) for coastal scrub restoration. In the event that coastal scrub restoration is required pursuant to **MV 4.3-24**, the applicant shall develop a Coastal Scrub Restoration Plan, subject to the approval of CDFG. The plan shall specify, at a minimum, the following: (1) the location of mitigation sites to be selected from suitable mitigation land in the High Country and Salt Creek areas identified in the Feasibility Study; (2) a description of "target" vegetation (native shrubland) to include estimated cover and abundance of native shrubs; (3) site preparation measures to include topsoil treatment, soil decompaction, erosion control, temporary irrigation systems, or other measures as appropriate; (4) methods for the removal of non-native plants (*e.g.*, mowing, weeding, raking, herbicide application, or burning); (5) the source of all plant propagules (*e.g.*, seed, potted nursery stock, *etc*. collected from within five miles of the restoration site), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful.

Habitat restoration/enhancement will be judged successful when: (1) percent cover and species richness of native species reach 50% of cover and species richness at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation.

MV 4.3-83 a. As a supplement to **MV 4.3-1, MV 4.3-23** and **MV 4.3-31** through **MV 4.3-43**, and **MV 4.3-80**, additional habitat mitigation through replacement or enhancement of nesting/foraging habitat for least Bell's vireo will be provided for certain key habitat zones at higher ratios (identified as "key population areas" in **Figure 4.5-86**, Alternative 2 Impacts to Least Bell's Vireo Habitat). Southern willow scrub, southern cottonwood–willow riparian, arrow weed scrub, mulefat scrub, and Mexican elderberry scrub and woodland that provide nesting/foraging habitat for least Bell's vireo in "key population areas" shall be replaced or enhanced. All permanent loss to nesting/foraging habitat in key population areas shall be mitigated at a 5:1 ratio unless otherwise authorized by CDFG or USFWS. Temporary habitat loss of foraging/nesting habitat in key population areas shall be mitigated at a 2:1 ratio. The requirements for replacing habitat by either creating new habitat or removing exotic species from existing habitat shall follow the procedures outlined **in MV 4.3-1, MV 4.3-23** and **MV 4.3-31** through **MV 4.3-43**, and **MV 4.3-80**. To replace the lost functions of habitat located adjacent to the Santa Clara River due to noise impacts, all nesting/foraging habitat within the 60 dBA sound contour (associated with development site roadway improvements) shall be considered degraded. Nesting/foraging habitat within this area shall be mitigated at a ratio of 2:1.

b. The loss of documented occupied nesting habitat for coastal California gnatcatcher shall be mitigated. If the coastal California gnatcatcher is identified nesting on site, the applicant will acquire or preserve nesting coastal California gnatcatcher habitat at a 3:1 ratio for impacts to documented occupied habitat, or by the ratio specified in **MV 4.3-31**, whichever is greater. Mitigation acquisition shall occur at an agreed-upon location as approved by the USFWS upon consultation. The applicant shall enter into a binding legal agreement regarding the preservation of occupied habitat describing the terms of the acquisition, enhancement, and management of those lands.

MV 4.3-84 Road undercrossings will be built in accordance with accepted design criteria to allow the passage of mountain lions and mule deer. The applicant shall prepare a Wildlife Movement Corridor Plan that specifically addresses wildlife movement corridors at San Martinez Grande, Chiquito Canyon, and Castaic Creek, which shall be monitored for one year prior to construction of the SR-126 widenings. The Plan shall address current movement that is occurring, the methods that will be implemented to provide for passage, including lighting, fencing, vegetation planting, the installation of bubblers to encourage wildlife usage, and the size of the passage. The applicant shall install motion cameras at these locations in consultation with CDFG and monitor these passages for a period of two years subsequent to constructing improvements. A report of the

wildlife documented to utilize these crossings shall be provided to CDFG annually. In addition, the Salt Creek crossing west of the Project area will be enhanced prior to initiation of construction in Long Canyon (southern portion of the Homestead Village). This crossing will be monitored for one year at the initiation of RMDP development, for two years at the time the crossing is enhanced, and then for three years after Project buildout. Prior to the construction of adjacent developments, signs will be placed along the roads indicating potential wildlife crossings where mountain lions and mule deer are likely to cross. (This mitigation measure has been identified to offset cumulative impacts to wildlife habitat (including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area, but is not required for implementation with the Mission Village tract map.)

MV 4.3-85 At least 1,900 acres of Open Area within the Specific Plan area shall be offered for dedication to an NLMO in fee and/or by conservation easement. These 1,900 acres of the Open Area will be left as natural vegetation. Dedication of open areas lands shall be reported annually to CDFG.

MV 4.3-86 Pre-construction surveys for San Emigdio blue butterfly shall occur in all areas containing host plants in sufficient density to support this species. A qualified Lepidoptera biologist shall conduct focused surveys at a time of year and during weather conditions when the detection of eggs, larvae, or adults is possible. All occupied habitat shall be mapped and the locations provided to CDFG. Should the removal of quail brush or other documented host plants from occupied San Emigdio blue butterfly habitat in Potrero Canyon or other areas be required, the plants shall be removed when eggs and larvae are not present (*i.e.*, mid-September to March). Removal of quail brush plants from the documented habitat in Potrero Canyon may only be conducted from April through early September if it is determined by a qualified biologist that eggs and/or larvae are not present on the plants to be removed.

MV 4.3-87 The removal of quail brush or other documented host plants from any occupied San Emigdio blue butterfly habitat in Potrero Canyon or other areas shall be replaced at a minimum of a 1.5:1 ratio. The replacement plants shall be planted contiguous to the existing quail brush plants associated with the San Emigdio blue butterfly habitat. The success of the replanting shall be monitored for survival and vigor consistent with survivorship requirements of Mitigation Measure **MV 4.3-35** and **MV 4.3-36**.

MV 4.3-88 Prior to any construction activities occurring within 200 feet of any occupied San Emigdio blue butterfly habitat in Potrero Canyon or other areas, the boundaries of preserved areas of the habitat shall be clearly marked with flagging. The flagging would serve to identify the boundaries of the

habitat to construction personnel and to prevent the inadvertent construction-related loss of quail brush or other host plants associated with the habitat. Construction personnel working in the area shall be informed that the removal of or damage to any flagged quail brush or other host plants located outside the disturbance footprint is prohibited.

MV 4.3-89 The Newhall Ranch JPA will have overall responsibility for recreation within and conservation of the High Country. The Newhall Ranch JPA and ~~Project applicant and/or~~ NLMO shall develop and implement a conservation education and citizen awareness program for the High Country SMA informing the public of the special-status resources present within the High Country SMA and providing information on common threats posed by the presence of people and pets to those resources. The NLMO shall install trailhead and trail signage indicating the High Country SMA is a biological conservation area and ~~requesting~~ advising that people and their animals must stay on existing trails at all times and that violators may be cited. The NLMO shall provide quarterly maintenance patrols to remove litter and monitor trail expansion and fire hazards within the High Country SMA, funded by the JPA.

MV 4.3-90 The status of the Potrero Canyon San Emigdio blue butterfly colony shall be monitored by a qualified biologist for a period of five years after Potrero Canyon Road construction completion/operation commencement to evaluate whether the operation of the road may be contributing to a population decline in the colony. Should it be determined that a population decline is occurring, habitat creation for the San Emigdio blue butterfly shall be implemented in suitable locations contiguous to the habitat but away from the road. A habitat creation plan will be prepared that details the location and methods for creating habitat, that specifies success criteria, and that describes measures that will be implemented in the event that the habitat creation does not stabilize the San Emigdio blue butterfly population.

MV 4.3-91 The installation of new, or relocation of existing, utility poles and phone and cell towers shall be coordinated with CDFG where located in the High Country SMA and Salt Creek area. The applicant or SCE shall install utility poles, phone, and cell towers in conformance with APLIC standards for collision-reducing techniques as outlined in Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (APLIC 2006).

MV 4.3-92 a. All surfaces on new antennae and phone/utility towers shall be designed and operated with anti-perching devices in conformance with APLIC standards to deter California condors and other raptors from perching. During construction the area shall be kept clean of debris, such as cable, trash, and construction materials. The applicant shall collect all microtrash and litter (anything shiny, such as broken glass), vehicle fluids, and food waste from the Project area on a daily basis.

Workers will be trained on the issue of microtrash: what constitutes microtrash, its potential effects on California condors, and how to avoid the deposition of microtrash.

b. The applicant shall retain a qualified biologist with knowledge of California condors to monitor construction activities within the Project area. The resumes of the proposed biologist(s) will be provided to CDFG for concurrence. This biologist(s) will be referred to as the authorized biologist hereafter. During clearing and grubbing of construction areas, the qualified biologist shall be present at all times. During mass grading, construction sites shall be monitored on a daily basis. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed. If condors are observed landing in the Project area, the applicant shall avoid further construction within 500 feet of the sighting until the animals have left the area, or as otherwise authorized by CDFG and USFWS. All condor sightings in the Project area will be reported to CDFG and USFWS within 24 hours of the sighting. Should condors be found roosting within 0.5 mile of the construction area, no construction activity shall occur between one hour before sunset to one hour after sunrise, or until the condors leave the area, or as otherwise directed by USFWS. Should condors be found nesting within 1.5 miles of the construction area, no construction activity will occur until further authorization occurs from CDFG and USFWS.

c. To further protect California condor potentially foraging in the Project area over the long term from negative interactions with humans and/or artificial structures, the applicant or the JPA or the NLMO shall remove dead cattle that are found or reported within 1,000 feet of a residential or commercial development boundary. Dead cattle shall be relocated to a predetermined location within the High Country SMA or Salt Creek area. The locations where carcasses shall be placed shall be a minimum of 1,000 feet from a development area boundary. Appropriate locations for transfer of carcasses include open grasslands and oak/grassland areas where condors can readily detect carcasses and easily land and take off without encountering physical obstacles such as powerlines and other utility structures. The proposed locations would be selected and approved by the CDFG and USFWS. Pursuant to this measure, a telephone number for reporting dead cattle shall be provided and actively maintained. Any cattle carcasses transferred to the relocation areas shall be reported to the USFWS Condor group.

11. CUMULATIVE IMPACTS

a. Introduction

The Mission Village project is a component of the Newhall Ranch Specific Plan. The Specific Plan guides the long-term development of the 11,999-acre Newhall Ranch community, comprising a broad range of residential, mixed-use, and non-residential land uses developed within five village areas. Buildout of the Newhall Ranch Specific Plan will occur through submission of individual tentative subdivision maps. Landmark Village was the first subdivision

map filed within the Specific Plan area, and Mission Village represents the second subdivision map. Other subdivision maps on file with the County or that are considered reasonably foreseeable include Potrero and Homestead.

Buildout of the Specific Plan would permanently convert acreage from a natural, albeit partially disturbed habitat condition, to that of an urban environment. Buildout of individual tracts filed under the Specific Plan would significantly impact the following vegetation communities absent mitigation: coastal scrub, big sagebrush scrub, oak communities, Mexican elderberry scrub, riparian scrub, riparian woodland, coastal and valley freshwater marsh, southern cottonwood-willow riparian, alluvial scrub, and cismontane alkali marsh.

Construction and operation of uses developed within the Specific Plan would directly disturb wildlife on and near the site. Within the planned development areas, species of low mobility would be lost during site preparation. Conversion of existing open space to developed uses consisting of structures and ornamental landscaping would eliminate natural communities on developed portions of the site and result in a reduction in native wildlife species diversity. Buildout of uses within the Specific Plan would also limit the local movement of wildlife species that currently make use of areas proposed for development.

Other proposed and reasonably foreseeable projects beside those in the Newhall Ranch Specific Plan are described below. Where the potential impacts are known, the impacts likely to be associated with these projects are first identified. The potential for these impacts to combine with similar impacts due to the proposed project is also evaluated. This list of projects is not intended to include all projects that are proposed in the project region. Instead, the analysis focuses on those projects that support or would potentially affect similar plant communities, jurisdictional resources, and special-status plant and animal species that occur on the Mission Village project site. The analysis also focuses on those related projects that would likely be constructed during the same timeframe as Mission Village. Those projects that also are adjacent to or that otherwise may affect resources associated with the Santa Clara River were included.

In close proximity to the proposed Mission Village site is the VCC. The VCC project consists of a light industrial and commercial development over 1,500 acres on undeveloped farmlands north of the Newhall Ranch Specific Plan site and SR-126, and west of I-5. Castaic Creek traverses the VCC site. The County approved this VCC project in 1992, and a considerable portion of the site is now developed. A 404 Permit was issued for the VCC project by the Corps to line the existing banks with gunite bank protection. Castaic Creek contains dense riparian woodland and supports the least Bell's vireo and arroyo toad. As such, construction of the VCC and the development projects associated with the proposed Valencia Company 404 Permit could cause the following potentially significant cumulative impacts: (1) loss of riparian habitat from the study area; (2) disturbance of riparian wildlife due to the proximity of urban development; (3) potential degradation of water quality in the Santa Clara River due to urban

stormwater runoff; (4) permanent loss of prime farmlands; (5) temporary and permanent disturbance to habitat for the least Bell's vireo; (6) impacts to mariposa lily, everlasting, and San Fernando Valley spineflower; and (7) modification of visual qualities due to urban development, bank protection, and bridges. The remaining undeveloped portion of the VCC project is assessed as a part of the Mission Village applicant's RMDP/SCP project.

Also in proximity to the proposed Mission Village project is the proposed Entrada project. The Entrada project, consisting of approximately 505 acres, is located within unincorporated Los Angeles County in the Santa Clarita Valley. More specifically, the project site is located directly west of I-5, both north and south of Magic Mountain Parkway. The project applicant proposes to develop the property with up to 3,300 residential units and 3.1 million square feet of commercial floor area. Approximately 48 percent of the site would be retained as open space. Bank stabilization along a portion of the Santa Clara River would be constructed in conjunction with the project. Construction and development of this project could cause potentially significant cumulative impacts to mariposa lily, everlasting, San Fernando Valley spineflower, and valley oak savannah. As stated, a portion of Entrada includes spineflower. To facilitate a portion of the development within Entrada, the project applicant is currently seeking a Section 2081 permit authorizing the take of spineflower as part of the RMDP/SCP project. This separate project is being evaluated in a Draft EIS/EIR prepared under the direction of the Corps and CDFG.

In addition, the project applicant is currently processing federal and state permit applications and the preparation of a combined EIS/EIR under both the National Environmental Policy Act (NEPA) and CEQA to assess the environmental implications of implementing the Newhall Ranch Resource Management and Development Plan/Spineflower Conservation Plan (RMDP/SCP) project. The project's RMDP component consists of those improvements, facilities, and activities associated with implementation of the Newhall Ranch Specific Plan, which will require federal and state permits and agreements from the Corps and the CDFG. The RMDP consists specifically of various flood control improvements, stream bank protection, drainage facilities, roads, building pads, pipeline and utility river crossings, nature trails, new and widened bridges, and the Newhall Ranch WRP outfall facilities. The proposed SCP component consists of a conservation management framework to permanently protect and manage designated preserve areas designed to maximize the long-term persistence of the spineflower, and to authorize the take of spineflower located outside of the preserve system.

The proposed federal action required to implement the RMDP/SCP project consists of the issuance of a long-term Section 404 permit for the Newhall Ranch RMDP facilities and improvements associated with the Newhall Ranch Specific Plan that would potentially result in the discharge of fill or dredged material in and adjacent to the Santa Clara River and its side drainages. As part of the federal permit review process, the Corps also will comply with Section 7 of the Endangered Species Act, which requires consultation with the USFWS for any federal permit that may affect an ESA-listed species or its critical habitat. In addition, a federal Clean Water Act Section 401 water quality certification will be required from the Los Angeles Regional Water Quality Control Board (RWQCB) as part of the Corps permit review process. The USFWS also will review a candidate conservation agreement and the SCP

for the spineflower and consider whether to enter into such an agreement for the long-term conservation of the spineflower.

The proposed state action required to implement the RMDP/SCP project consists of the issuance by CDFG of a long-term master streambed alteration agreement under Section 1600 of the California Fish and Game Code for Newhall Ranch RMDP construction activities associated with the Newhall Ranch Specific Plan that occur within the bed, bank, or streambed channel of the Santa Clara River and its side drainages. The proposed state action also would include issuance by CDFG of an incidental take permit for Newhall Ranch RMDP construction activities that impact state-listed species under the California Endangered Species Act~~. The proposed state action also includes CDFG's~~, and CDFG's review and possible approval of the SCP and issuance of a Section 2081 incidental take permit for spineflower. Since circulation of the Mission Village Draft EIR (October 2010), on December 3, 2010, CDFG certified the EIR portion of the EIS/EIR for the Newhall Ranch RMDP/SCP project under its lead agency authority granted by CEQA, and issued the following final approvals:

(a) Final Newhall Ranch Resource Management and Development Plan (December 3, 2010);

(b) Final Spineflower Conservation Plan (December 3, 2010);

(c) CDFG-approved Master Streambed Alteration Agreement (Notification No. 1600-2004-0016-R5);

(d) CDFG-approved California Endangered Species Act Incidental Take Permit No. 2081-2008-012-05 (SCP spineflower);

(e) CDFG-approved California Endangered Species Act Incidental Take Permit No. 2081-2008-013-05 (RMDP multi-species);

(f) CDFG-approved CEQA findings (December 3,2 010);

(g) CDFG-approved California Endangered Species Act Findings (December 3, 2010);

(h) CDFG-approved Mitigation Monitoring and Reporting Plan and Appendices for the Newhall Ranch RMDP/SCP (December 3, 2010);

(i) Final Addendum/Additional Information (November 2010); and

(j) CDFG-approved Notice of Determination and Decision (filed December 3, 2010).[1030]

b. Cumulative Impact Analysis Study Area

Under the *State CEQA Guidelines*,[1031] the lead agency should provide a reasonable explanation of the geographic limitation used in the cumulative impacts analysis. As permitted under California Code of Regulations, Title 14, section 15130, this cumulative impacts analysis uses a "project list" approach.[1032] Under such an approach, the proposed project's impacts are considered in conjunction with impacts from past, present, and reasonably

[1030] For the specific documents memorializing CDFG's final approvals for the Newhall Ranch RMDP/SCP project, please see the Mission Village Final EIR, **Appendix F4.3**.

[1031] 14 C.C.R. Sec. 15130(b)(3)

[1032] 14 C.C.R. Sec. 15130(b)(1)(A)

foreseeable projects within a designated study area, which, in this case, is the Santa Clara River Watershed (SCRW). Because the SCRW is so large and spans across multiple jurisdictions, the project list for this cumulative impacts analysis includes projects only in the watershed from: (1) Los Angeles County and the City of Santa Clarita; and (2) Ventura County, extending west to the City of Santa Paula and including the community of Piru and the City of Fillmore. Note that this analysis generally addresses past, present, and reasonably foreseeable projects located within the watershed itself; however, for some biological resources other scales are more applicable and are used as appropriate. For certain species, the scope of analysis extends beyond the watershed boundary (e.g., San Fernando Valley spineflower), and for other species the scope of analysis is more focused based on limited distribution and use of habitat within the watershed (e.g., unarmored threespine stickleback).

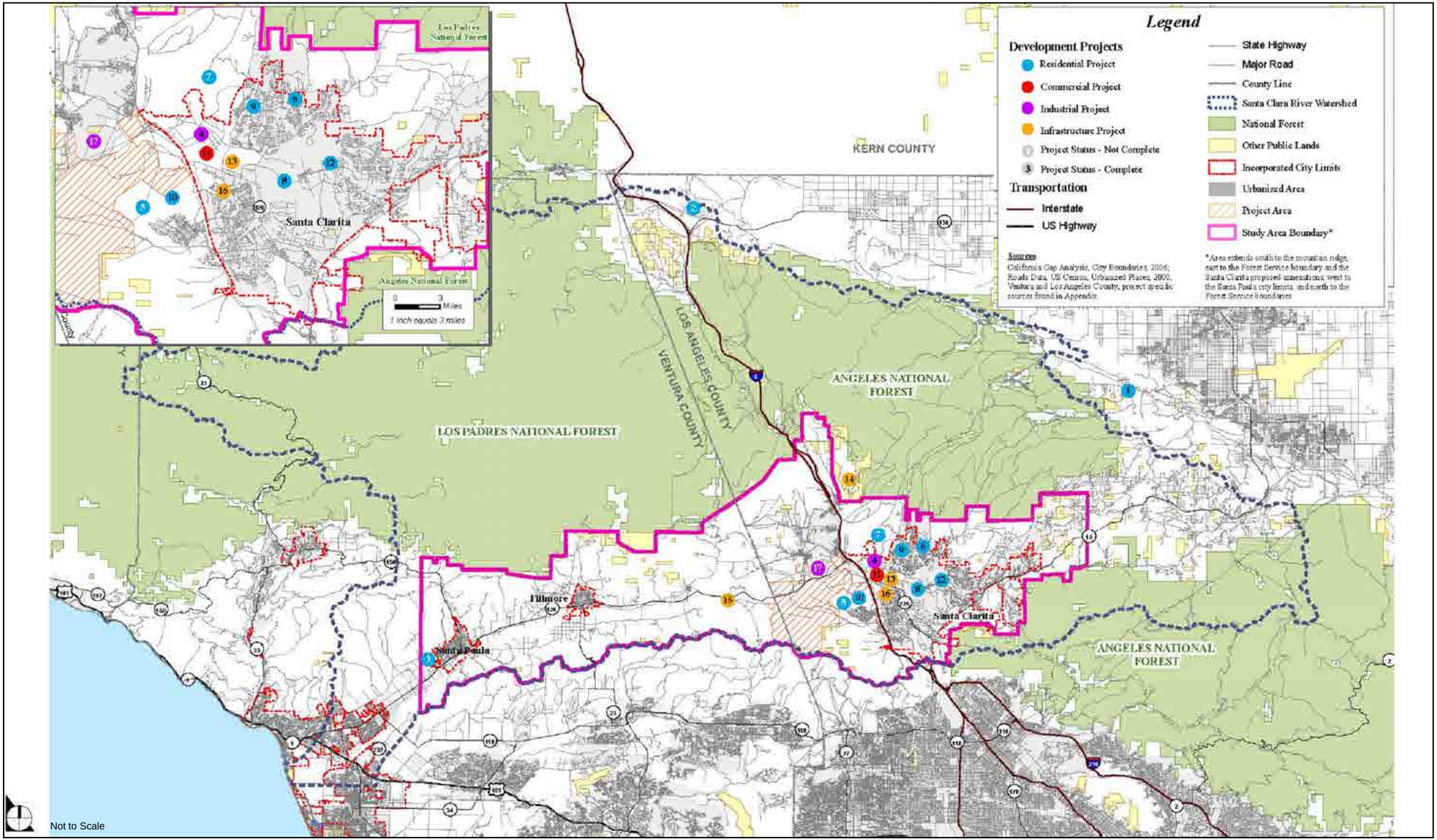
This cumulative analysis describes the effects of past, present, and reasonably foreseeable projects on the biological resources of SCRW. The list of past, present and reasonably foreseeable cumulative development projects used to conduct this cumulative impact analysis was prepared for the Santa Clara River Watershed Study.[1033] The Watershed Study is provided in **Appendix 4.3** of this EIR. The Watershed Study, which forms the basis of this cumulative impacts analysis, includes a review of cumulative impacts within the Santa Clara River watershed based on information from permits issued between 1988 and 2006[1034] by the Corps and CDFG regarding impacts to jurisdictional wetlands and waters and mitigation for those impacts. In addition, 14 cumulative development projects with potential impacts to biological resources were added to the analysis because they were not included on the Watershed Study project list. In general, the additional projects are located in the Santa Clarita area and are small- to moderately sized (i.e., 1 to 100 acres) urban "infill" projects. In total, the 14 additional projects encompass an area of 337 acres.

For this EIR, the geographic scope of the cumulative impacts analysis is shown on **Figure 4.3-12, Cumulative Individual Project Location Map**.[1035] The "Project Area" shown on this figure is the Newhall Ranch Specific Plan and the VCC and Entrada planning areas, including the Mission Village project site.

[1033] Dudek, *Santa Clara River Watershed Study* (Encinitas, California: Dudek, 2008).

[1034] The permits from CDFG date back to 1983, but the information provided on those permits was insufficient to quantify impacts. Therefore, impacts were quantified beginning from 1988.

[1035] This scope was used for analysis of the following resource categories: Hydrology, Geomorphology, Water Quality, Cultural Resources, Paleontological Resources, Geology, Land Use, Visual Resources, Parks and Recreation, Hazards and Hazardous Materials, Public Services, Socioeconomics and Environmental Justice, and Solid Waste.



SOURCE: URS 2008; Impact Sciences Inc. 2009

FIGURE 4.3-12

Mission Village EIR

DUDEK

Cumulative Individual Project Location Map

An analysis of CDFG section 2081 Permits and USFWS section 7 and 10a Permits is also included. This review included, but was not limited to, the subset geographic area used for the analysis of the remainder of the cumulative analysis. This analysis thus included data from a watershed perspective. (See, e.g., Santa Clara River Watershed Study).[1036]

This analysis also reviewed major NCCPs and HCPs for other areas of Southern California, including Kern, Riverside, Orange, and San Diego Counties, but found those areas to be so geographically distant (e.g., greater than 25 to 30 miles) from the Mission Village project area as to have little bearing on the resource issues in the SCRW. (See ~~**subsection**~~**Subsection 4.3.11.a.(1.9)** below.)

In order to present a reasonable cumulative impacts analysis in this EIR, the local development and infrastructure projects lists were reduced and consolidated according to the following parameters: (1) projects outside the geographic scope, with the exception of a few large projects, were excluded from further analysis due to their distance from the proposed project; (2) projects more than 5 miles away from the project area (but within the roughly 10-mile geographic scope) and/or smaller-scale projects are listed in a consolidated manner, and are grouped by local jurisdiction (note that due to the approximately 12,000-acre size of the Newhall Ranch Specific Plan area, including the proposed Mission Village project, "smaller-scale" projects in this context include projects roughly 700 acres and smaller); and (3) large projects within 5 miles of the Newhall Ranch Specific Plan area are listed individually. Projects selected for individual listing also are included in the consolidated lists, to reflect overall development patterns in the geographic study area. The consolidated project lists are grouped according to the following jurisdictions: City of Santa Clarita; unincorporated areas of Los Angeles County; City of Fillmore (Ventura County); City of Santa Paula (Ventura County); Corps (section 404 permit); USFWS biological opinions; CDFG (streambed); and CDFG (take authorizations). [1037]

(1) Consolidated Projects

(a) City of Santa Clarita Consolidated Projects

Table 4.3-13, City of Santa Clarita Consolidated Projects (Includes Individually Reviewed Projects), contains the City of Santa Clarita consolidated projects analysis. Projects more than 5 miles away from the Newhall Ranch

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1036 Dudek, *Santa Clara River Watershed Study*.

1037 The geographic study areas utilized in this cumulative impacts analysis are more comprehensive than the study area currently being used by the City of Santa Clarita and Los Angeles County to create a General Plan document and EIR for the entire Santa Clarita Valley Planning Area, called "One Valley, One Vision" or "OVOV." Although this EIR cannot rely on the City and County's joint OVOV effort as it has not yet been finalized and adopted, it is worth noting that the OVOV planning effort will cover the City, including its four communities: Canyon Country, Newhall, Saugus, and Valencia, as well as County communities of Agua Dulce, Castaic, Newhall Ranch, Stevenson Ranch, and Val Verde. City of Santa Clarita and Los Angeles County, "Notice of Preparation for General Plan document and EIR for the Santa Clarita Valley Planning Area: One Valley, One Vision~~,~~" (2008).

Specific Plan area and/or smaller-scale projects (less than 700 acres) are listed in a consolidated manner, and are grouped by local jurisdiction. **Table 4.3-13** also includes the projects selected for individual listing, which are discussed further in ~~**subsection**~~**Subsection 4.3.11.a.(2)**, below.

Table 4.3-13
City of Santa Clarita Consolidated Projects (Includes Individually Reviewed Projects)

Name	Location	Dwelling Units	Commercial/ Industrial (sf)	Acres[1]	Status
Residential/Mixed Use Projects					
Golden Valley Ranch (TR 52414)	Newly annexed area southeast of SR-14 and north of Placerita Canyon Road; 8 miles east of the RMDP/SCP project.	498	618,759	1,259 (974 open space)	Approved 2002; Under Construction
Whittaker Bermite/Porta Bella Project (TR 51599)	Map ID #8 - West of Golden Valley Road, south of Soledad Canyon Road, and east of San Fernando Road; 3 miles east of the RMDP/SCP project.	2,911	609,832	996 (407 open space)	On Hold Pending Remediation Activities
River Park (TR 53425)	Map ID #12 - Located at the eastern terminus of Newhall Ranch Road, east of Bouquet Canyon Road, and north of Soledad Canyon Road and the Santa Clara River; 4 miles east of the RMDP/SCP project.	1,089	16,000	695	Under Construction
North Valencia Specific Plan No. II (MC 04-205)	Two miles east of the Newhall Ranch Specific Plan along the east side of San Francisquito Creek, north of Newhall Ranch Road, south of Decoro Drive, east of Rye Canyon Road, and west of McBean Parkway; 2 miles east of the RMDP/SCP project.	1,900	210,000	596	Approved 2000; Near Buildout
Keystone/Synergy Project (TR 60258)	South of Bouquet Canyon Road, adjacent to the River Park project; 5 miles east of the RMDP/SCP project.	499	30,476	246 (137 open space)	Approved 2006
Stonecrest Annexation	Annexation of existing developed area on the far east side of the City of Santa Clarita, north of Soledad Canyon Road, and east of Shadow Pines Boulevard; 10 miles east of the RMDP/SCP project; no new construction.	631	0	427	Annexed 2006; Existing Development
Downtown Newhall Specific Plan	Redevelopment of downtown Newhall area (along San Fernando Road), 3 miles southeast of the RMDP/SCP project.	1,092	1,017,000	320	Approved
North Newhall Specific Plan	Redevelopment along San Fernando Road in Newhall, 3 miles southeast of the RMDP/SCP project.	673	660,500 (Comm.) 261,000 (Elem. School)	213	Pending
Lyons Ranch (TR 53653)	West of I-5 and south of Pico Canyon Road; 2 miles east of the RMDP/SCP project.	186	800	235	Approved
Stetson Ranch (TR 49621)	East of Sand Canyon Road at the northern terminus of Gary and Marilyn Drives; 9 miles east of the RMDP/SCP project.	265	0	176	Approved
Sand Canyon Joint Venture (TT 53255, 53074)	The northeast corner of Soledad Canyon Road and Sand Canyon Road; 9 miles east of the RMDP/SCP project.	87	110,000	89	Approved

Table 4.3-13 (Continued)
City of Santa Clarita Consolidated Projects (Includes Individually Reviewed Projects)

Name	Location	Dwelling Units	Commercial/ Industrial (sf)	Acres[1]	Status
DR Horton (TR 48892)	Northeast corner of Sierra Highway and Golden Valley Road; 6 miles east of the RMDP/SCP project.	148	0	61	Approved
Centex Homes (TR 61811)	Located north of Golden Valley Road, west of Sierra Highway; 6 miles east of the RMDP/SCP project.	52	0	14	Under Construction
Soledad Village Project (MC 04-444)	North of Soledad Canyon Road, south of Santa Clara River, approximately 1 mile east of Bouquet Canyon Road; 6 miles east of the RMDP/SCP project.	407	8,000	30	Approved 2006
Friendly Valley Association 11 (TR 52385)	Generally located north of Sierra Highway and east of Via Princessa; 6 miles east of the RMDP/SCP project.	43	0	22	Proposed
Valle de Oro (TR 53419)	Located at the northwest corner of Sierra Highway and Golden Valley Road; 6 miles east of the RMDP/SCP project.	111	0	21	Completed
Soledad Circle Estates	South of Soledad Canyon Road at Penlon Court, 4 miles east of the RMDP/SCP project.	147	0	20	Pending
Flying Tiger (TR 259166)	North of Via Princessa and east of Sierra Highway; 7 miles east of the RMDP/SCP project.	200	0	13	Approved
Total Santa Clarita Residential/Mixed Use		**10,939**	**3,542,367**	**5,433**	
Commercial/Industrial Projects					
Rye Canyon Business Park (TR 23916, 51826)	At the northeast corner of Rye Canyon Road and Newhall Ranch Road; 2 miles northeast of the RMDP/SCP project.	0	4,400,000	376	Under Construction
Gate King (TR 50283)	Southern Santa Clarita, west of SR-14 and Sierra Highway, south of San Fernando Road; 6 miles southeast of the proposed project.	0	4,200,000	682	Approved
Centre Pointe Business Park (TR 42670)	South of Soledad Canyon road, east of Bouquet Canyon Road, west of Golden Valley Road; 5 miles east of the RMDP/SCP project.	0	2,300,000	45	Near Buildout
North Valencia Specific Plan No. I	Map ID #11 - South of Newhall Ranch Road, north of Magic Mountain Parkway, east of Rye Canyon Road, west of Bouquet Canyon Road; 0.5 mile east of the RMDP/SCP project.	2,000	803,000	707 (365 open space)	Near Buildout
Valencia Town Center Expansion	Northeast corner of Valencia Boulevard and McBean Parkway; 2 miles east of the RMDP/SCP project.	0	491,860	10	Proposed
Bridgeport Market Place	Northeast corner of McBean Parkway and Newhall Ranch Road, 2 miles east of the RMDP/SCP project.	0	160,000	32	Under Construction
Henry Mayo Newhall Memorial Master Plan (MC 04-325)	23845 West McBean Parkway; 2 miles east of the RMDP/SCP project.	0	600,000	21	Proposed
Tourney North	Magic Mountain Parkway west of The Old Road and I-5; 1 mile east of the RMDP/SCP project.	0	450,000	100	Under Construction
Tourney South	Wayne Mills Place east of I-5; 1 mile east of the RMDP/SCP project.	0	165,000	12	Under Construction

Table 4.3-13 (Continued)
City of Santa Clarita Consolidated Projects (Includes Individually Reviewed Projects)

Name	Location	Dwelling Units	Commercial/ Industrial (sf)	Acres[1]	Status
Aspen Investment Company (MC 02-273)	North of Soledad Canyon Road and west of Valley Center Drive; 6 miles east of the RMDP/SCP project.	0	109,000	6	Proposed
Chinque Terra Office Park	On Sierra Highway between Dockweiler Drive and San Fernando Road, 4 miles southeast of the RMDP/SCP project.	0	90,900	6	Pending
Rice Self Storage (MC 02-231)	Southwest corner of Seco Canyon Road and Copperhill Drive; 3 miles north east of the RMDP/SCP project.	0	84,000	3	Completed
Facey Medical Building	26357 McBean Parkway; 2 miles east of the RMDP/SCP project.	0	79,000	4	Completed
HH Seco II LLC (MC 01-317)	Southwest corner of Seco Canyon Road and Copperhill Drive; 3 miles northeast of the RMDP/SCP project.	0	40,000	2	Completed
VTC Square	Northwest corner of McBean Parkway and Valencia Boulevard, 2 miles east of the RMDP/SCP project.	10	37,000	1	Pending
Rodgers Development Master Case 02-232	Northeast corner of Bouquet Canyon Road and Plum Canyon Road; 7 miles northeast of the RMDP/SCP project.	0	34,000	4	Completed
Total Santa Clarita Commercial/Industrial		**2,010**	**14,043,760**	**2,011**	
Institutional Projects					
College of the Canyons Expansion	South of Valencia Boulevard and west of Rockwell Canyon Road, 1.5 miles east of the RMDP/SCP project.	n/a	180,000	5	Pending
Master's College Master Plan and TM 66503	21726 Placerita Canyon Road; 2 miles east of the RMDP/SCP project.	54	0	95	Pending
UCLA Film Archives	North of McBean Parkway and west of Rockwell Canyon Road, 3 miles northeast of the RMDP/SCP project.	n/a	368,730	65	Pending
Total Santa Clarita Institutional		**54**	**548,730**	**165**	
Infrastructure Projects					
Sand Canyon Road Bridge Widening	Tentative Tract Map No. 52004 filed with City of Santa Clarita, Robinson Ranch Golf Course project. Crosses the Santa Clara River 6 miles upstream of the RMDP/SCP project area where riverbed is dry. Two new lanes are proposed for an existing bridge.	n/a	n/a	n/a	Approved
Wiley Canyon Road/Via Princessa Bridge (South fork)	1,100-foot bridge, crosses South Fork of Santa Clara River near city of Santa Clarita; 5 miles east of the RMDP/SCP project.	n/a	n/a	n/a	Permitted
Saugus Water Reclamation Plant	Near Bouquet Canyon Road, discharges to Santa Clara River; 3 miles east of the RMDP/SCP project.	n/a	n/a	n/a	Completed
City of Santa Clarita General Plan Circulation Element Amendment, all watercourses	City of Santa Clarita.	n/a	n/a	n/a	City General Plan Circulation Element
Total Santa Clarita Infrastructure		**n/a**	**n/a**	**n/a**	
Total Santa Clarita		**13,003**	**18,134,857**	**7,609**	(includes at least 1,883 acres of open space)

Table 4.3-13 (Continued)
City of Santa Clarita Consolidated Projects (Includes Individually Reviewed Projects)

[1] Open space acreage information was not available for all projects, but is provided where available.
Source:
City of Santa Clarita.

(b) Unincorporated Los Angeles County Consolidated Projects

Table 4.3-14 contains the Los Angeles County consolidated projects analysis. Projects more than 5 miles away from the Newhall Ranch Specific Plan area and/or smaller-scale projects (less than 700 acres) are listed in a consolidated manner, and are grouped by local jurisdiction. **Table 4.3-14** also includes the projects selected for individual listing, which are discussed further in ~~**subsection**~~**Subsection 4.3.11.a.(2)**, below.

Table 4.3-14
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial/Industrial (sf)[1]	Acres[2]	Status
Residential/Mixed Use Projects					
Ritter Ranch[3]	Map ID #1 - South of Bouquet Canyon Road and Elizabeth Lake Road, west of Antelope Valley Freeway, and north of Sierra Highway; 40 miles east of the RMDP/SCP project.	7,200	3,000,000	10,258	Partially Built Out
Centennial[3]	Map ID #2 - Located on the Tejon Ranch, approximately 60 miles north of Los Angeles, just south of the Kern County/Los Angeles County border, located next to SR-138, just east of I-5; 40 miles north of the RMDP/SCP project.	23,000	14,000,000	11,700	Pending
Fair Oaks Ranch (TR 47200, 52833, 52938)	East of SR-14, northeast of Via Princessa, and west of Sand Canyon Road; 7 miles east of the RMDP/SCP project.	1,476	19 acres [827,640 sf]	839 (497 open space)	Under Construction
Stevenson Ranch Phase IV (PD #2528; TR 52796, 43896)	West of I-5 and southwest of Magic Mountain Parkway; 0.5 mile east of the RMDP/SCP project.	1,130	0	488 (113 open space)	Built-out
Plum Canyon (TR 46018)	East of Bouquet Canyon Road and north of the northern terminus of Whites Canyon Road; 6 miles northeast of the RMDP/SCP project.	4,051	150,000	603	Under Construction
Skyline Ranch (TR 060922)	East of Whites Canyon Road, west of Sierra Highway; 8 miles northeast of the RMDP/SCP project.	1,325	0	2,196 (1,604 open space)	Pending
Plum Canyon (SunCal) (TR 31803)	South of Plum Canyon Road, east of Bouquet Canyon Road; 5 miles east of the RMDP/SCP project.	499	0	209 (90 open space)	Under Construction
Legacy Village (formerly Stevenson Ranch V)	Map ID #5 - Adjacent to/southeast of the Newhall Ranch Specific Plan area.	3,425	840,200	1,759	Pre-Application

Table 4.3-14 (Continued)
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial/Industrial (sf)[1]	Acres[2]	Status
Tesoro del Valle (TR 51644)	Map ID #6 - West side of San Francisquito Creek, north of Copperhill Drive; 5 miles northeast of the RMDP/SCP project.	1,791	0	1,793	Under Construction
West Creek/West Hills Valencia Project (TR 52445)	Map ID #9 - West side of San Francisquito Creek, north of Newhall Ranch Road and south of the Copperhill Drive bridge; 4 miles northeast of the RMDP/SCP project.	2,545	180,000	966	Under Construction
Westridge Project (TR 45433 & MP 19050)	Map ID #10 - Just west of I-5, north of Stevenson Ranch, and directly south of Six Flags Magic Mountain Amusement Park; 0.5 mile east of the RMDP/SCP project.	1,939	192,000	794	Under Construction
Northlake (TR 51852)	Near Castaic Lake; 7 miles north of the RMDP/SCP project.	1,698	388,775	1,330 (312 open space)	Pending
Tapia Ranch (TR 53822)	Map ID #7 - Tapia Canyon Road, west of Tesoro Residential Development. Access to the site currently via Parker Road exit from I-5; 4 miles east of the RMDP/SCP project.	405	0	1167	Pending
Spring Canyon (TR 48086)	East of city of Santa Clarita boundary, south of Sierra Highway, north of SR-14 and Soledad Canyon Road; 14 miles east of the RMDP/SCP project.	542	0	548 (279 open space)	Approved
Bee Canyon (TR 54020)	East of city of Santa Clarita boundary, south of SR-14; 12 miles east of the RMDP/SCP project.	556	0	211 (76 open space)	On Hold
Tick Canyon / Park Place (TR 060259)	Along Shadow Pines Boulevard just east of city of Santa Clarita boundary, north of Stonecrest Annexation area and SR-14; miles east of the RMDP/SCP project.	492	0	523 (272 open space)	Pending
Hasley Golf Course (TR 52584)	North of Hasley Canyon Road, west of I-5; 3 miles north of the RMDP/SCP project.	209	0	438 (67 open space)	Approved
Meadow Peak Project (TT 47760)	South of the Angeles National Forest, north of the city of Santa Clarita boundary, and northeast of the intersection of Copperhill Drive and Haskell Canyon Road; 6 miles east of the RMDP/SCP project.	495	0	454	Pending
Tincher (TR 060319)	Located at The Old Road and Villa Canyon Road; 2 miles north of the RMDP/SCP project.	36	0	8	Pending
G. H. Palmer and Associates (TR 45023)	North of Fair Oaks Ranch, east of SR-14; 7 miles east of the RMDP/SCP project.	752	0	8	Map Recorded
North Park (TR 46389)	West of Seco Canyon Road, east of Mc Bean Parkway, north of Decoro Drive; 2 miles east of the RMDP/SCP project.	744	0	350	Map Recorded

Table 4.3-14 (Continued)
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial/Industrial (sf)[1]	Acres[2]	Status
Pacific Bay Homes (TR 36943)	East of city of Santa Clarita boundary and Stonecrest Annexation area, north of Highway 14; 12 miles east of the RMDP/SCP project.	636	0	213	Completed
Stevenson Ranch III (TR 33608)	North of Pico Canyon Road, west of The Old Road; 1 mile southeast of the RMDP/SCP project.	972	0	112	Built Out
Fair Oaks Ranch (TR 44492)	East of Sierra Highway, north of Via Princessa; 9 miles east of the RMDP/SCP project.	634	0	37	Map Recorded
Centex Homes Bouquet Canyon (TR 46908)	South of the Angeles National Forest, north of Copperhill Drive, west of the Meadow Peak project; 6 miles northeast of the RMDP/SCP project.	594	0	381	Completed
Ion Communities, Castaic (Tract 46443)	West of I-5 in Castaic; 3 miles north of the RMDP/SCP project.	95	0	159	Pending
Johannes Van Tiburge (TR 43570)	West of I-5, east of Hasley Golf Course; 3 miles north of the RMDP/SCP project.	540	0	8	Map Recorded
Curtis Development Corporation (TR 47657)	North of Haskell Canyon Road and Copperhill Drive; 6 miles northeast of the RMDP/SCP project.	223	0	63	Map Recorded
G. H. Palmer and Associates (TR 45287)	On Sandy Drive and Jakes Way, between Sierra Highway and SR-14, south of the Santa Clara River; 10 miles east of the RMDP/SCP project.	463	0	23	Map Recorded
Davidon Homes (TR 35783)	North of Copperhill Drive and east of Seco Canyon Road; 5 miles east of the RMDP/SCP project.	419	0	149	Map Recorded
Green Valley Ranch Residential (TR 62000, 60257, and 062275)	Located south of Del Valle Road near Cromwell Avenue. The property is located approximately 0.5 mile west of the intersection of Hasley Canyon Road and Del Valle Road, and approximately 1.5 miles north of SR-126; 1 mile north of the RMDP/SCP project.	233	30,000	224 (25 open space)	Pending Approval
Newhall Land (TR 44429)	Along Ridge Route Road, east of I-5 in Castaic; 3 miles north of the RMDP/SCP project.	293	0	113	Map Recorded
Valencia Company (TR 48202)	Northeast corner of Decoro Drive and Copperhill Drive; 3 miles northeast of the RMDP/SCP project.	458	3.5 acres [152,460 sf]	9	Map Recorded
Valencia Company (TR 45084)	Corner of Commerce Center Drive and Hasley Canyon Road; 2 miles north of the RMDP/SCP project.	294	0	150	Completed
Valencia Company (TR 36668)	West of The Old Road, north of Commerce Center Drive; 2 miles north of the RMDP/SCP project.	359	one lot	134	Completed
Curtis Development Corporation (TR 45958)	West of I-5 in Castaic; 5 miles north of the RMDP/SCP project.	296	0	357	Map Recorded
Gerald Nordeman (TR 44373)	Along Hillcrest Parkway, west of I-5, north of Hasley Golf Course; 2 miles north of the RMDP/SCP project.	1,114	4 acres [174,240 sf]	376	Map Recorded

Table 4.3-14 (Continued)
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial/Industrial (sf)[1]	Acres[2]	Status
Vista Canyon Ranch	Along Lost Canyon Road and the Santa Clara River, east of the Fair Oaks Ranch community, south of the 14 Freeway and west of Sand Canyon Road, 7 miles east of the RMDP/SCP project.	1,600	1,500,000	217 (80 open space)	Pending
Davidon Homes (TR 46183)	West of Haskell Canyon Road, north of Copperhill Drive; 5 miles northeast of the RMDP/SCP project.	213	0	80	Completed
Forest Edge Project (Western Pacific Housing, TR 51789)	West of Haskell Canyon Road, north of Copperhill Drive; 5 miles northeast of the RMDP/SCP project.	194	0	79 (30 open space)	Map Recorded
Bouquet Canyon Land Fund 8, LLC (TR 52193)	Located west of Bouquet Canyon Road near the intersection of Bouquet and Vasquez Canyon Road; 6 miles northeast of the RMDP/SCP project.	179	20,000	260	Pending
Westshire (Pardee Homes, TR 063483)	Located immediately south of SR-14, southwest of Via Princessa and north of Lost Canyon Road; 7 miles east of the RMDP/SCP project.	190	0	13 (3 open space)	Pending
Overland National Land Fund (TR 52192)	Southwest of the intersection of Bouquet Canyon Road and Vasquez Canyon Road; 6 miles northeast of the RMDP/SCP project.	155	0	204	Pending
Condo III Development, Larwin Company, Val Verde (TR 51995)	West of I-5, south of Hillcrest Parkway; 3 miles north of the RMDP/SCP project.	114	0	15	Map Recorded
Forecast Homes (TR 46353)	Located in Mint Canyon just southeast of Sierra Highway and west of Sand Canyon Road, just north of the city of Santa Clarita boundary; 9 miles east of the RMDP/SCP project.	110	0	65	Map Recorded
Golden Valley Ranch (TR 52535)	West of I-5 in Castaic; 6 miles north of the RMDP/SCP project.	80	0	260	Pending
Decoro Drive Residential (TR 45440)	West of McBean, east of San Francisquito Creek; 3 miles northeast of the RMDP/SCP project.	182	0	99	Completed
Dierckman & Mayh (PM 19784)	West of Commerce Center Drive, north of SR-126; 0.25 mile north of the RMDP/SCP project.	115	0	288	Map Recorded
(TR 42537)	West of I-5 in Castaic; 4 miles north of the RMDP/SCP project.	95	0	553	Approved
Sierra Way Estates (TR 47573)	Located northeast of the intersection of Sierra Highway and Vasquez Canyon Road; 12 miles northeast of the RMDP/SCP project.	75	0	246 (179 open space)	Pending
(TR 47807)	West of Sloan Canyon Road and I-5 in Castaic; 3 miles north of the RMDP/SCP project.	77	0	197	Approved
SunCal Burnam Project (TR 53189)	Along San Francisquito Creek, west of McBean Parkway and north of Copperhill Drive; 5 miles northeast of the RMDP/SCP project.	60	0	186	Pending

Table 4.3-14 (Continued)
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial/Industrial (sf)[1]	Acres[2]	Status
Hasley Ranch Co. Greystone Homes Inc. (TR 45645)	Hasley Canyon Road and Romero Canyon Road, west of the Hasley Canyon Golf Course and I-5; 2 miles north of the RMDP/SCP project.	67	0	160	Approved
Arciero and Sons, Inc. (TR 53725)	West of Hasley Canyon Golf Course and I-5; 2 miles north of the RMDP/SCP project.	42	0	139	Pending
Del Valle Project (TR 060665)	South of Hasley Canyon Golf Course; 0.5 mile north of the RMDP/SCP project.	111	0	134	Pending
Tract 52475	North of Hasley Canyon Road, west of Del Valle Road, 3 miles north of the RMDP/SCP project.	46	0	70	Pending
Sterling Gateway (TR 60030)	Located east of Chiquita Canyon Road, just north of the RMDP/SCP project area; 0.5 mile north of the RMDP/SCP project.	21	1,300,000	108	Pending
Total Los Angeles County Residential/Mixed Use[3]		**35,459**	**5,755,315**	**20,565**	
Industrial/Commercial Projects					
Castaic Junction (PM 26574)	North of Henry Mayo Drive, west of The Old Road, north of the I-5 and SR-126 interchange; 0.25 mile northeast of the RMDP/SCP project.	0	1,879,500	114	Under Construction
Valencia Industrial Center	Map ID #4 - East of I-5, south of Newhall Ranch Road, north of Magic Mountain Parkway; 0.25 mile northeast of the RMDP/SCP project.	0	12,900,000	1,840	Approved
PM 18654	Northwest of The Old Road and Magic Mountain Parkway, near Six Flags Magic Mountain Amusement Park; 0.25 mile east of the RMDP/SCP project.	0	200,000	9	Approved
Curtis Sand and Gravel Mine and Aggregate Plant	Upper Santa Clara River, about 10 miles upstream from Newhall Ranch Specific Plan area.	0	n/a	185	Operating since 1955
Transit Mix (CEMEX) Soledad Canyon Mine	East of City of Santa Clarita boundary, at the entrance to Soledad Canyon; 16 miles east of the RMDP/SCP project.	0	n/a	300	Suspended pending federal legislation
Chiquita Canyon Landfill Expansion	Map ID #17 - West of I-5, north of SR-126 at Wolcott Way; 0.5 mile north of the RMDP/SCP project.	0	n/a	98	Pending
Industrial/Commercial Subtotal		**0**	**14,879,500**	**2,546**	
Institutional Projects					
Castaic High School	North of Lake Hughes Road, east of Ridge Route Road, 4 miles north of the RMDP/SCP project.	0	500,000	50	Pending
Total Los Angeles County Institutional		**0**	**500,000**	**50**	
Infrastructure Projects					
CLWA Reclaimed Water Master Plan (Santa Clara River)	Map ID #14 - Los Angeles County and city of Santa Clarita; 6 miles north of the RMDP/SCP project.	n/a	n/a	n/a	Pending

Table 4.3-14 (Continued)
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial/Industrial (sf)[1]	Acres[2]	Status
Bouquet Canyon Bridge Widening	Adding one lane in each direction on Bouquet Canyon Bridge at Santa Clara River; 2 miles east of the RMDP/SCP project.	n/a	n/a	n/a	Completed
Copperhill Drive Bridge	Upper San Francisquito Creek, 565-foot bridge, 6 lanes; 3 miles northeast of the RMDP/SCP project.	n/a	n/a	n/a	Completed
Commerce Center Drive Extension	Extension of Commerce Center Drive and Bridge over Castaic Creek; 0.25 mile east of the RMDP/SCP project.	n/a	n/a	n/a	Completed
Cross Valley Connector	Two-mile extension of Newhall Ranch Road to east of Bouquet Canyon Road, including approximately 120-foot wide bridge over Santa Clara River, connecting with Golden Valley Road; 3 miles east of the RMDP/SCP project.	n/a	n/a	n/a	Approved; estimated completion 2008
Santa Clarita Valley Joint Sewerage Facilities Plan	Map ID #16—Los Angeles County.	n/a	n/a	n/a	Approved
DPW Channel maintenance (South Fork)	70 acres of channel excavation, center of Santa Clara River, South Fork.	n/a	n/a	n/a	Provisional Corps permit in 1997
Natural River Management Plan (NRMP)	Map ID #13—Natural River Management Plan for 1,200 acres along the Santa Clara River.	n/a	n/a	n/a	Approved in 1998; half built-out
Santa Clara River Enhancement and Management Plan	Map ID #15—Santa Clara River from Acton to Pacific Ocean, in Los Angeles and Ventura Counties.	n/a	n/a	n/a	Approved
I-5 and SR-126	I-5/SR-126 interchange; 0.5 mile northeast of the RMDP/SCP project.	n/a	n/a	n/a	Completed
I-5/Hasley Canyon Road	Within Valencia Commerce Center, I-5 at the I-5/Hasley Canyon Road interchange; within the RMDP/SCP project area.	n/a	n/a	n/a	Under Construction since 10/07
I-5/Magic Mountain Parkway Interchange Project	Modify the I-5/Magic Mountain Parkway interchange, reconstruct the Santa Clara River Bridge, realign The Old Road, and realign and widen Magic Mountain Parkway from six to eight lanes; 0.5 mile northeast of the RMDP/SCP project.	n/a	n/a	n/a	Construction scheduled to be complete Spring 2009
Valencia Water Reclamation Plant	Immediately downstream of the I-5 bridge, discharges to the Santa Clara River; 0.5 mile east of the RMDP/SCP project.	n/a	n/a	n/a	Completed
I-5 Santa Clara River Bridge Replacement	Santa Clara River and I-5; 0.5 mile east of the RMDP/SCP project.	n/a	n/a	n/a	Completed
Castaic Junction Project	I-5/SR-126 interchange improvement project; 0.25 mile east of the RMDP/SCP project.	n/a	n/a	n/a	Under Construction

Table 4.3-14 (Continued)
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial/Industrial (sf)[1]	Acres[2]	Status
DPW Del Valle Sediment Placement Site	Near intersection of SR-126 and Chiquito Canyon Road; 0.5 mile north of the RMDP/SCP project	n/a	n/a	n/a	Pending
Soledad Canyon Road Trail (Santa Clara River)	South side of Santa Clara River from Metro Link Station to west side of Bouquet Canyon Bridge, continuing along the west side of Valencia Boulevard across South Fork at the Valencia Bridge; 3 miles east of the RMDP/SCP project.	n/a	n/a	n/a	Pending
Infrastructure Subtotal		**n/a**	**n/a**	**n/a**	
Total		**35,459**	**21,134,815**	**23,161**	(includes at least 3,627 acres of open space)

Note: The Las Lomas Project (PM 060792) application was denied, and thus, it was not included in this list because it is currently not reasonably foreseeable.
[1] In some instances, commercial/industrial square footage was not available but an acreage for such uses was provided. That acreage was converted to square footage [shown in brackets] to provide an estimated basis for aggregating square footage totals.
[2] Open space acreage information was not available for all projects, but is provided where available.
[3] Ritter Ranch and Centennial are not included in the totals because they are located in a different watershed.
Source:
Los Angeles County.

(c) City of Fillmore (Ventura County) Consolidated Projects

Table 4.3-15 contains the City of Fillmore consolidated project list. Projects more than 5 miles away from the Newhall Ranch Specific Plan area and/or smaller-scale projects (less than 700 acres) are listed in a consolidated manner, and are grouped by local jurisdiction.

Table 4.3-15
City of Fillmore Consolidated Projects

Name	Location	Units	Commercial/ Industrial (sf)[1]	Acres[2]	Status
Residential/Mixed Use Projects					
Heritage Valley Parks Specific Plan	Located within and adjacent to the southeastern boundary of the city of Fillmore; 10 miles east of the RMDP/SCP project.	750	0	301 (52 open space)	Under Construction
North Fillmore Specific Plan	North of B Street and 7th Street; 11 miles east of the RMDP/SCP project.	350	15,000	101 (2 open space)	Pending
Residential Subtotal		**1,100**	**15,000**	**402**	
Commercial/Industrial Projects					
South West Business Park Master Plan Commercial	South West corner of the city of Fillmore; 10 miles west of the RMDP/SCP project.	0	90 acres [3,920,400 sf]	90	Under Construction
Commercial/Industrial Subtotal		**0**	**3,920,400**	**90**	
Infrastructure Projects					
Fillmore Water Recycling Plant	SR-126 and "E" Street, city of Fillmore; 10 miles west of the RMDP/SCP project.	n/a	n/a	n/a	Under Construction
Total		**1,100**	**3,935,400**	**492**	(includes at least 54 acres of open space)

[1] In some instances, commercial/industrial square footage was not available but an acreage for such uses was provided. That acreage was converted to square footage [shown in brackets] to provide an estimated basis for aggregating square footage totals.
[2] Open space acreage information was not available for all projects, but is provided where available.
Source:
City of Fillmore.

(d) City of Santa Paula (Ventura County) Consolidated Projects

Table 4.3-16 contains the City of Santa Paula consolidated project list. Projects more than 5 miles away from the Newhall Ranch Specific Plan area and/or smaller-scale projects (less than 700 acres) are listed in a consolidated manner, and are grouped by local jurisdiction.

Table 4.3-16
City of Santa Paula Consolidated Projects

Name	Location	Units	Commercial (sf)	Acres	Status
Residential Projects					
Adams Canyon	Map ID #3—West of SR-150; 22 miles west of the RMDP/SCP project.	450	unknown	6,578	Pending (See **Table 4.3-21**)
East Area 1 Specific Plan	The property is bounded by hillside agricultural land to the north, Haun Creek to the east, Main Street and Southern Pacific Railroad to the south, and Santa Paula Creek to the west; 20 miles west of the RMDP/SCP project.	900	810,800	541	Annexation Pending
Residential Subtotal		**1,350**	**810,800**	**7,119**	
Total		**1,350**	**810,800**	**7,119**	

Source:
City of Santa Paula.

(e) Unincorporated Ventura County Consolidated Projects

Table 4.3-17 contains the unincorporated Ventura County consolidated project list. Projects more than 5 miles away from the Newhall Ranch Specific Plan area and/or smaller-scale projects (less than 700 acres) are listed in a consolidated manner, and are grouped by local jurisdiction.

Table 4.3-17
Ventura County Consolidated Projects

Name	Location	Units	Commercial/ Industrial (sf)	Status
Residential/Mixed Use Projects				
Permit No. LU08-0062	Located within the Piru area of Ventura County; approximately 7 miles west of the RMDP/SCP project.	66	0	Pending
Residential Subtotal		**66**	**0**	
Commercial/Industrial Projects				
Permit No. LU08-0047	Located in the Piru area of Ventura County; approximately 7 miles west of the RMDP/SCP project.	0	19,300	Pending
Commercial/Industrial Subtotal		**0**	**19,300**	
Recreational Projects				
Permit No. LU07-0088	Located in the Piru area of Ventura County; approximately 8 miles northwest of the RMDP/SCP project.	0	**(1)**	Approved
Total		**66**	**19,300**	

(1) This project consists of minor improvements to existing buildings, structures and utilities at Lake Piru
Source:
Ventura County

(f) Consolidated Projects Overview

Table 4.3-18 contains a summary of the consolidated project information contained in **Tables 4.3-13** to **4.3-16**, above.

Table 4.3-18
Summary of Total City/County/Caltrans Consolidated Projects

Agency	Units	Comm./Ind (sf)[1]	Total Acres/Open Space Acres[2]
Santa Clarita	13,003	18,134,857	7,609/1,883
Los Angeles County	35,459	21,134,815	23,161/3,627
Fillmore	1,100	3,935,400	492/54
Santa Paula	1,350	810,800	7,119
Ventura County	66	19,300	unknown
Total	**50,978**	**44,035,172**	**59,929/5,564**

Notes:
*[1] Includes some instances where commercial/industrial acreages were converted to square footage [shown in brackets in **Tables 4.3-13** to **4.3-15**] to provide an estimated basis for aggregating square footage totals.*
*[2] Open space acreage information was not available for all projects; therefore, the "Open Space Acres" number represents the minimum open space that is planned for the projects in **Tables 4.3-13** to **4.3-15**.*
Source:
Tables 4.3-13** to **4.3-17.

(g) Corps (Section 404 Permit) Projects

Between 1988 and 2006, the Corps issued an average of approximately 12.6 section 404 permits per year within the Santa Clara River watershed. (See **Figure 4.3-13, Consolidated Corps Projects (1988 and 2006)**, and **Figure 4.3-**

14, Consolidated Corps Permits, Acreage of Impacts and Mitigation (1988 to 2006), below.) The greatest number of permits was issued in 1998 and 2005, respectively, which were both El Nino years. As a result, the amount of jurisdictional area affected, in terms of acreage, was greatest in these 2 years. This is likely due to the fact that dramatic flood events necessitate the need for repairs and maintenance of existing facilities, and may also underscore the general need to construct additional flood and erosion facilities for protection against future disasters.

Of the 228 projects permitted by the Corps under section 404 permits in the Santa Clara River watershed between 1988 and 2006, more were associated with emergency repairs and maintenance than any other type of activity. Combined, the permits issued for emergency repairs and maintenance of existing facilities accounted for a 25 percent of the total permits issued (16 percent were emergency repairs, 9 percent maintenance). Flood protection activities, including bank protection, riprap, rock groin, and culver/levee improvements, accounted for 25 percent of the total permits issued. Another 17 percent of the permits issued were associated with residential development. Unknown activities (largely from older permits with minimal available data) comprised 15 percent of the permits. The remaining 18 percent include bridges, channel alterations, sediment removal, storm drains, and other projects. (See **Figure 4.3-15, Corps Permitted Activities by Types (1998-2006).**)

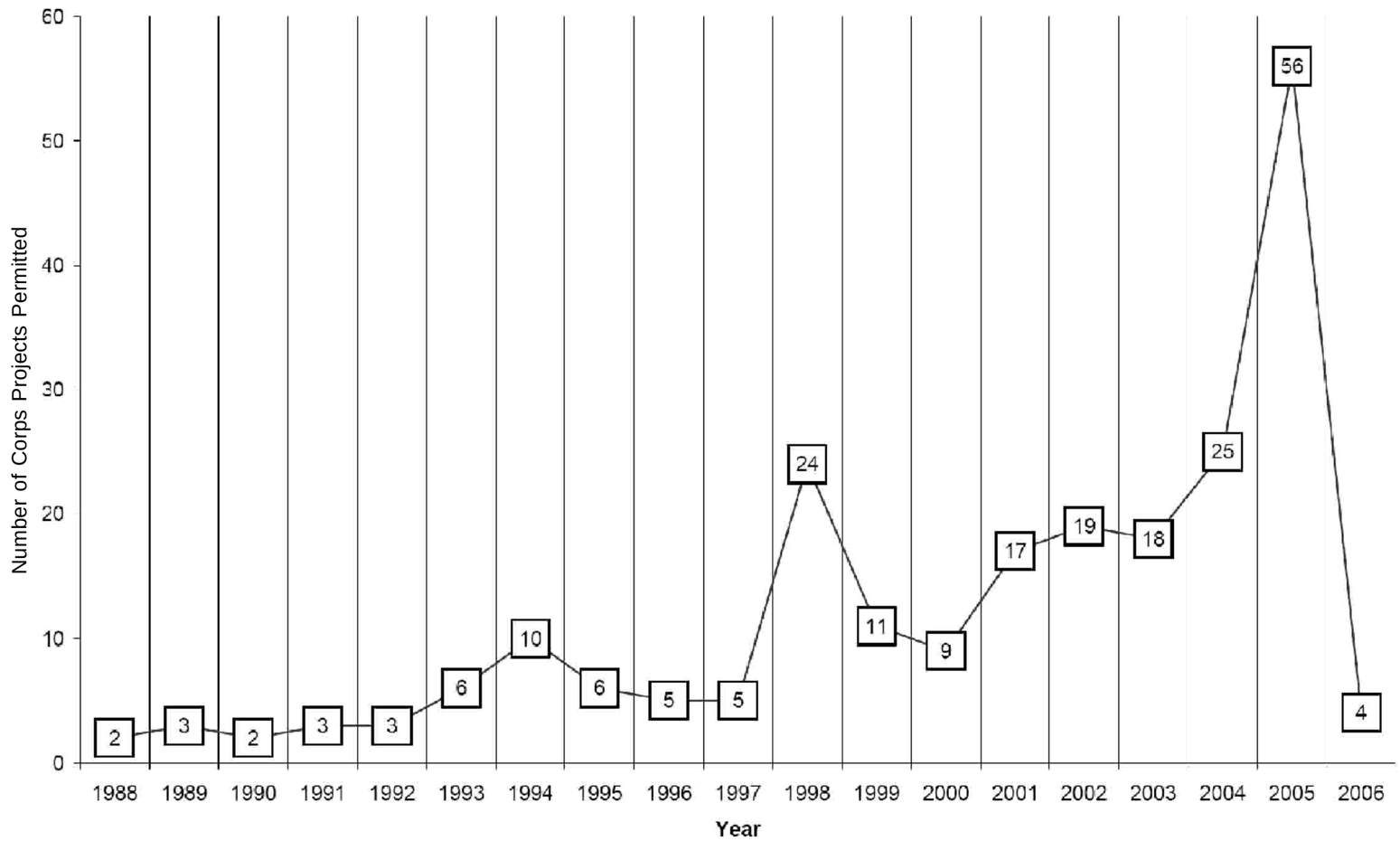
(h) Federal Biological Opinions

Table 4.3-19 summarizes federal biological opinions issued in the Santa Clara River watershed between 1993 and 2006 as they relate to the species that are the most likely to be reviewed by the USFWS and CDFG as part of the species-related determinations and/or authorizations that are being sought as part of the Newhall Ranch Specific Plan process. A total of 25 USFWS biological opinions were reviewed. One of those opinions is not incorporated below because it did not affect any species of primary concern. Three opinions have been combined into one entry below because they concern the same request.

(i) CDFG Streambed Projects

Between 1983 and 2006, CDFG issued an average of 21 streambed alteration agreements per year in the Santa Clara River watershed. (See **Figure 4.3-16, Consolidated CDFG Streambed Projects (1983-2006),** and **Figure 4.3-17, Consolidated CDFG Streambed Permits, Acreages of Impacts and Mitigation (1983-2006).**) In general, the acreages of jurisdictional streambeds affected by projects authorized under the Fish and Game Code section 1600 program, in a given year, were related to the number of projects authorized that year. The years following the 1998 and 2005 El Niño events showed peaks in the number of authorizations granted, and a corresponding trend with respect to acreages of jurisdictional areas impacted. This is likely due to the fact that dramatic flood events necessitate the need for repairs and maintenance of existing facilities, and may also underscore the need to construct additional flood and erosion facilities for protection against future disasters.

Of the 503 projects permitted under the section 1600 program in the Santa Clara River watershed between 1983 and 2006, 32 percent of the project activities were associated with bridges and maintenance activities. The combined number of streambed alteration agreements issued for the installation of riprap, bank protection, and miscellaneous flood/erosion control facilities accounted for 19 percent of the total authorizations issued. Sediment removal and fill activities accounted for 12 percent of the authorized activities, while channel alterations account for 11 percent of the total authorized activities. Unknown activities (largely from older permits with minimal available data) comprised 3 percent of the permits. (See **Figure 4.3-18, Consolidated CDFG Streambed Permits by Type (1983-2006)**.) The remaining 23 percent include culverts, storm drains, vegetation removal, and other projects.



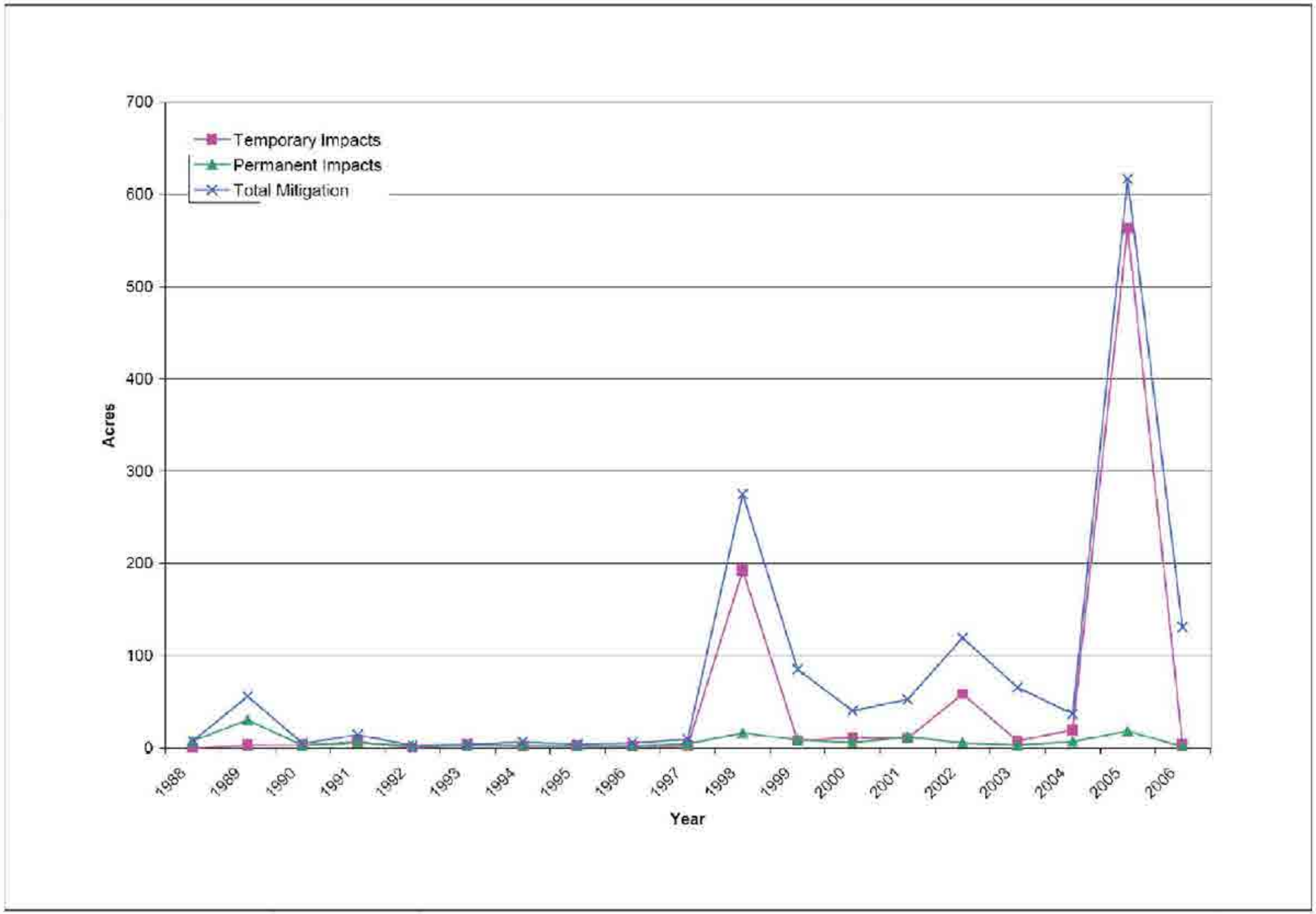
SOURCE: Corps 2008; Impact Sciences Inc. 2009

FIGURE 4.3-13

Mission Village EIR

DUDEK

Consolidated Corps Projects (1988 and 2006)



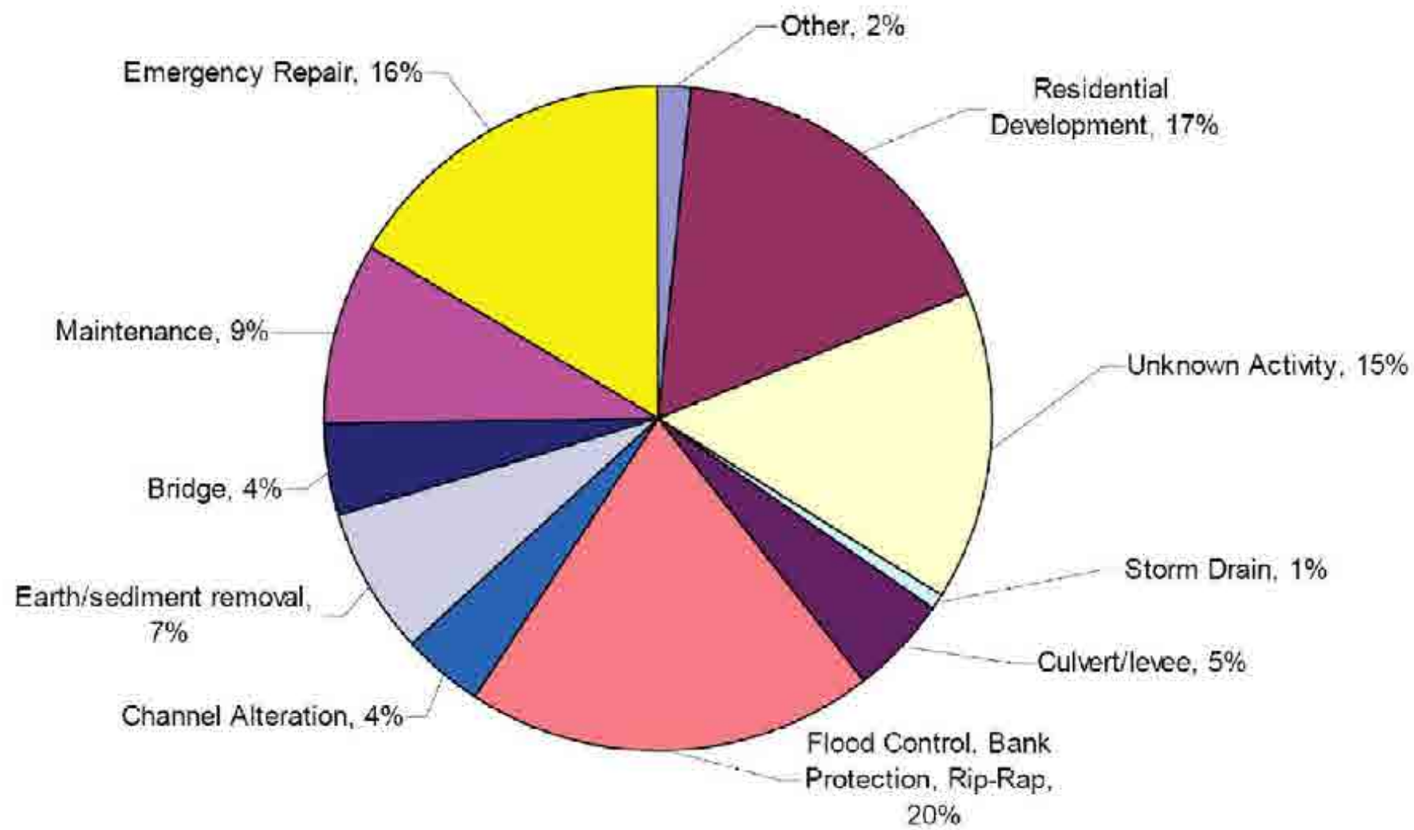
SOURCE: Corps 2008; Impact Sciences Inc. 2009

FIGURE 4.3-14

Mission Village EIR

DUDEK

Consolidated Corps Permits, Acreage of Impacts and Mitigation (1988 to 2006)



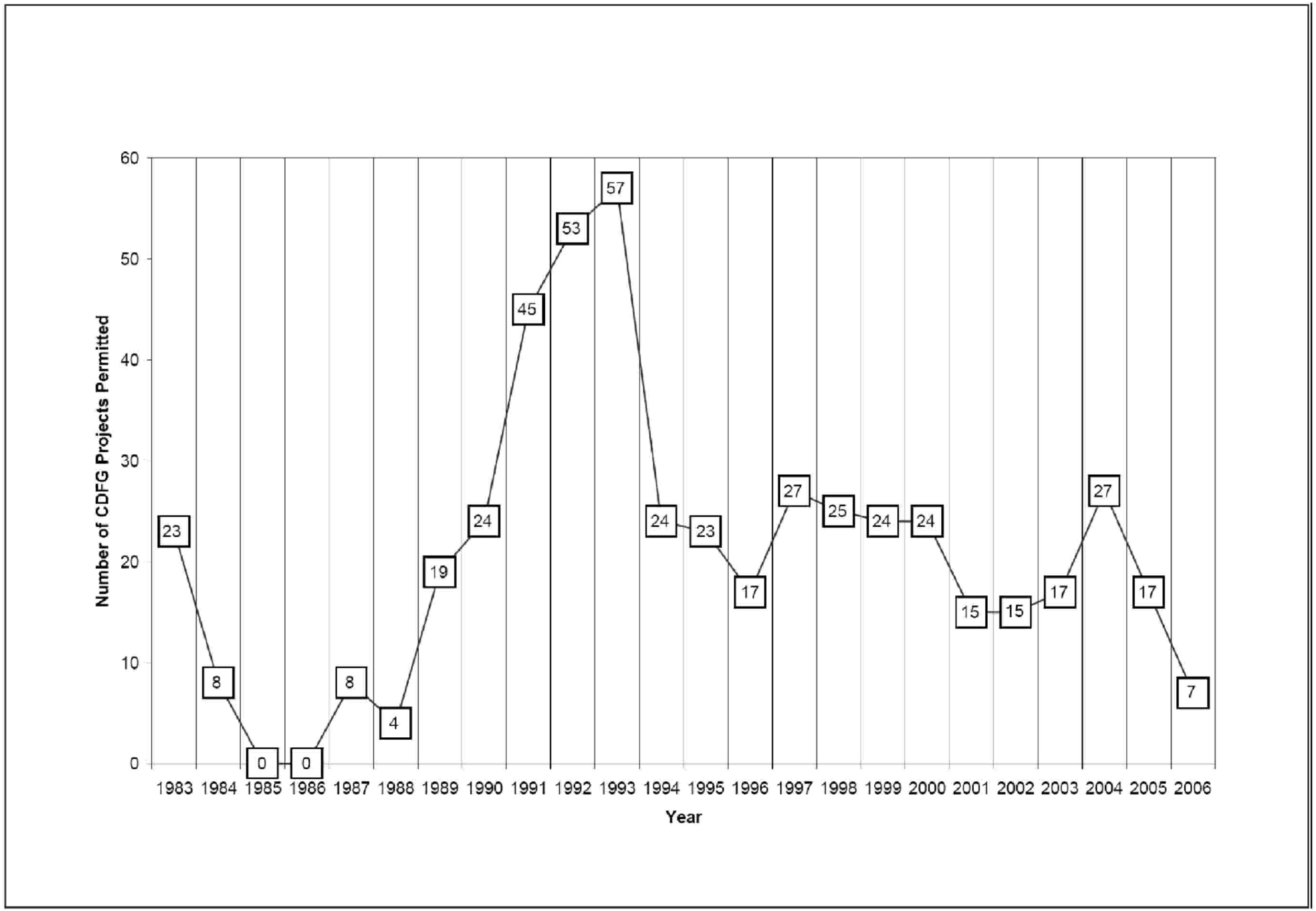
SOURCE: Corps 2008; Impact Sciences Inc. 2009

FIGURE 4.3-15

Mission Village EIR

DUDEK

Corps Permitted Activities by Types (1998-2006)



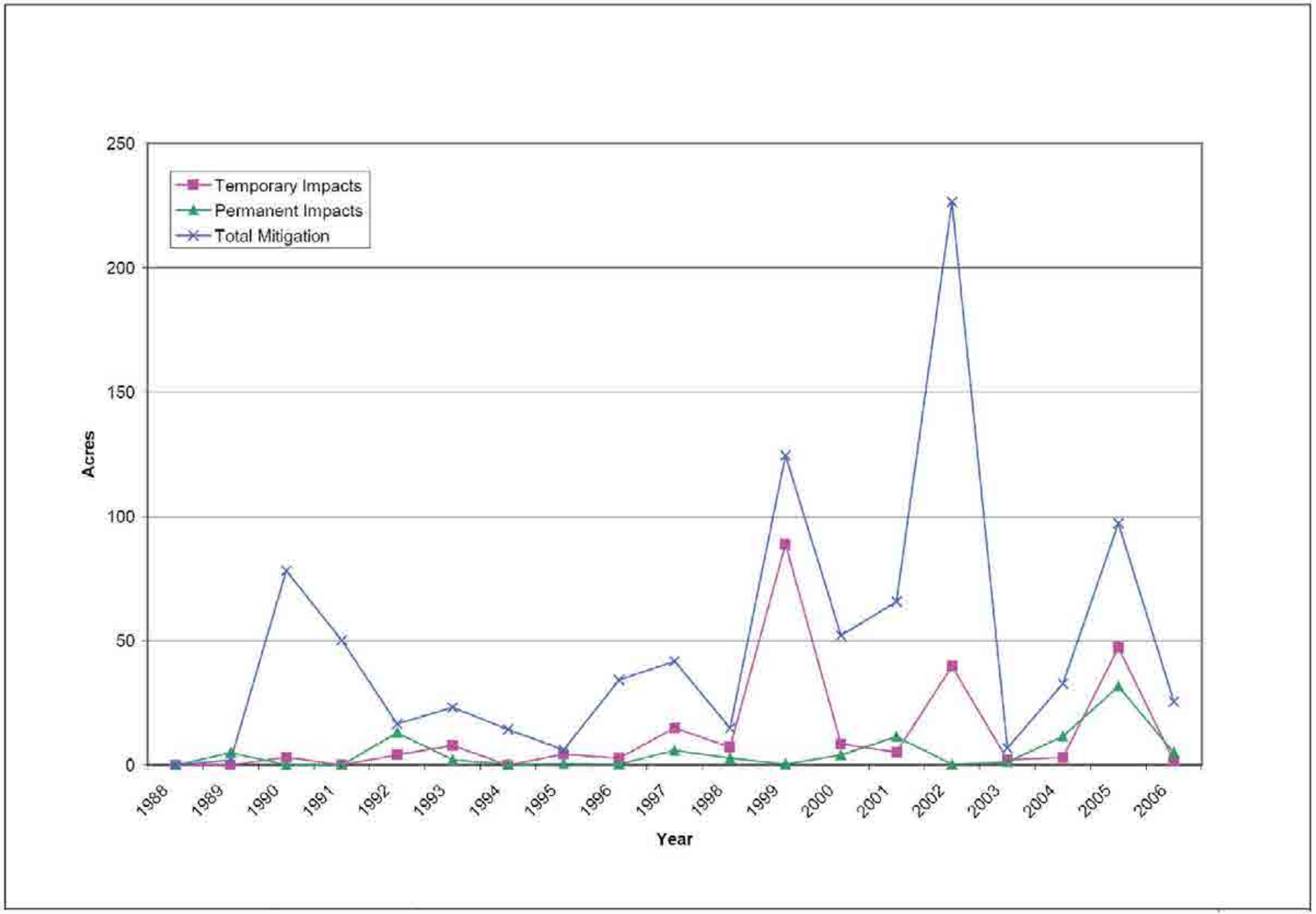
SOURCE: Impact Sciences Inc. 2009

FIGURE 4.3-16

Mission Village EIR

DUDEK

Consolidated CDFG Streambed Projects (1983-2006)



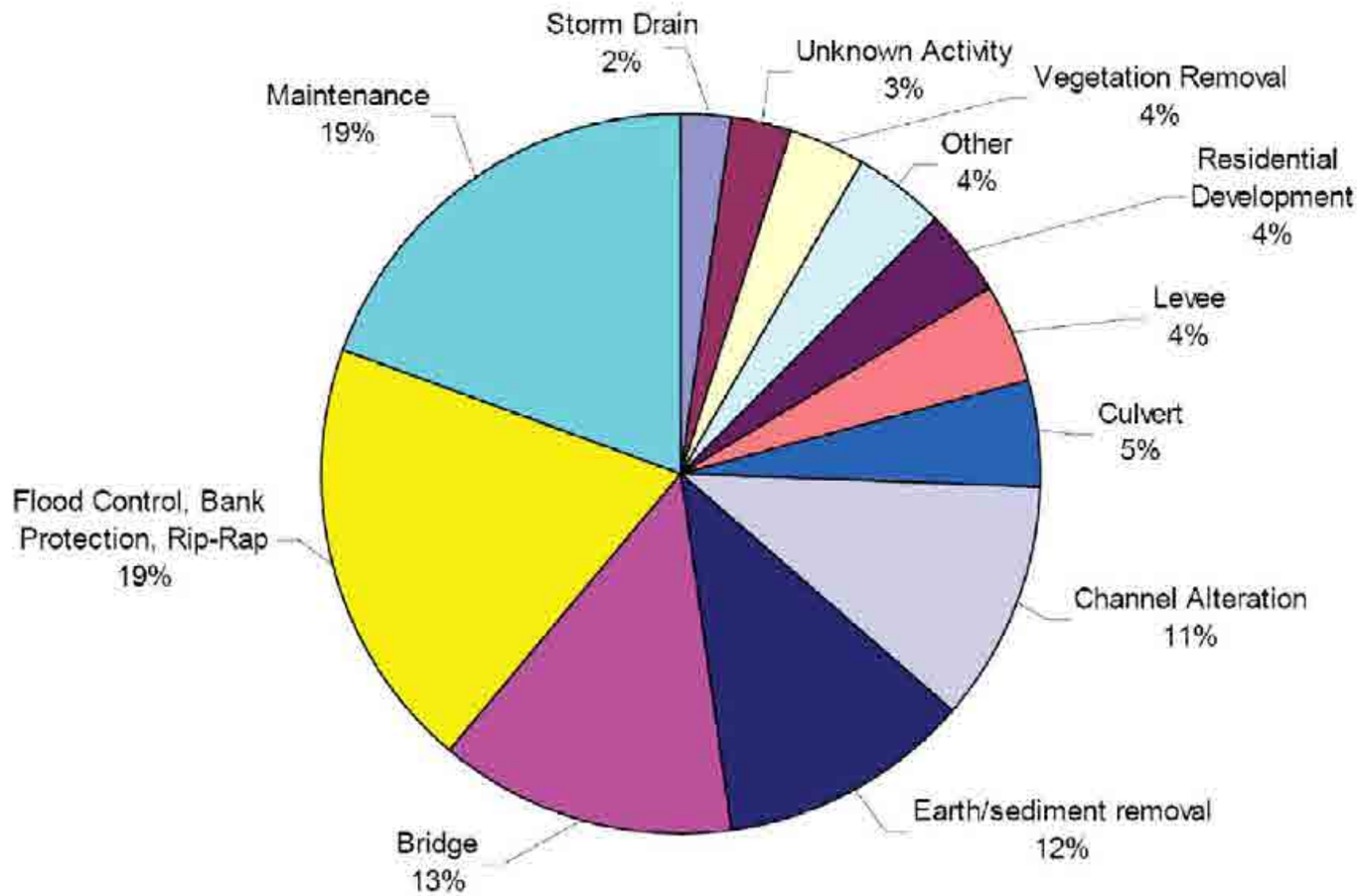
SOURCE: Impact Sciences Inc. 2009

FIGURE 4.3-17

Mission Village EIR

DUDEK

Consolidated CDFG Streambed Permits, Acreages of Impact and Mitigation (1988-2006)



SOURCE: Impact Sciences Inc. 2009

FIGURE 4.3-18

Mission Village EIR

DUDEK

Consolidated CDFG Streambed Permits by Type (1983-2006)

Table 4.3-19
Federal Biological Opinion Summary, Santa Clara Watershed (19932006)

Project	Species Covered	Acres Permanently (P) or Temporarily (T) Disturbed	Location	Description	Conclusion
Temporary Diversion Berm on the Santa Clara River on the Newhall Ranch Op. 1065.1163.1544 October 26, 1993	UTS[1038]	0 P 0.09 T (est.)	Along the Santa Clara River on the Newhall Ranch.	Construction of a 2' x 10' x 400' berm to divert water away from an exempt levee which is to be rebuilt.	Project is not likely to jeopardize the continued existence of the UTS; no adverse modification of critical habitat.
Southern Pacific Milling Company Sand and Gravel Mine Op.1025.1129.1492 February 7, 1994	LBV[1039]	19 P T-unknown	Within and adjacent to the Santa Clara River from the western edge of the city of Santa Paula downstream to the confluence with the Lindsay Barranca in Ventura County.	The applicant proposes to install a sand and gravel mine.	Project is not likely to jeopardize the continued existence of the LBV; no adverse modification of critical habitat.
Installation of a Southern California Gas Company Pipeline Op. 1380.1517.2051 August 28, 1995	UTS	0 P .23 (est.) T	Santa Clara River at Castaic Creek.	Installation of an 8 mile gas line that crosses the Santa Clara River and Castaic Creek.	Project is not likely to jeopardize the continued existence of the UTS; no adverse modification of critical habitat.
Installation of Irrigation Pipelines on the Santa Clara River in Newhall Ranch Op. 1392.1533.2075 October 23, 1995	UTS	0.005 P 1.45 T	Santa Clara River at Summer Crossing.	Installation of 18" x 12" PVC irrigating pipe and removal of fill that comprises Summer Crossing; purpose is to irrigate nearby Citrus Orchards.	Project is not likely to jeopardize the continued existence of the UTS; no adverse modification of critical habitat.
Construction of Erosion Control Facilities for the Valencia Water	UTS & LBV	1.4 P T-unknown	Santa Clara River near the Valencia Water Reclamation Plant.	Construction of a 50' x 12' x 630' keystone retaining wall.	Project is not likely to jeopardize the continued existence of either species; no adverse modification of critical habitat.

1038 UTS = Unarmored three-spine stickleback

1039 LBV = Least Bell's vireo

Table 4.3-19 (Continued)
Federal Biological Opinion Summary, Santa Clara Watershed (19932006)

Project	Species Covered	Acres Permanently (P) or Temporarily (T) Disturbed	Location	Description	Conclusion
Reclamation Plant Op. 1406.1547.2098 February 29, 1996					
Repair of I-5 Bridge Over Santa Clara River Op. 1443.1591.2158 September 6, 1996	UTS ~LBV & ~SWF[1040]	1.4 P T-unknown	The Intersection of I-5 and the Santa Clara River.	The repair of two pier footings of the I-5 bridge crossing the Santa Clara River.	Project is not likely to jeopardize the continued existence of the UTS; no adverse modification of critical habitat.
Widening of SR-126 Op. 1472.1623.2199 April 20, 1997	LBV	0.5 P T-unknown	SR-126 just east of Rancho Camulos, from city of Piru to Los Angeles County line.	Grubbing, vegetation removal, and installation of retaining walls for ROW expansion.	Project is not likely to jeopardize the continued existence of the LBV; no adverse modification of critical habitat.
Sewer Line and Force Main Op. 2390.3666.4402 September 28, 1998	UTS ~LBV	0.7 P T-unknown	Near the intersection of the Santa Clara River and Old Road Bridge in the city of Santa Clarita.	Replacement of two underground sewer lines that cross the Santa Clara River.	Not likely to jeopardize the continued existence of the species or adversely affect critical habitat.
Newhall Land and Farming's Summer Crossings and Water Diversions Op. 911.1015.1329, 911.1015.1330, & 911.1351.1804 September 25, 1998 Note: Duplicate Letters	UTS	0 P 14 T	Santa Clara River from the Castaic Creek confluence to the Rancho Camulos vicinity.	Installation of six temporary vehicle crossings and four water diversions along the Santa Clara River from native materials.	The action as is not likely to jeopardize the continued existence of the UTS or modify critical habitat.
Natural River Management Plan Op. 116.122.166 Nov. 27, 1998	UTS, LBV & SWF	96 P 71 T	Along the Santa Clara River and its tributaries in Valencia and Santa Clarita and adjacent unincorporated areas of Los Angeles County at the inlet of the San Francisquito Creek and	81,150 lf of bank protection along the River and San Francisquito Creek; a 1,700 foot long inlet structure at the confluence with the South Fork; approximately 85 storm drain outlets; eight new bridges; a replacement for an existing bridge; and	Activities are not likely to jeopardize the continued existence of these species or result in destruction or adverse modification of critical habitat.

1040 SWF = Southwestern willow flycatcher

Table 4.3-19 (Continued)
Federal Biological Opinion Summary, Santa Clara Watershed (19932006)

Project	Species Covered	Acres Permanently (P) or Temporarily (T) Disturbed	Location	Description	Conclusion
			confluence with the South Fork of the Santa Clara River.	upgrades to six existing bridges.	
Replacement of the I-5 Bridge over the Santa Clara River, Los Angeles County Op. 148.155.1274 December 26, 2000	UTS & LBV	1.18 P 0.42	Where I-5 crosses the Santa Clara River.	Caltrans (with FHWA funding), proposes to replace the existing bridges where I-5 crosses the Santa Clara River, with a single structure, consisting of 10 traffic lanes. Construction activities would include major and minor grading, installing pier supports, and the demolition and removal of the existing bridges.	Not likely to jeopardize the existence of these three species and is not likely to destroy or adversely modify the critical habitat of the LBV or the proposed critical habitat of the UTS.
Replacement of the Highway 101 Bridge over the Santa Clara River, Ventura County, California Op. 852.921.1190 May 3, 2001	LBV & SWF	1.18 P 0.42 T	Highway 101 and the Santa Clara River; activities are expected to occur only on and under the bridge, and within 100 feet up- and downstream of the bridge.	Caltrans, (with FHWA funding) proposes to replace existing Highway 101 bridges over the Santa Clara River with a single concrete bridge with 12 lanes, a bike path, 12 piers and two abutments.	The action as is not likely to jeopardize the continued existence of these species; no critical habitat present.
Amendment to the Biological Opinion for the Santa Clara River Bridge Replacement Project Op. 852.921.1195 April 3, 2002	LBV & SWF	1.18 P 0.42 T	Interstate 101 and the Santa Clara River (although the opinion inadvertently references I-5).	Caltrans was unable to comply with term and condition 7 of the May 3, 2001 opinion requiring removal of riparian vegetation within 100 yards of the bridge before March 15 of each construction year.	Qualified ornithologists conducted surveys for breeding birds in the project area and concluded that no LBV or SWF had been detected. Therefore, the biological opinion can be amended without resulting in additional take of the species.
Hardluck Campground Low Water Crossing Replacement Op. 2409.3697.4463 September 10, 2002	AT[1041]	0.25 P T - unknown	Piru Creek near Hardluck Campground in Los Padres National Forest.	Replacement of a concrete low water crossing.	Not likely to jeopardize the continued existence of the AT or adversely affect critical habitat.

1041 AT = Arroyo Toad

Table 4.3-19 (Continued)
Federal Biological Opinion Summary, Santa Clara Watershed (19932006)

Project	Species Covered	Acres Permanently (P) or Temporarily (T) Disturbed	Location	Description	Conclusion
Natural River Management Plan (NRMP) (Supplement to previous application dated November 27, 1998) Op. 116.154.212 Nov. 15, 2002	AT	66 P 71 T (smaller acreage for permanent reflects that a portion of the project had already been completed)	Same as previous.	Same as previous.	The NRMP, as proposed, is not likely to jeopardize the continued existence of the AT.
Castaic Creek Bank Protection, Valencia Commerce Center, Los Angeles County, California Op. 189.203.342 December 17, 2002	UTS & AT ~LBV	135 P 8.3 T	Castaic and Hasley creeks adjacent to the Santa Clara River.	Installation of approximately 19,400 feet of bank protection along Castaic and Hasley creeks over a period of 4 years.	The project, as proposed, is not likely to jeopardize the continued existence of either of these species.
Re-initiation of the replacement of the I-5 Bridge over the Santa Clara River, Los Angeles County Op. 148.156.215 August 1, 2003	UTS, LBV, SWF, & AT	1.28 P 0.42 T	Where I-5 crosses the Santa Clara River.	Same as above, but permanently impacted area will be expanded by 0.1 acres.	Action is not likely to jeopardize the continued existence of the species.
Santa Clara River Reaches 71 & 82 Op. 884.976.1397 October 24, 2004	UTS & AT	5.81 P T-unknown	Reaches 71 & 82 of the Santa Clara River.	Clearing of soft-bottom channels using both heavy mechanical equipment and hand clearing.	The action is not likely to jeopardize the continued existence of these species.
Townhomes at the River Development and Construction of a Flood Control Levee Op. 1726.2067.3266 March 31, 2005	LBV	11.4 P T-unknown	City of Fillmore.	66 residential units on an 11.4 acre site and 26' x 730' x 10' x 90' levee installation.	Not likely to jeopardize the continued existence of the LBV; critical habitat will not be adversely affected.
I-5 Hasley Canyon Interchange	UTS & AT	0.01 P 0.42 T (est)	I-5 at Castaic Creek and Hasley Canyon.	Replacement of existing over-crossings, ramps, and supports.	Not likely to jeopardize the continued existence of either

Table 4.3-19 (Continued)
Federal Biological Opinion Summary, Santa Clara Watershed (19932006)

Project	Species Covered	Acres Permanently (P) or Temporarily (T) Disturbed	Location	Description	Conclusion
Improvement Op. 2141.3126.3703 May 31, 2005					species; critical habitat will be adversely affected.
Amendment to Biological Opinion for Santa Clara Bridge Replacement Op. 852.921.4942 February 16, 2006	LBV & SWF	1.18 P 0.42 T	Interstate 101 and the Santa Clara River.	Proposed revision of project description to include underground drainage and outlet.	The revised project is not likely to adversely affect these species.
Santa Paula Water Recycling Facility Op. 2260.3483.5550 September 5, 2006	LBV	0 P 9.4 T	Approximately 58 acres immediately south of SR-126 and west of Peck Road in Santa Paula.	Construction of a new water recycling facility including new percolation ponds that would discharge into the Santa Clara River.	Not likely to jeopardize the continued existence of the LBV; critical habitat will not be adversely affected.

Notes:
UTS - Unarmored Threespine Stickleback
SWF - Southwestern Willow Flycatcher
LBV - Least Bell's Vireo
AT - Arroyo toad
~ - species mentioned but not discussed
Source:
USFWS.

(j) CDFG Take Authorizations

Prior to 1997, CDFG issued Memoranda of Understanding and a few permits for authorization of incidental take of species listed under the California ESA. Between 1988 and 1997, CDFG considered 273 incidental take authorizations statewide, of which 174 were ultimately signed. Of those 174 authorizations, three were for western yellow-billed cuckoo, 11 for least Bell's vireo, and one for unarmored threespine stickleback. In the bioregion that includes the proposed project (the South Coast bioregion), approximately 20 take authorizations were issued during that time period, which authorized a total of roughly 1,000 acres of habitat impacts (including coastal sage scrub, alluvial fan sage scrub, non-native grassland, riparian, and wetland habitat types) and required 2,000 acres of mitigation.[1042]

More recently, CDFG has issued 48 take authorizations in the general regional vicinity of the project (i.e., generally within Los Angeles, Ventura, and Santa Barbara Counties, but also including some authorizations in San Diego County). Most of those authorizations were for projects that are a significant distance from the Newhall Ranch Specific Plan area, including the proposed Mission Village project (e.g., greater than 25-30 miles), and/or for species that are not of primary concern for the proposed project. The four most relevant authorizations are summarized in **Table 4.3-20**, below. Relevancy was determined by proximity to the proposed project and shared species impacts.

Table 4.3-20
Recent CDFG Take Authorizations in Project Vicinity

Project Number	Project Name	Project Location	Project Impact Description	Relevant Species
2080-2001-029-05	I-5/Santa Clara River Bridge Replacement	City of Santa Clarita.	Unknown.	LBV, SWF, UTS*
2081-2002-008-05	SR 101 Santa Clara River Bridge Replacement	Santa Clara River Bridge where it is crossed by SR 101, between Post miles 22 and 24 in Ventura County.	The permanent destruction of 1.0 acres of habitat and temporary impacts to 0.9 acres of habitat during 4 breeding seasons.	LBV, SWF
2080-2003-018-05	I-5 Santa Clara River Bridge Replacement Additional Work Area	City of Santa Clarita.	Permanent acres-1.28; temporary acres-3.30.	LBV, SWF, UTS*
2081-1998-49-5	NRMP	Santa Clara River in Los Angeles County by City of Santa Clarita.	74 acres.	LBV, SWF, UTS*

*UTS - Unarmored Threespine Stickleback. *Discussed, but no take authorized.*
SWF - Southwestern Willow Flycatcher.
LBV - Least Bell's Vireo.
Source:
CDFG 2007.

1042 The California Department of Fish and Game and U.S. Army Corps of Engineers, "Final Environmental Impact Report/Environmental Impact Statement: 404 Permit and 1603 Streambed Alteration Agreement for Portions of the Santa Clara River and its Tributaries, Los Angeles County (SCH No. 1997061090)" (August 1998) is incorporated by reference, as permitted in section 15150 of the *State CEQA Guidelines*. All referenced documents are available for public inspection and review upon request to: County of Los Angeles, Department of Regional Planning, 320 West Temple Street Los Angeles, California 90012 (Samuel Dea; (213) 974-6461) or Impact Sciences, Inc., 803 Camarillo Springs Road, Suite A-1, Camarillo, California 93012 (Susan Tebo; (805) 437-1900).

In addition, several NCCPs have recently been proposed and/or approved in the Southern California area. These NCCPs (or combination HCP/NCCPs) would provide comprehensive take authorizations for larger planning areas in parts of Kern, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties. However, none of these proposed or approved planning/take authorization documents were deemed to be relevant for analysis in this EIR because of their distance from the proposed project (e.g., greater than 25-30 miles) and/or their lack of similarity of species of primary concern.

(2) Individual Projects

Major residential/mixed use, commercial, and industrial projects of 700 or more acres within 5 miles of the project area, as well as larger-scale infrastructure projects involving the Santa Clara River, are listed below. A summary of these projects' size, location, and current status appears in the following table (**Table 4.3-21**). These projects are identified by the same numbers used in **Figure 4.3-12**, **Cumulative Individual Project Location Map**.

Table 4.3-21
Individual Project Summary

Map ID	Name	Jurisdiction	Project Type	Location and Distance from Proposed Project	Residential Units/ Comm./Ind. Square Feet	Size (Acres)	Status
1	Ritter Ranch	City of Palmdale (Los Angeles County)	Residential/Mixed Use	South of Bouquet Canyon Road and Elizabeth Lake Road, west of Antelope Valley Freeway, and north of Sierra Highway; 40 miles east of the proposed project.	7,200	10,258	Partially Built Out
2	Centennial	Northern Los Angeles County	Residential/Mixed Use	Located on the Tejon Ranch, just south of the Kern County/Los Angeles County border, located next to SR-138, just east of I-5; 40 miles north of the proposed project.	23,000	11,700	Pending
3	Adams Canyon	City of Santa Paula	Residential/Mixed Use	West of SR-150; 22 miles west of the proposed project.	450	6,578	Pending
4	Valencia Industrial Center	Los Angeles County	Industrial Park and Commercial Retail	East of I-5, south of Newhall Ranch Road, and north of Magic Mountain Parkway; 0.25 mile northeast of the proposed project.	12,900,000	1,840	Completed
5	Legacy Village (Stevenson Ranch V)	Los Angeles County	Residential/Mixed Use	Adjacent to/southeast of the Newhall Ranch Specific Plan area..	3,425/ 840,200	1,759	Pre-Application
6	Tesoro del Valle (TR 51644)	Los Angeles County	Residential/Mixed Use	West side of San Francisquito Creek, north of Copperhill Drive; 5 miles northeast of the proposed project.	1,791	1,793	Under construction
7	Tapia Ranch (TR 53822)	Los Angeles County	Residential/Mixed Use	Tapia Canyon Road, west of Tesoro Residential Development. Access to the site currently via Parker Road exit from I-5; 4 miles east of the proposed project.	405	1167	Pending
8	Whittaker Bermite / Porto Bello Project (TR 51599)	City of Santa Clarita	Residential/Mixed Use	West of Golden Valley Road, south of Soledad Canyon Road, and east of San Fernando Road; 3 miles east of the proposed project.	2911/ 609,832	996 (407 open space)	On hold pending remediation activities and bankruptcy proceedings.

Table 4.3-21 (Continued)
Individual Project Summary

Map ID	Name	Jurisdiction	Project Type	Location and Distance from Proposed Project	Residential Units/ Comm./Ind. Square Feet	Size (Acres)	Status
9	West Creek/West Hills Valencia Project (TR 52445)	Los Angeles County	Residential/Mixed Use	West side of San Francisquito Creek, north of Newhall Ranch Road, and south of the Copperhill Drive bridge; 4 miles northeast of the proposed project.	2,545/ 180,000	966	Near buildout.
10	Westridge Project (TR 45433 & MP 19050)	Los Angeles County	Residential/Mixed Use	Just west of I-5, north of Stevenson Ranch, and directly south of Six Flags Magic Mountain Amusement Park; 0.5 mile east of the proposed project.	1,939/ 192,000	794	Under Construction
11	North Valencia Specific Plan No. 1 (Industrial Park)	City of Santa Clarita	Industrial and Business Park	South of Newhall Ranch Road, north of Magic Mountain Parkway, east of Rye Canyon Road, and west of Bouquet Canyon Road; 0.5 mile east of the proposed project.	2,000/ 803,000	707 (365 open space)	Completed
12	RiverPark (TR 53425)	City of Santa Clarita	Residential/Mixed Use	Located at the eastern terminus of Newhall Ranch Road, east of Bouquet Canyon Road, and north of Soledad Canyon Road and the Santa Clara River; 4 miles east of the proposed project.	1,089/ 16,000	695	Under Construction
13	NRMP	Los Angeles County	Infrastructure	Approved NRMP for 1,200 acres of the Santa Clara River.	NA	NA	Approved and Partially Built Out
14	CLWA Reclaimed Water Master Plan (SCR)	Los Angeles County and the City of Santa Clarita	Infrastructure	Los Angeles County and the City of Santa Clarita; 6 miles north of the proposed project.	NA	NA	Approved
15	Santa Clara River Enhancement and Management Plan	Los Angeles and Ventura Counties	Infrastructure/Environmental	Santa Clara River from Acton to Pacific Ocean.	NA	NA	Approved
16	Santa Clarita Valley Joint Sewerage Facilities Plan	Los Angeles County	Infrastructure	Los Angeles County	NA	NA	Approved

Table 4.3-21 (Continued)
Individual Project Summary

Map ID	Name	Jurisdiction	Project Type	Location and Distance from Proposed Project	Residential Units/ Comm./Ind. Square Feet	Size (Acres)	Status
17	Chiquita Canyon Landfill Expansion	Los Angeles County	Industrial	West of I-5, north of SR-126 at Wolcott Way; 0.5 mile north of the proposed project.	NA	98	Pending

Source:
1. City of Palmdale Planning Department, Ritter Ranch Specific Plan Final EIR, SCH No. 1990010124 (March 1992).
2. Los Angeles County Regional Planning Department, Notice of Preparation for Centennial Specific Plan, SCH No. 2004031072 (March 2004).
3. Two different projects have been proposed for this site. The Ventura County version would provide for 34 single-family lots ranging in size from 40 to 160 acres (Notice of Preparation for SD05-0035 (Adams Canyon), SCH No. 2007021073, February 2007). In May 2007, City of Santa Paula voters amended the City's urban restriction boundary to include Adams Canyon and amended the City's General Plan to allow 495 residential units, 100 acres of public recreation facilities, open space, a 40-acre school site, a hotel and a golf course on the site. (See http://www.ci.santa-paula.ca.us/adamscanyon/; http://recorder.countyofventura.org/Results/050807/Election%20Result.htm.) According to City planning staff, as of February 2009, the current proposal for the site is 450 estate homes. Any proposed development on the site would still require discretionary approvals from the City Council (e.g., a specific plan and development agreement), and would require annexation to the City's jurisdiction before it could be developed with City approvals. (See http://www.ci.santa-paula.ca.us/adamscanyon/ImpartialAnalysis_A7.pdf.)
4. Applicant provided information.
5. Applicant provided information.
6. Los Angeles County Regional Planning, Tesoro del Valle/Project No. 92-074/Vesting Tentative Tract Map No. 51644-01 Initial Study, SCH No. 1993021007 (February 2007).
7. Los Angeles County Regional Planning, Tapia Ranch Project/Project No. 02-196/Tentative Tract Map No. 53822 Initial Study, SCH No. 2006121016 (November 2006).
8. City of Santa Clarita, Porta Bella Development Project Notice of Determination, SCH No. 1995101595 (cleanup being processed as Former Whittaker-Bermite (Porta Bella Development Project) SCH No. 2001051089); more information can be found at ~~http://www.santa-clarita.com/cityhall/~~http://www.santa-clarita.com/cityhall/cd/planning/bermite.asp.
9. Los Angeles County, CEQA findings for West Creek Project 98-008 (CUP Zone Change, Oak Tree Permit, Plan Amendments & Tract 52455), SCH No. 1998021052 (July 2005).
10. Los Angeles County Regional Planning, Revised Draft EIR for Westridge Residential Project Unnamed Tributary to Santa Clara River, SCH No. 1990011146 (May 1999), containing text revisions to Draft EIR text based on comments received during the project review process. Los Angeles County certified the Final EIR for this project in May 1999.
11. City of Santa Clarita Planning Department, North Valencia Annexation and Specific Plan Draft EIR, SCH No. 1996071077 (August 1997).
12. City of Santa Clarita, Vesting Tentative Tract Map 53425 Draft EIR, SCH No. 2002091081 (March 2004). The City of Santa Clarita certified a Final EIR for this project in May 2005. The Final EIR did not change the Draft EIR's conclusions regarding impacts and their significance.
13. California Department of Fish and Game, CEQA findings for Valencia Company Master 1603 Lake or Streambed Alteration, SCH No. 1997061090 (August 2003).
14. Castaic Lake Water Agency (CLWA), East Valley Water District's Perchlorate Treatment and Water Distribution Project Draft EIR, SCH No. 2005041138 (November 2006). The CLWA certified a Final EIR for this project in March 2007. The Final EIR did not change the Draft EIR's conclusions regarding impacts and their significance.
15. Document and information available at: http://www.santaclarariverparkway.org/wkb/projects/scremp, last visited on September 9, 2008.
16. County Sanitation Districts 26 and 32 of Los Angeles, 2015 Santa Clarita Valley Joint Sewerage System Final EIR, SCH No. 1998109408 (January 1998).
17. Los Angeles County Regional Planning, Chiquita Canyon Landfill, Project No. RENVT200400039 NOP/IS, SCH No. 2005081071 (July 2005).

b. Cumulative Impacts on Biological Resources

The Mission Village proposed project's impacts to biological resources are summarized in **Table 4.3-9, Significant Impacts and Mitigation Summary**.

The following discussion evaluates the proposed Mission Village project's cumulative impacts on biological resources located within the SCRW. The cumulative impacts analysis relies heavily on the Watershed Study (see Appendix 4.3), which addresses impacts related to the Newhall Ranch Resource Management and Development Plan/Spineflower Conservation Plan (RMDP/SCP) project, because the Mission Village project site is included within the RMDP/SCP project area. The RMDP/SCP project area also encompasses the Entrada South project and the VCC project, both of which are located outside the Newhall Ranch Specific Plan area.

The RMDP/SCP project's contribution to a cumulative impact will always include any Mission Village contribution, as the latter is a subset of the former. In some cases, however, the Mission Village project's share of the RMDP/SCP contribution will be so small (or non-existent) that it qualifies as "less than cumulatively considerable," as that term is used in CEQA Guidelines section 15130. Where this occurs, the cumulative impact analysis differentiates the Mission Village contribution from the RMDP/SCP contribution.

The evaluation of cumulative impacts also was based on two vegetation and land cover data sets: (1) for the RMDP/SCP project area, including the proposed Mission Village project site, the project-level vegetation and land covers data were used, as summarized in **Table 4.3-22**; and (2) for areas outside of the RMDP/SCP project area boundaries, data provided by the California Gap Analysis Program (GAP) database[1043] were used, as these were the only other vegetation and land cover data available for the entire SCRW. The California GAP data were compiled in 1998 by overlaying existing land use maps, vegetation maps, and forest inventory data. The minimum mapping unit for upland vegetation communities was 100 hectares (247 acres), the minimum mapping unit for major wetland areas was 40 hectares (99 acres), and smaller wetlands were included with the same attributes as larger upland polygons. Thus, the California GAP vegetation database was mapped at a broader scale and necessarily lower precision than the RMDP/SCP project-level vegetation community and land cover mapping. Nonetheless, the GAP data provide reasonable estimates of watershed-wide vegetation community conditions (i.e., acreage) that existed *prior* to 1998, and, in conjunction with the project-level data, have been used as a starting point for this assessment's quantitative evaluation of cumulative impacts to various types of vegetation communities and land covers. To estimate cumulative impacts to vegetation communities and land covers that have occurred *since* 1998, this analysis has relied on an assessment of the development projects included on the list of past, present, and reasonably

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1043 University of California, Santa Barbara (UCSB), Biogeography Lab, *California Gap Analysis Project (GAP)* (Santa Barbara, California: Donald Bren School of Environmental Science and Management, coordinated through the U.S. Geological Survey Biological Resources Division, 1999).

foreseeable future development projects. This list includes development projects located in the watershed area that were under consideration by Los Angeles County and the City of Santa Clarita during a period that generally extends between the late 1990s and 2008. Cumulative development projects within the study area located in Ventura County and the cities of Santa Paula and Fillmore include projects under consideration by those jurisdictions in late 2008 and early 2009.

The surveys, reports, studies, and maps referenced in this section are incorporated by reference, as permitted in section 15150 of the *State CEQA Guidelines*. All referenced documents are available for public inspection and review upon request to: County of Los Angeles, Department of Regional Planning, 320 West Temple Street Los Angeles, California 90012 (Samuel Dea; (213) 974-4808) or Impact Sciences, Inc., 803 Camarillo Springs Road, Suite A-1, Camarillo, California 93012 (Susan Tebo; (805) 437-1900). Additionally, many of these documents are included in the appendices to the Newhall Ranch Resource Management and Development Plan and the Spineflower Conservation Plan Draft EIS/EIR (SCH No. 2000011025), and can be obtained from the California Department of Fish and Game's website at http://www.dfg.ca.gov/regions/5/newhall/docs/.

No other readily available sources of habitat data would facilitate the analysis of cumulative impacts on a watershed-wide basis. By estimating impacts to vegetation communities and land covers reasonably expected to occur as a result of the identified past, present, and reasonably foreseeable development projects, and comparing those impact estimates to the available GAP data,[1044] reasonable characterizations of impact trends throughout the SCRW have been provided. Cumulative impacts have been characterized to reflect the "severity of the impacts and their likelihood occurrence" as required by the State CEQA Guidelines.[1045] Although cumulative impacts are often expressed in this analysis in terms of acres and proportion of habitat loss, etc., it should be recognized that these numbers are meant to be estimates of cumulative impact conditions and trends, and not project-specific evaluations of impacts to biological resources in the watershed. Where acreages are reported for those areas outside of the RMDP/SCP project area, they should be considered approximations and not precise measurements. Because the California GAP data are general and the minimum mapping units are very coarse, these data cannot be used to provide specific analyses of impacts to habitats for wildlife and plant species. However, these data can be used to provide the context of the size of the watershed in relation to the impact associated with present and reasonably foreseeable projects.

Where acreages are reported throughout this cumulative impact analysis for the SCRW as a whole, and the California GAP vegetation database[1046] is referenced, the project-level mapping for the RMDP/SCP boundary has

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[1044] UCSB, *California Gap Analysis Project.*
[1045] 14 C.C.R. Sec. 15130(b).
[1046] UCSB, *California Gap Analysis Project.*

been incorporated into the reported acreage.This cumulative biology impacts analysis is organized into four separate discussions. The first addresses cumulative impacts to vegetation communities and land covers. The second addresses cumulative impacts to general wildlife (by species guild).[1047] The third addresses impacts to wildlife habitat linkages, wildlife corridors, and wildlife crossings (again, by species guilds). The fourth addresses impacts to special-status species, as such species are defined in ~~**subsection**~~**Subsection 4.3.7(d)** of this EIR.

It should be noted that impacts associated with the RMDP/SCP are assessed as direct, indirect, and secondary. Direct and indirect impacts differ in regard to the project component resulting in the impacts. As used here, direct impacts are those that would occur as a result of implementation of the RMDP/SCP project and include temporary disturbance and/or permanent loss of vegetation communities, including sensitive vegetation communities, general wildlife, and special-status plant and animal species. Indirect impacts are those that would occur as a result of buildout of the Newhall Ranch Specific Plan, VCC, and Entrada planning areas. Indirect impacts also include permanent loss of vegetation communities, including sensitive vegetation communities, general wildlife, and special-status plant and animal species. For purposes of analyzing indirect impacts, any temporary disturbance areas are included in the permanent footprint. (There are no temporary impacts identified for buildout of the Specific Plan, VCC, and Entrada planning areas.) Note that in this cumulative impact analysis, the total loss of habitat for direct and indirect effects is evaluated in its entirety.

[1047] Species guilds are groups of species that use or exploit similar resources or have similar life history characteristics even though they may represent different taxonomic groups.

Table 4.3-22
Existing Vegetation Communities, Floristic Alliances and Associations, and Land Cover Types in Project Area

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	RMDP Acreage	VCC Planning Area Acreage	Entrada Planning Area Acreage
Grass and Herb Dominated Communities	Non-Native Grassland	California annual grassland	Not mapped to association level	2,175.5	71.1	53.2
	Native Grassland	Purple needlegrass	Not mapped to association level	0.6	0.0	0.0
Scrub and Chaparral	Coastal Scrub	California sagebrush scrub	Not mapped to association level	1,529.3	35.6	59.0
			Burned California sagebrush scrub	1,469.3	0.0	0.0
			California sagebrush–*Artemisia californica*	82.5	0.0	3.4
			California sagebrush–purple sage	393.5	0.0	0.0
			Disturbed California sagebrush–purple sage	4.5	0.0	0.0
		California sagebrush–black sage scrub	California sagebrush–black sage	196.3	0.0	0.0
		California sagebrush–California buckwheat scrub	Not mapped to association level	310.0	6.0	97.5
		California sagebrush scrub–undifferentiated chaparral	Not mapped to association level	135.0	0.0	0.0
			Burned California sagebrush scrub–undifferentiated chaparral	5.2	0.0	0.0
		Coyote brush scrub	Not mapped to association level	9.2	0.0	0.0
	Undifferentiated Chaparral Scrubs	Not mapped to alliance level	Not mapped to association level	1,106.9	0.0	24.5
			Burned undifferentiated chaparral	957.2	0.0	0.0
	Chaparral with Chamise	Chamise chaparral	Not mapped to association level	55.7	0.0	0.0
			Burned chamise chaparral	0.0	0.0	0.0
	Chaparral with Oak	Scrub oak chaparral	Not mapped to association level	1.5	0.0	0.0
	Other Scrubs	Eriodictyon scrub	Not mapped to association level	0.2	0.0	0.0
Broad Leafed Upland Tree Dominated	Upland Walnut Woodland and Forest	California walnut woodland and forest	California walnut woodland	27.2	0.0	0.0
	Oak Woodland and Forest	Coast live oak forest and woodland	Coast live oak woodland	757.8	0.0	0.0
		Mixed oak woodland and forest	Not mapped to association level	168.9	0.0	0.0
		Valley oak forest and woodland	Valley oak woodland	79.4	0.0	0.0
			Valley oak/grass	461.4	0.0	0.0
Bog and Marsh	Marsh	Bulrush–cattail wetland	Not mapped to association level	1.4	0.0	0.0
		Cismontane alkali marsh	Not mapped to association level	18.6	0.0	0.0
		Fresh–brackish water marsh	Coastal and valley freshwater marsh	2.0	0.0	0.0
Riparian and Bottomland Habitat	Other Riparian/Wetland	Herbaceous wetland	Not mapped to association level	183.1	0.9	0.0
		River wash	Not mapped to association level	290.0	37.5	4.9

Table 4.3-22 (Continued)
Existing Vegetation Communities, Floristic Alliances and Associations, and Land Cover Types in Project Area

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	RMDP Acreage	VCC Planning Area Acreage	Entrada Planning Area Acreage
		Alluvial scrub	Not mapped to association level	1.0	0.0	0.5
		Big sagebrush scrub	Not mapped to association level	76.5	0.0	14.8
		Big sagebrush scrub	Big sagebrush-California buckwheat	0.5	0.0	0.0
		Giant reed	Not mapped to association level	5.6	0.0	0.0
	Low to High Elevation Riparian Scrub	Arrow weed scrub	Not mapped to association level	18.7	0.0	0.0
		Mexican elderberry	Not mapped to association level	12.8	0.0	0.0
		Mexican elderberry	Disturbed Mexican elderberry	0.3	0.0	0.0
		Mulefat scrub	Not mapped to association level	71.5	0.5	0.0
	Riparian Forest and Woodland	Southern willow scrub	Not mapped to association level	22.7	0.0	0.0
		Tamarisk scrub and woodland	Shrub tamarisk	2.8	0.0	0.0
		Coast live oak forest and woodland	Southern coast live oak riparian forest	0.7	0.0	0.0
		Fremont cottonwood riparian forest and woodland	Southern cottonwood–willow riparian	358.3	63.4	0.0
Man-Made Land Cover Types		Agriculture	NA	1,576.4	40.5	0.0
		Developed land	NA	0.5	2.2	2.0
		Disturbed land	NA	1,080.6	63.7	56.2
			Total	13,651.1	321.4	316.0

Secondary impacts are those reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the construction disturbance zone. Secondary impacts may affect areas that are within the defined project area but outside the construction disturbance zone, including open space. Secondary impacts may also occur outside the project area, such as downstream. Secondary impacts include short-term effects immediately related to construction activities and long-term or chronic effects related to the human occupation of developed areas. Both implementation of the RMDP/SCP project and buildout of the Specific Plan, VCC, and Entrada planning areas would result in short-term construction-related secondary impacts and long-term secondary impacts.

(1) Impacts to Vegetation Communities and Land Covers

As indicated in ~~**subsection**~~**Subsection 4.3.9.b.1.(a)**, Project Impacts, the following vegetative communities and land covers may be affected by the proposed Mission Village project and are assessed for cumulative impacts: riparian communities; California annual grassland; coastal scrub communities; chaparral communities; oak woodlands; agricultural land; and disturbed land. See **Table 4.3-8, Plant Community/Land Use Impact Summary**.

There are, however, a host of vegetation communities and land covers that do not occur in the RMDP/SCP project area, which encompasses the Mission Village project, but occur elsewhere in the SCRW and are included in the California GAP vegetation database.[1048] These include coniferous forests, black oak forest, Mojavean pinyon and juniper woodlands, bare exposed rock, and sandy areas other than beaches. Because the RMDP/SCP project, including the proposed Mission Village project, would not affect these vegetation communities and land covers, they are not included in this cumulative analysis.

The Santa Clara River Watershed is Relatively Undeveloped and Has Substantial Existing and Designated Open Space. Based on the California GAP data,[1049] as of 1998, approximately 52,000 acres of the 1,038,100-acre SCRW[1050] had been converted to agricultural uses and approximately 47,300 acres had been converted to industrial, commercial, and urban uses. Combined, these developed uses comprise about 99,000 acres of the total watershed.[1051] Based on the project-level mapping for the RMDP/SCP project area, including the Mission Village project area, and the California GAP data for areas outside of the RMDP/SCP project area, chaparral is the dominant vegetation community in the SCRW, accounting for about approximately 550,300 acres of the watershed. Coastal scrub comprises approximately 174,340 acres in the watershed. The third most common grouping includes higher

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1048 UCSB, *California Gap Analysis Project.*

1049 UCSB, *California Gap Analysis Project.*

1050 The study area is defined as the Santa Clara River Watershed within Los Angeles and Ventura Counties (CalWater Version 2.2; http://gis.ca.gov/meta.epl?oid=22174)

1051 **Table 4.3-23** provides a summary of vegetation communities and land covers based on the California GAP data and the project-level mapping for the RMDP/SCP project area, including the Mission Village project area.

elevation coniferous and black oak forests and Mojavean pinyon and juniper woodlands, which together account for about 14 percent of the SCRW; as noted above, however, none of these vegetation communities occur within the RMDP/SCP project area, including the Mission Village project area. Riparian and lower elevation oak woodlands account for about 3 percent of the watershed. The remainder is made up of disturbed (but not developed) lands, annual grasslands, and other land covers.

Figure 4.3-19, Santa Clara River Watershed - Existing Vegetation Types, shows that most of the approximately 99,000 acres of land converted to development land uses (i.e., agriculture, and residential, commercial, industrial, infrastructure development) has occurred: (1) in the southern portion of the watershed along the Santa Clara River, where agricultural uses dominate; and (2) in the cities of Ventura, Santa Paula, Santa Clarita, and the communities of Valencia and Acton, where urban development dominates. It should be noted that **Figure 4.3-19** shows the California GAP data for the watershed outside of the RMDP/SCP project area. Because of large scale of the vegetation and land covered data shown in **Figure 4.3-19**, the project-level data for the RMDP/SCP project, including the proposed Mission Village project, cannot be clearly shown on this figure. The reader is referred to **Figures 4.3-20-A1** through **4.3-20-D2, RMDP/SCP – Vegetation Communities and Land Covers,** for the project-level detail. **Figure 4.3-21** is also provided to reflect the vegetation community categories of **Table 4.3-22**.

Approximately 734,000 acres of the SCRW either currently exist as open space or are classified as open space under available zoning information (**Figure 4.3-22, Santa Clara River Watershed - Current Land Use Classifications**).[1052] Approximately 635,000 acres of the SCRW of this open space currently have a land use designation of federal (Bureau of Land Management, USFWS, U.S. Forest Service) and state (CDFG, Department of Parks and Recreation, State Lands Commission) public lands, as well as privately-held reserves (The Nature Conservancy). The approximately 98,000 acres classified as open space under available zoning information is not currently protected as natural open space, and could be subject to several uses that are allowed under some open space designation, such as active recreation. Relatively large sub-basins with substantial existing and/or classified open space include Eastern (sub-basin 3), Hungry Valley (sub-basin 5), Topa Topa (sub-basin 12), and Upper Piru (sub-basin 13) (**Figure 4.3-22**). Most of the land within each of these sub-basins is open space: 55 percent of Eastern, 93 percent of Hungry Valley, 97 percent of Topa Topa, and 98 percent of Upper Piru. In terms of overall acreage, Eastern is the largest sub-basin. As a result, this sub-basin's approximately 160,000 acres of open space is second only to Upper Piru, which has approximately 165,000 acres of open space. Smaller sub-basins with high percentages of open space include Bouquet (sub-basin 2), Mint Canyon (sub-basin 6), Sisar (sub-basin 9), and Stauffer (sub-basin 10). Along the Santa Clara River mainstem, the NRMP upstream is conserving 4.7 miles, and the

1052 University of California, Davis (UCD), "General Plans" (Davis, California: UCD, distributed through the California Resrouces Agency, 2004).

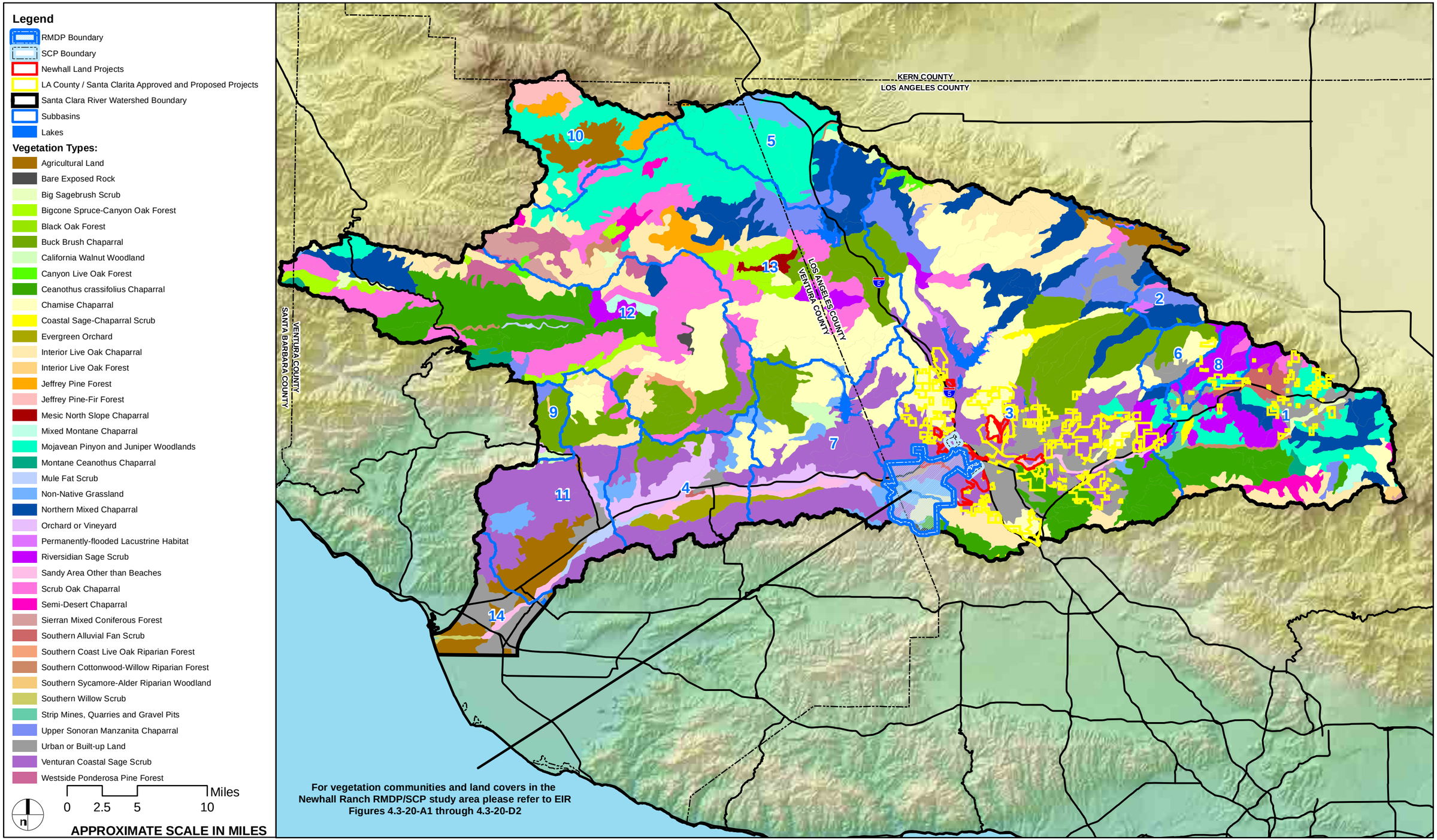
RMDP project will conserve 5 miles. An additional 13.7 miles are conserved within the County of Los Angeles, and approximately 33 miles are conserved within the County of Ventura.

Land Use Classification and Past, Present, and Reasonably Foreseeable Projects. To assess the Mission Village project's cumulative impacts on vegetation communities and land covers, **Table 4.3-8** provides a breakdown of the potential permanent loss of the different vegetation communities and land covers that would occur as a result of the proposed Mission Village project alone, and **Table 4.3-23** provides a breakdown of the potential permanent loss of vegetation communities and land covers that would occur as a result of: (1) the RMDP/SCP project, which encompasses the Newhall Ranch Specific Plan; and (2) present and reasonably foreseeable projects elsewhere in the SCRW.

As indicated in **Table 4.3-23**, the SCRW consists of approximately 1,038,100 acres of land and supports a variety of vegetation communities and land covers. As explained above, the GAP data, although mapped at a broad, landscape level, is the best available data for vegetation communities and land covers in the SCRW outside the RMDP/SCP project area and are appropriate for the watershed-level analysis. The project-level mapping data for the RMDP/SCP project area, including Mission Village project data, were incorporated into this analysis.

According to land use information provided by Los Angeles County and Ventura County, and by the cities of Santa Clarita, Ventura, Santa Paula, and Fillmore, and the community of Piru, approximately 47,300 acres (4.6 percent) of the watershed has been developed per the GAP data.[1053] In addition, project list information from these government entities indicates that another 32,300 acres (3.1 percent) are expected to be developed in the foreseeable future, based on present and reasonably foreseeable future projects. Present and reasonably foreseeable future projects, including the RMDP/SCP project, including the Mission Village project area, would convert approximately 37,890 additional acres (3.6 percent) of the watershed to developed uses, resulting in development of approximately 85,200 acres (8.2 percent) within the watershed.

1053 UCSB, *California Gap Analysis Project.*



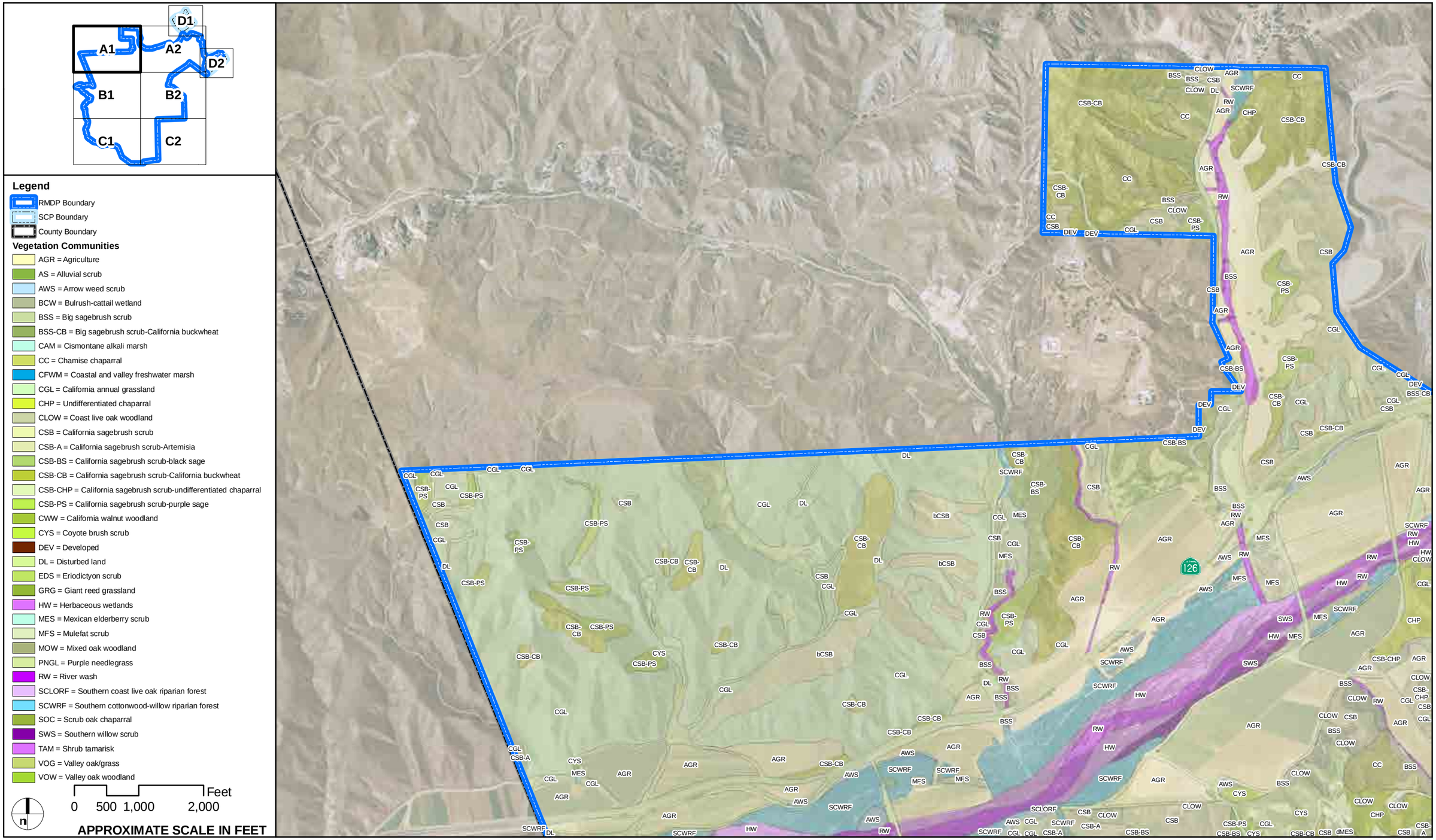
SOURCE: GAP Analysis Project, Generalized Land Cover of California 1998

FIGURE 4.3-19

Mission Village EIR

DUDEK

Santa Clara River Watershed - Existing Vegetation Types



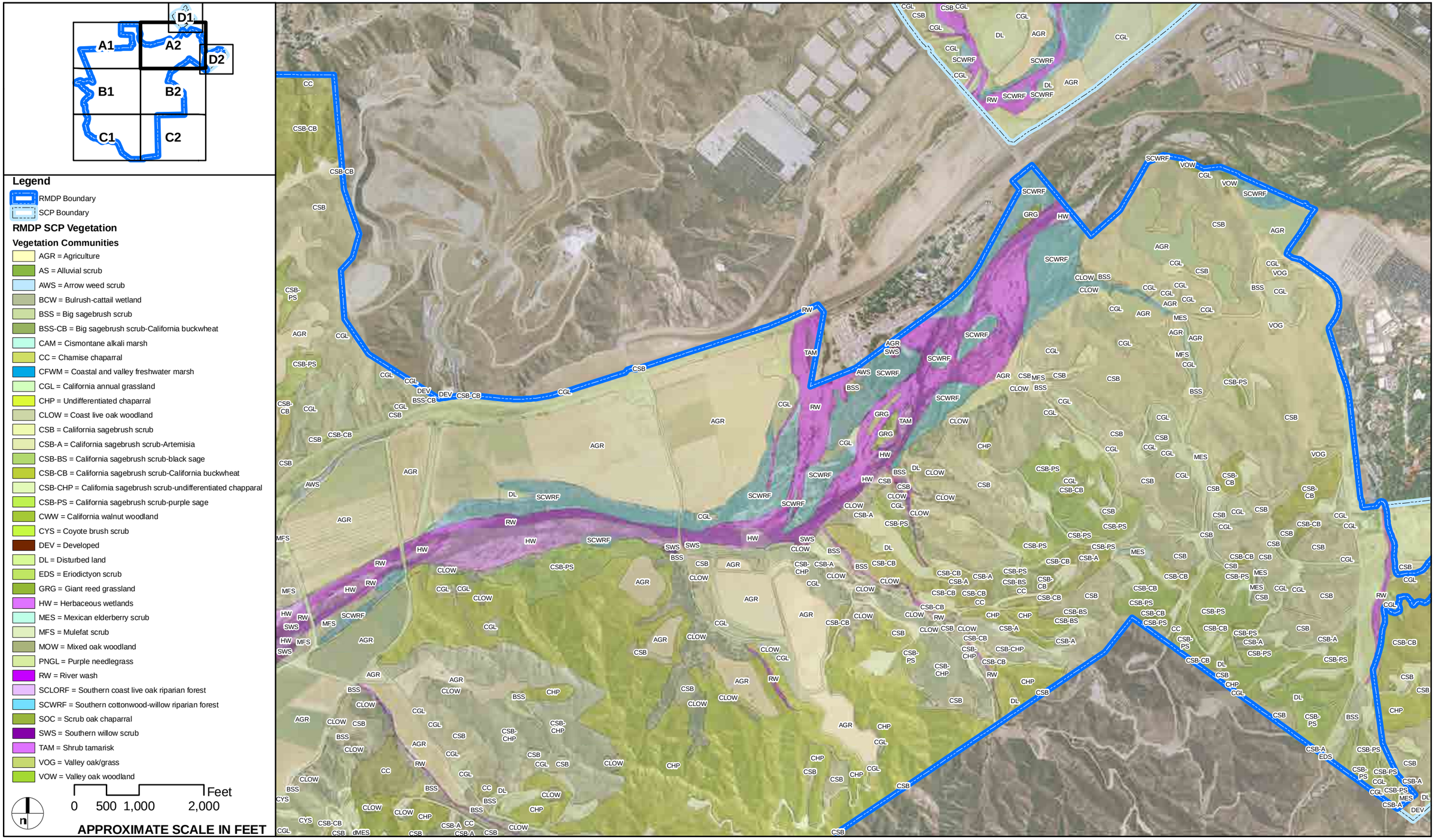
AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-20-A1

Mission Village EIR

DUDEK

RMDP/SCP - Vegetation Communities and Land Covers



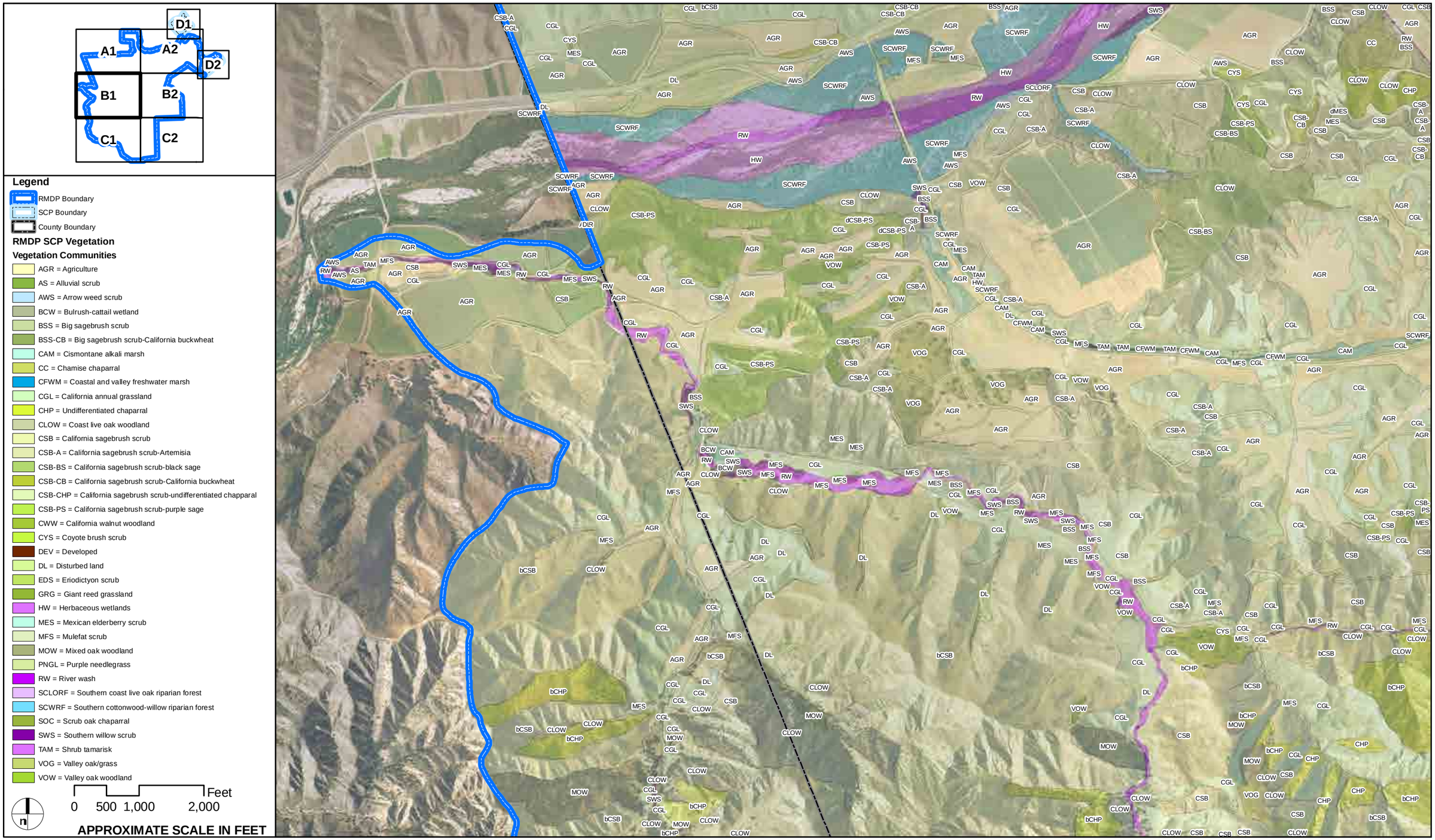
AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-20-A2

Mission Village EIR

DUDEK

RMDP/SCP - Vegetation Communities and Land Covers



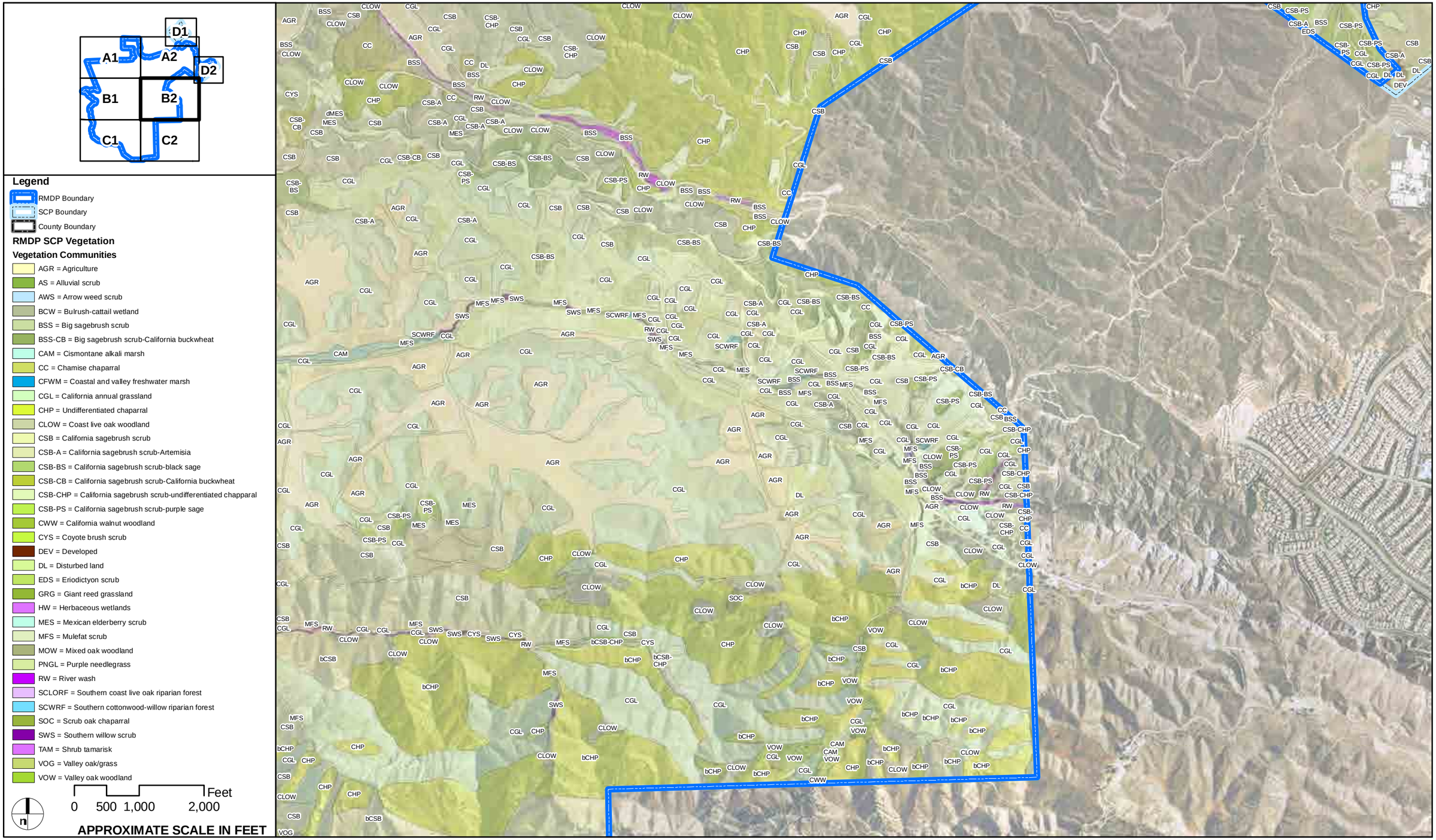
AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-20-B1

DUDEK

Mission Village EIR

RMDP/SCP - Vegetation Communities and Land Covers



AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-20-B2

Mission Village EIR

DUDEK

RMDP/SCP - Vegetation Communities and Land Covers

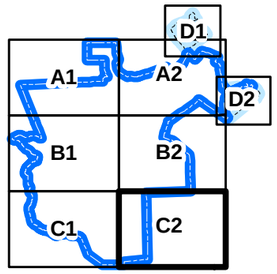
AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-20-C1

Mission Village EIR

DUDEK

RMDP/SCP - Vegetation Communities and Land Covers



Legend

- RMDP Boundary
- SCP Boundary

RMDP SCP Vegetation

Vegetation Communities

- AGR = Agriculture
- AS = Alluvial scrub
- AWS = Arrow weed scrub
- BCW = Bulrush-cattail wetland
- BSS = Big sagebrush scrub
- BSS-CB = Big sagebrush scrub-California buckwheat
- CAM = Cismontane alkali marsh
- CC = Chamise chaparral
- CFWM = Coastal and valley freshwater marsh
- CGL = California annual grassland
- CHP = Undifferentiated chaparral
- CLOW = Coast live oak woodland
- CSB = California sagebrush scrub
- CSB-A = California sagebrush scrub-Artemisia
- CSB-BS = California sagebrush scrub-black sage
- CSB-CB = California sagebrush scrub-California buckwheat
- CSB-CHP = California sagebrush scrub-undifferentiated chaparral
- CSB-PS = California sagebrush scrub-purple sage
- CWW = California walnut woodland
- CYS = Coyote brush scrub
- DEV = Developed
- DL = Disturbed land
- EDS = Eriodictyon scrub
- GRG = Giant reed grassland
- HW = Herbaceous wetlands
- MES = Mexican elderberry scrub
- MFS = Mulefat scrub
- MOW = Mixed oak woodland
- PNGL = Purple needlegrass
- RW = River wash
- SCLORF = Southern coast live oak riparian forest
- SCWRF = Southern cottonwood-willow riparian forest
- SOC = Scrub oak chaparral
- SWS = Southern willow scrub
- TAM = Shrub tamarisk
- VOG = Valley oak/grass
- VOW = Valley oak woodland

0 500 1,000 2,000 Feet

APPROXIMATE SCALE IN FEET

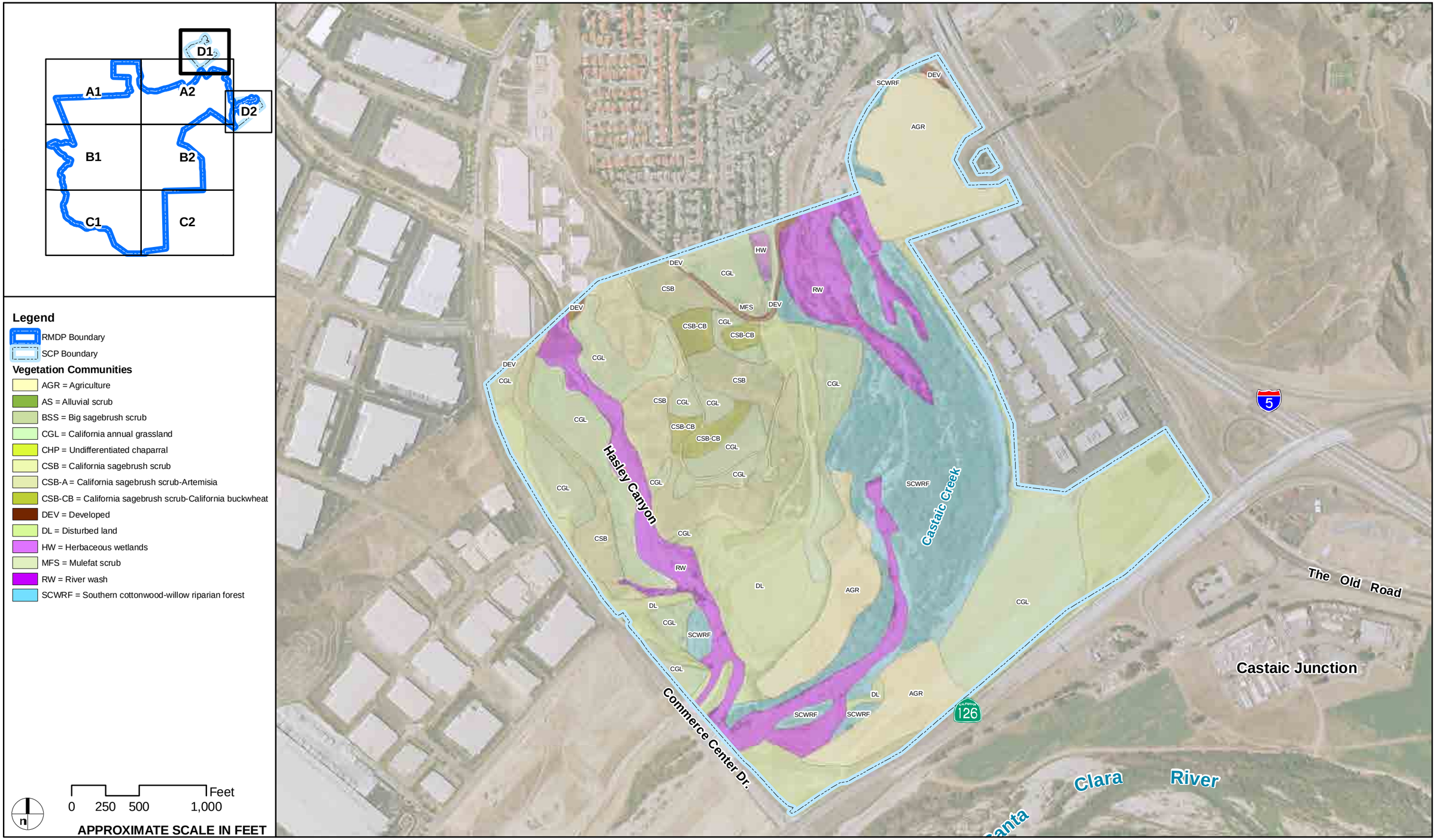
AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-20-C2

Mission Village EIR

DUDEK

RMDP/SCP - Vegetation Communities and Land Covers



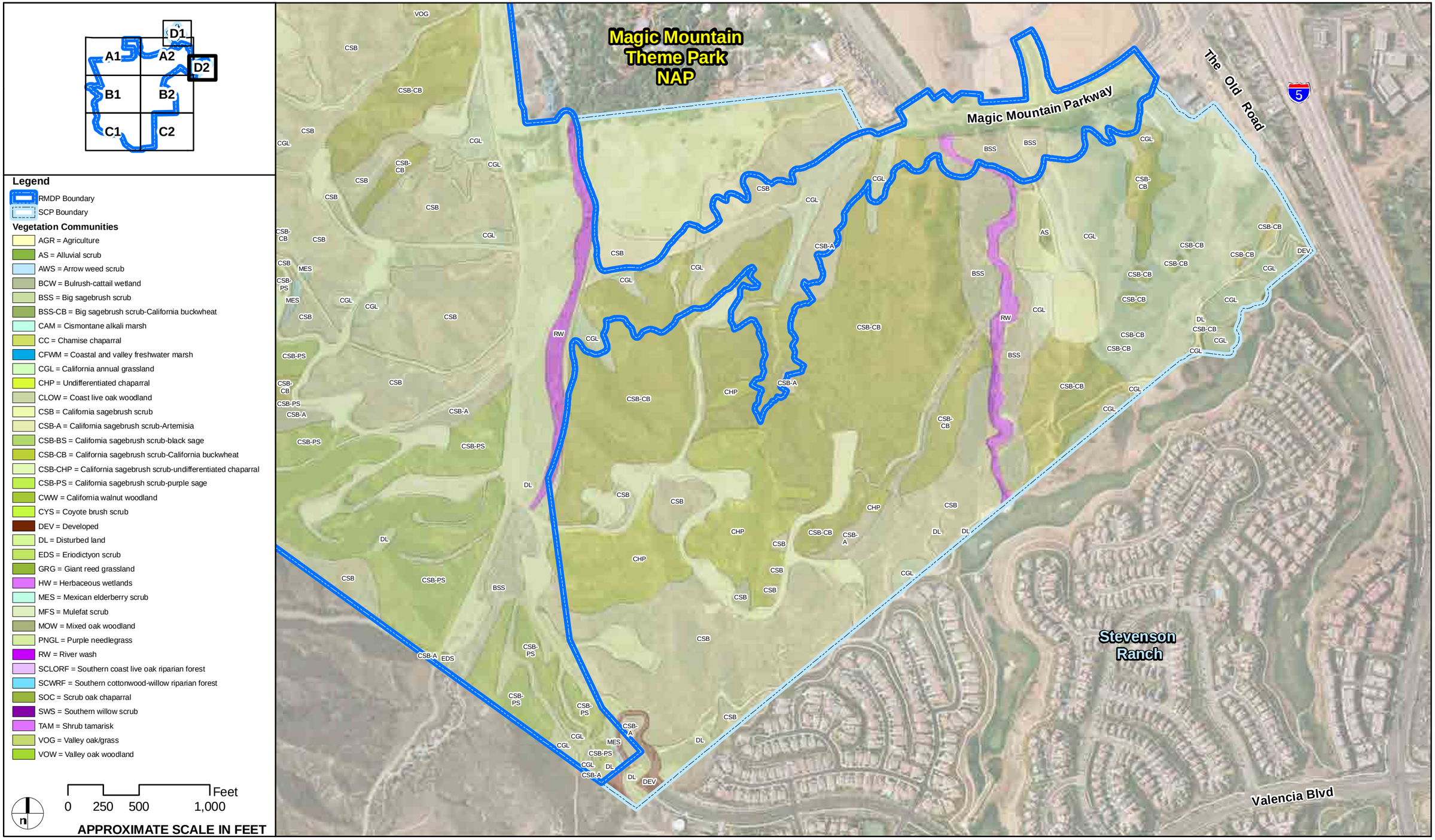
AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-20-D1

Mission Village EIR

DUDEK

RMDP/SCP - Vegetation Communities and Land Covers



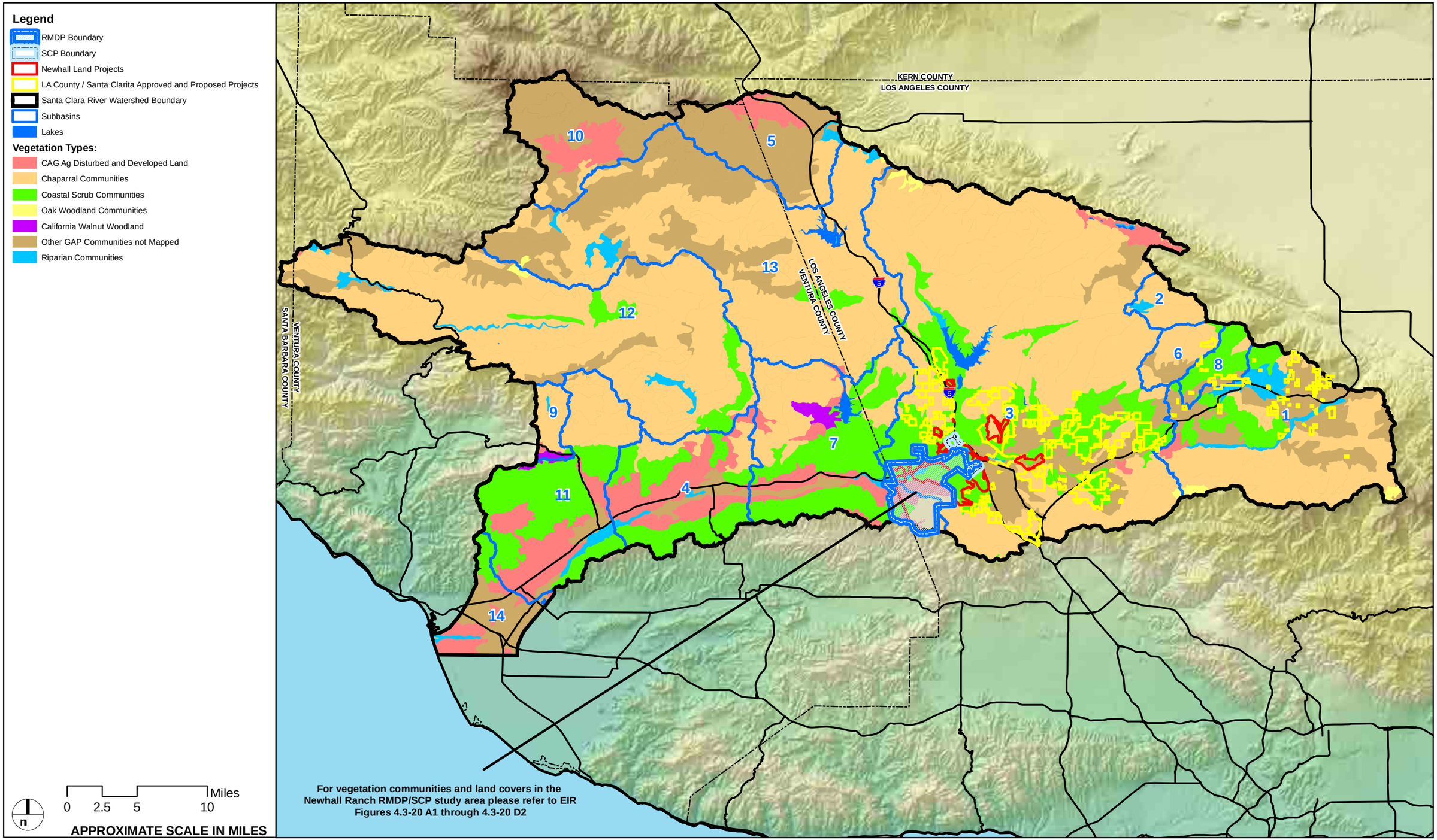
AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-20-D2

Mission Village EIR

DUDEK

RMDP/SCP - Vegetation Communities and Land Covers



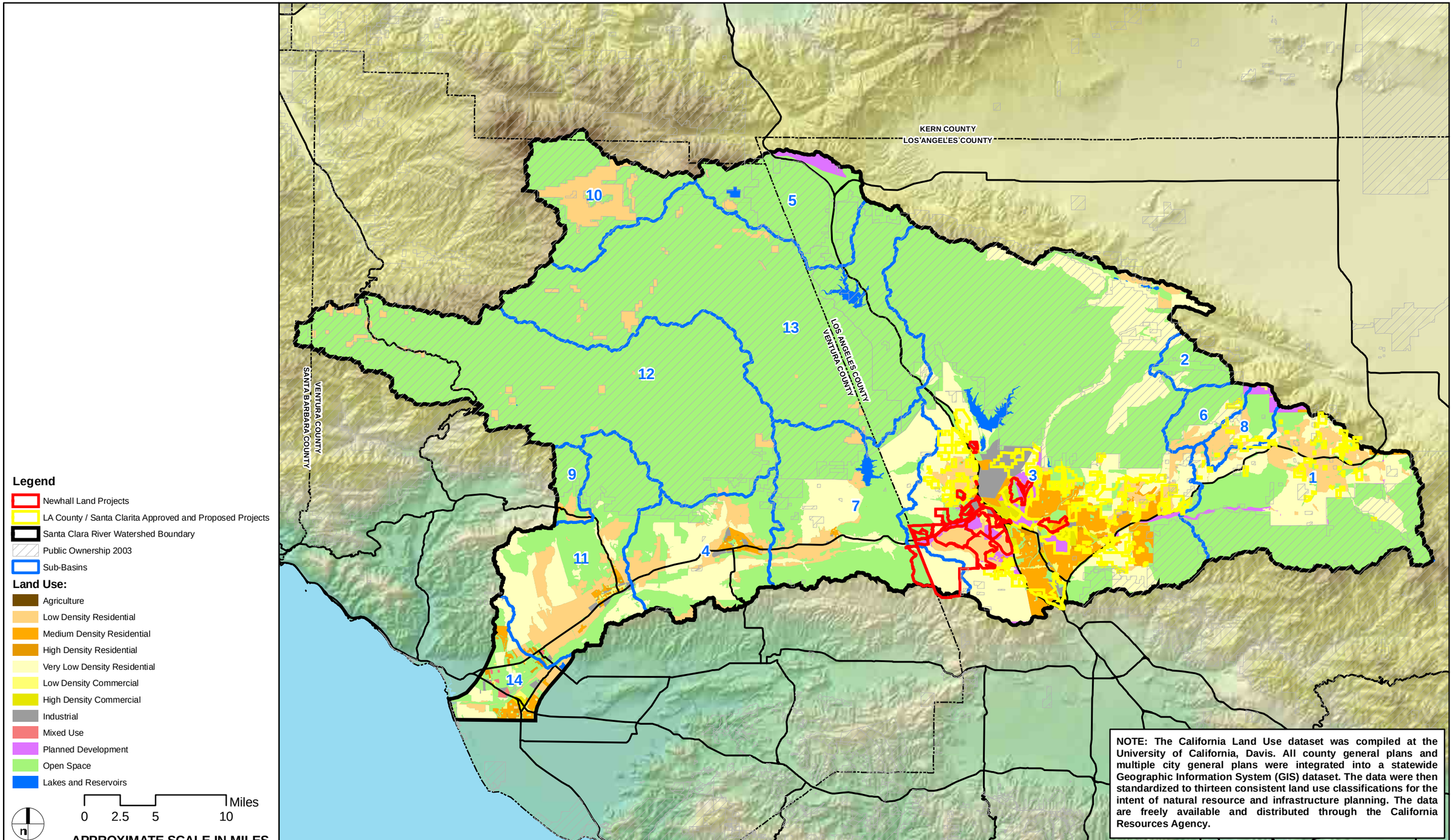
SOURCE: GAP Analysis Project, Generalized Land Cover of California 1998

FIGURE 4.3-21

DUDEK

Mission Village EIR

Santa Clara River Watershed - Existing Vegetation Types by General Physiognomic Category



LAND USE SOURCE: UC Davis 2004

FIGURE 4.3-22

Mission Village EIR

DUDEK

Santa Clara River Watershed - Current Land Use Classifications

Table 4.3-23
Summary of Cumulative Impacts to Vegetation and Land Covers in the Santa Clara River Watershed (GAP Data are Approximate)

Vegetation Communities and Land Covers	California GAP Vegetation Communities	Total Acres of Vegetation Communities and Land Covers in Watershed	Permanent Direct and Indirect Impact Acres of Proposed Project (RMDP/SCP)1	Total Impact Acres in Watershed From Present and Reasonably Foreseeable Projects (Not Including RMDP/SCP Project)	Estimated Cumulative Impact Acres in Watershed, After Accounting for the RMDP/SCP Project Plus Present and Reasonably Foreseeable Projects
Riparian Communities	Mulefat scrub Permanently flooded lacustrine habitat Southern coast live oak riparian forest Southern cottonwood/willow riparian forest Southern sycamore/alder riparian woodland Southern willow scrub Big sagebrush scrub Southern alluvial fan scrub	GAP = 23,430 RMDP/SCP = 1,190 Total = 24,620	225	800	1,025
California Annual Grassland, Agriculture, and Disturbed Land	Non-native grassland Open pit mines, quarries, gravel pits Agriculture land Evergreen orchard Orchard or vineyard	GAP = 72,760 RMDP/SCP = 5,120 Total = 77,880	3,290	500	3,790

Table 4.3-23 (Continued)
Summary of Cumulative Impacts to Vegetation and Land Covers in the Santa Clara River Watershed (GAP Data are Approximate)

Vegetation Communities and Land Covers	California GAP Vegetation Communities	Total Acres of Vegetation Communities and Land Covers in Watershed	Permanent Direct and Indirect Impact Acres of Proposed Project (RMDP/SCP)1	Total Impact Acres in Watershed From Present and Reasonably Foreseeable Projects (Not Including RMDP/SCP Project)	Estimated Cumulative Impact Acres in Watershed, After Accounting for the RMDP/SCP Project Plus Present and Reasonably Foreseeable Projects
Coastal Scrub Communities	Coastal sage/chaparral scrub Riversidean sage scrub Venturan coastal sage scrub	GAP = 170,000 RMDP/SCP = 4,340 Total = 174,340	1,520	19,000	20,520
Chaparral Communities	Buck brush chaparral Ceanothus crassifolius chaparral Chamise chaparral Interior live oak chaparral Mesic north slope chaparral Mixed montane chaparral Montane ceanothus chaparral Northern mixed chaparral Scrub oak chaparral Semi-desert chaparral Upper Sonoran manzanita chaparral	GAP = 548,150 RMDP/SCP = 2,150 Total = 550,300	460	12,000	12,460
Oak Woodland Communities (Coast Live Oak Woodland, Mixed Oak Woodland, Valley Oak/Grass, Valley Oak Woodland)	Canyon live oak forest Interior live oak forest	GAP = 3,700 RMDP/SCP = 1,470 Total = 5,170	95	0	95
California Walnut Woodland	California walnut woodland	GAP = 3,600 RMDP/SCP = 27 Total = 3,627	<1	0	<1
Total—California GAP Vegetation + RMDP/SCP Project Impacts		**835,950**	**5,590**	**32,300**	**37,890**

Table 4.3-23 (Continued)
Summary of Cumulative Impacts to Vegetation and Land Covers in the Santa Clara River Watershed (GAP Data are Approximate)

Vegetation Communities and Land Covers	California GAP Vegetation Communities	Total Acres of Vegetation Communities and Land Covers in Watershed	Permanent Direct and Indirect Impact Acres of Proposed Project (RMDP/SCP)1	Total Impact Acres in Watershed From Present and Reasonably Foreseeable Projects (Not Including RMDP/SCP Project)	Estimated Cumulative Impact Acres in Watershed, After Accounting for the RMDP/SCP Project Plus Present and Reasonably Foreseeable Projects
Other California GAP Vegetation Communities and Land Covers Occurring in SCRW but Not Mapped in RMDP/SCP project Area, including Mission Village project area, in GAP Data Set[2]					
Other California GAP Woodland/Forest Communities not Mapped in RMDP/SCP project Area	Bigcone spruce/canyon oak forest Black oak forest Jeffrey pine/fir forest Mojavean pinyon and juniper woodlands Sierran mixed coniferous forest Westside ponderosa pine forest	145,850	N/A	N/A	N/A
Other California GAP Natural Land Covers not Mapped in RMDP/SCP project Area	Bare exposed rock Sandy areas other than beaches	9,000	N/A	N/A	N/A
Other California GAP Man-made Land Covers not Mapped in RMDP/SCP project Area	Urban or built-up land	47,300	N/A	N/A	N/A
Grand Total for SCRW		**1,038,100**	**N/A**	**N/A**	**N/A**

Notes:
[1] *The impacts based on the project-level mapping.*
[2] *These California GAP vegetation communities and land covers do not occur in the RMDP/SCP project area, including the proposed Mission Village project, based on the California GAP data set and, therefore, are not a part of the cumulative impact analysis. They are shown in the table to illustrate the vegetation communities and land covers within the SCRW.*

From a specific vegetation community and land cover perspective, the impacts from such development (including the RMDP/SCP project, which encompasses the Mission Village project area) is estimated to affect about 4.9 percent of existing California annual grassland, agriculture, and disturbed lands; 11.8 percent of existing coastal scrub communities, 2.3 percent of existing chaparral communities, and 4.2 percent of existing riparian communities within the watershed (although it is likely that there would be some level of avoidance of these riparian areas). Purple needlegrass grassland, of which 0.6 acre is mapped in the RMDP/SCP project area outside of the Mission Village site, would not be removed as a result of grading activities, but would be at increased risk from non-native, invasive plant and animal species, litter, hydrological alterations, human disturbance, and modified fire frequency. At the broad scale and necessarily lower precision of the California GAP vegetation database,[1054] no oak woodlands or oak/grass vegetation communities were mapped outside of the RMDP/SCP project area within present and reasonably foreseeable development sites. The RMDP/SCP project, however, would result in the loss of 95 acres of oak woodlands and oak/grass, including 9.7 acres within the proposed Mission Village project site (see **Table 4.3-8**). It is anticipated that present and reasonably foreseeable development within the watershed also would result in impacts to oak woodland and oak/grass vegetation communities, but these impacts can not be quantified with existing information. Note also that, generally speaking, most of the existing and future projects in the watershed occur or would occur on slopes of 0 to 20 percent, as these lower slopes are easier to grade and build upon than are steeper slopes, and are often adjacent to areas already developed. For example, in Los Angeles County, of the 6,774 acres of coastal scrub located on land zoned for development, 6,603 acres (97 percent) occur on slopes of 0 to 20 percent.

The RMDP/SCP project area Comprises a Small Proportion (0.5 percent) of the Santa Clara River Watershed. The RMDP/SCP project area— defined as implementation of the RMDP/SCP project and buildout of the Specific Plan, VCC, and Entrada planning areas, which includes the Mission Village project site -- would affect 0.5 percent (5,590 acres of approximately 1,038,100 acres) of the vegetation communities and land covers that are in the watershed (**Table 4.3-23**). The RMDP/SCP project is confined to a substantially urbanized area of one sub-basin— the Eastern sub-basin (sub-basin 3)—which has the most existing developed uses in the watershed (**Figure 4.3-19**). Nonetheless, this sub-basin supports several federal- and/or state-listed threatened and endangered species, such as unarmored threespine stickleback, arroyo toad, least Bell's vireo, and San Fernando Valley spineflower. Development in this sub-basin increases the potential for cumulative effects to these species. The RMDP/SCP project is downstream of, and contiguous with, urban development in the City of Santa Clarita and the community of Valencia. The RMDP/SCP project would not affect the headwaters of the Eastern and Santa Felicia sub-basins (sub-basins 3 and 7, respectively). The RMDP study area includes approximately 5 miles of the Santa Clara River mainstem (6 percent of the overall mainstem total); 1.5 of the 5 miles occurs within or adjacent to the

1054 UCSB, *California Gap Analysis Project.*

Mission Village project site. The entire Santa Clara River mainstem is 86 miles long;[1055] approximately 48 miles within the County of Los Angeles and 38 miles within the County of Ventura.

As shown in **Table 4.3-23**, the great majority of the SCRW watershed is currently undeveloped. Approximately 4.6 percent of the SCRW has been converted to agricultural, industrial, commercial, and urban uses. Based on the project lists from the affected jurisdictions in the watershed (including the RMDP/SCP project, and encompassing the proposed Mission Village project) a total of about 3.6 percent (37,890 of 1,038,100 acres) of vegetation communities and land covers in the SCRW are expected to be developed at some point in the future. Adding this to existing development (approximately 47,300 acres) would result in a total cumulative impact of approximately 8.2 percent (85,000 acres of 1,038,100 acres) of the SCRW. Without accounting for past, present, or reasonably foreseeable mitigation, the RMDP/SCP project's individual contribution to the above impacts to vegetation communities and land covers, the estimated loss of vegetation communities and land covers in the SCRW could be a potential significant cumulative impact.

Past, present, or reasonably foreseeable mitigation, other than for the RMDP/SCP project, is difficult to estimate within the context of this cumulative analysis because of the variety of size, type, and impact of each past, present, or reasonably foreseeable project. In particular, for upland vegetation communities (e.g., coastal scrub, chaparral, and grassland), depending on whether the impact is significant, mitigation in terms of replacement acreage may or may not have been, or be, required. Without a state- and/or federally-listed species inhabiting impacted areas (e.g., coastal California gnatcatcher occupation of coastal scrub), regulation of impacts of upland vegetation communities, and requirements for mitigation are variable. Projects that have special-status vegetation communities and/or species on site often have and would require some set aside of open space. In addition, some development projects may be required to provide habitat conservation areas.

For state and federal jurisdictional wetlands (including riparian) subject to regulation under Fish and Game Code section 1600 et seq. and Clean Water Act (CWA) section 404,[1056] CDFG and Corps implement "no net loss" policies as part of their respective permitting process for impacts to wetlands. California Executive Order W-59-93 established a State Wetland Conservation Policy (SWCP) that provides for the preservation and protection of wetland communities.[1057] A central goal of the SWCP is to ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreages and values. Similarly, per a 1990 Memorandum of Agreement (MOA) between the EPA and the Corps to demonstrate compliance with the CWA section 404(b)(1) guidelines, it is the policy of the Corps to achieve the goal of no overall net loss of wetlands

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1055 The Nature Conservancy, *Santa Clara River Upper Watershed Conservation Plan* (2006).

1056 33 U.S.C. Sec. 1251 et seq.

1057 State of California Executive Department, Executive Order W-59-93 (Sacramento, California: State of California, 1993).

functions and values/services, although it is recognized in the MOA that no net loss of functions and values/services may not be achieved in every permit action.[1058] With these policies in place, it is reasonable to assume that the permanent cumulative impacts to jurisdictional wetlands would be substantially less than estimated for this analysis.

Oak woodlands also receive protection from county ordinances and CEQA itself (Pub.Res.Code ~~Section~~§ 21083.4). As described in ~~**subsection**~~**Subsection 4.3.7.a.2.b**, Oaks, the County of Los Angeles Oak Tree Ordinance (CLAOTO) regulates impacts to oak trees with trunks that are at least 8 inches in diameter (or that have two trunks totaling at least 12 inches in diameter) as measured 4.5 feet above natural ground.[1059] CLAOTO requires that all potential impacts to regulated oak trees be reported in a detailed oak tree report and usually requires mitigation as a condition of an Oak Tree Permit issued by the County. Ventura County also has "Tree Protection Regulations"[1060] that govern impacts to oak trees in unincorporated areas of the County that are at least 9.5 inches in circumference (or that have two or more trunks with at least one of the trunks 6.25 inches in circumference) as measured at 4.5 feet above the ground. Impacts to oak trees in Ventura County are mitigated per the Ventura County Non-Coastal Zoning Ordinance section 8107-25.10 - Offsets for Altered, Felled, or Removed Trees, which requires a minimum 1:1 ratio of mitigation.

In addition, CEQA, through Public Resources Code section 21083.4, requires that counties analyze and mitigate significant impacts to oak woodlands. Under this Section, an "oak" is defined as a "native tree species in the genus Quercus, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height." Although, the statute does not provide a definition of "oak woodland," Public Resources Code ~~Section~~§ 12220(g) provides helpful guidance. It defines "forest land" – which would include oak woodland— as any "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

Using Section 12220(g) as a guide, this EIR defines "oak woodland" as an area with at least 10percent cover by oak trees with an understory of non-grass vegetation and at least 20percent cover by oak trees with an understory of grass vegetation. Oak/grass includes areas where oak trees comprise between 10 percent and 20 percent of the total cover with an understory of grass vegetation. As part of this EIR's Vegetation Communities analysis, biologists surveyed the site and identified all oak woodlands meeting this definition. Note that these surveys not only captured

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1058 EPA (Environmental Protection Agency) and U.S. Army (U.S. Department of the Army), *Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation under the Clean Water Act Section 404(b)(1) Guidelines* (February 6, 1990).

1059 County of Los Angeles, Municipal Code, Title 22, Chapter 56, Part 16: Oak Tree Permits, Sections 2050 et seq.

1060 County of Ventura, Article 7, Section 8107-25: Tree Protection Regulations.

the oak woodland habitat, but also the entire range of oak trees in terms of size and maturity, including all trees with trunk diameters of five (5) inches or more, measured at breast height, as required under Public Resources Code 21083.4(a). These surveys indicate that the project site supports 37.3 acres of oak woodland, as defined.

Based on the proposed grading plan, 7.8 acres of coast live oak woodland would be developed (including permanent and temporary impacts) and 1.9 acres of valley oak/grass would be developed (including permanent and temporary impacts), for a total of 9.7 acres of impact. This is considered a significant cumulative contribution to a significant effect, thus triggering the mitigation requirements set forth in Public Resources Code section 21083.4.

To address the Mission Village project's impacts on oaks and oak woodlands, this EIR proposes a three-part mitigation strategy that incorporates (1) planting replacement trees, per the requirements of CLAOTO and previously incorporated measure SP-4.6-48; (2) additional replacement ratios recommended in this EIR for impacts to oak trees and oak woodlands where they occur within stream channels falling under CDFG and Corps jurisdiction, per 1600 and 404 (Mitigation Measure MV 4.3-31); and (3) additional measures recommended in this EIR for tree replacement or woodland restoration/enhancement to mitigate for oak trees and woodland occurring in uplands outside CDFG and Corps jurisdiction at a minimum ratio of 2:1 (Mitigation Measure MV 4.3-50). These mitigation measures not only ensure that the Mission Village project complies with CLAOTO and Public Resources Code section 21083.4, they ensure that the project's contribution to cumulative impacts on oaks and oak woodlands will be less than cumulatively considerable.

Of the approximately 85,200 acres that are either developed currently or, based on the project list, expected to be developed in the foreseeable future, the RMDP/SCP project would consume 5,590 acres of the approximately 37,890 acres of impact from recent past, present, and reasonably foreseeable future projects. CEQA requires an analysis of whether this contribution to a significant impact can be rendered less than "cumulatively considerable," as that term is defined under CEQA:[1061]

> An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable *if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.* The Lead Agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable. *(Emphasis added.)*

1061 14 C.C.R. Sec. 15130.

As to the proposed Mission Village project, the Newhall Ranch Specific Plan Program EIR and this EIR impose measures on the applicant to mitigate the loss of vegetation communities. These measures include: (1) replacing the functions and values/services of riparian vegetation communities that may be lost through construction; and (2) the dedication and maintenance of existing natural lands in the Open Area, River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area, totaling approximately 9,753 acres. Mitigation also includes compliance with permits from federal and state agencies for impacts to wetlands and water quality (i.e., NPDES and section 401 water quality certifications, section 404 individual permits, and section 1602 Streambed Alteration Agreements). Mitigation for impacts to wetlands would achieve the goals of CDFG's and Corps' "no net loss" policies described above and, therefore, would result in no cumulative contribution to impacts to jurisdictional wetlands. Overall, these mitigation measures would offset the proposed Mission Village project's direct removal of ~~most~~ vegetation communities in the proposed project area. The measures also would offset potential secondary impacts to purple needlegrass grassland outside of the Mission Village project area.

~~Thus, with~~With the mitigation required by the Newhall Ranch Specific Plan Program EIR and with the additional mitigation recommended in this EIR (see ~~**subsection**~~**Subsection 4.3.10,** Project Mitigation Measures), the Mission Village open space areas, in association with the greater RMDP/SCP project area, would result in a large-scale, permanent and managed open space system, which would ensure long-term conservation of coastal sage scrub and other vegetation communities in large, unfragmented tracts of land (i.e., Open Area, River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area) within the watershed. Thus, the proposed Mission Village project would not result in a cumulatively considerable contribution to potential significant cumulative impacts on all of the vegetation communities and land covers in the SCRW~~, except for coastal sage scrub. (See **subsection.**~~ (See **Subsection 4.3.12.b** of this EIR.)

~~The California GAP vegetation[1062] and the project-level mapping for the RMDP/SCP project area include approximately 174,000 acres of coastal scrub in the SCRW, which includes the Mission Village project site (see **Table 4.3-8**). Without accounting for the RMDP/SCP project, other past, present, and reasonably foreseeable future projects within the SCRW result in a loss of approximately 19,000 acres of coastal scrub since the California GAP data were compiled (1998). Beginning well before 1998, coastal scrub had been extensively cleared throughout much of California for various land use changes (mainly agriculture and urbanization). For example, Westman[1063] analyzed historic losses of coastal scrub state-wide and estimated that about 15 percent of its original acreage was still extant at that time. Most coastal scrub occurs on relatively gentle slopes (0 to 20 percent) where land use conversions for agriculture and development tend to be concentrated because these lands are more developable. The SCRW has been less extensively developed than other regions in Southern California and coastal scrub loss in the~~

~~1062 UCSB, *California Gap Analysis Project.*~~

~~1063 W.E. Westman, "Diversity Relations and Succession in Californian Coastal Sage Scrub," *Ecology* 62 (1981), 439–455.~~

~~watershed probably has been proportionally less than Westman's[1064] state-wide estimate. Still, it is likely that much of the upland agricultural land mapped by the 1998 California GAP project in the SCRW supported coastal scrub habitat prior to these land use conversions. The acreage of coastal sage scrub lost prior to 1998, however, cannot be quantified for this analysis.~~

~~Most coastal scrub alliances and associations mapped on the~~ **~~RMDP/SCP project site~~**~~[1065] are ranked as G4S4 by CDFG,[1066] meaning that they are "apparently secure" both globally and within California, "but factors exist to cause some concern; i.e., there is some threat." For coastal scrub, the primary concerns are the extensive and ongoing habitat loss.[1067] Further, coastal scrub is used almost exclusively by the federally-listed threatened coastal California gnatcatcher,[1068] and many other special-status species occur regularly in coastal scrub.[1069] In addition to land use conversions, much coastal scrub vegetation has been lost due to secondary effects of population increases and land development throughout Southern California. These effects include habitat fragmentation, invasive non-native species, livestock grazing, off-highway vehicles, altered fire regime, and perhaps air pollution.[1070] Some coastal scrub vegetation occurs on National Forest lands, where land use management is generally compatible with habitat conservation, but these areas tend to be at its upper elevational limits, where many of the special-status species associated with coastal sage scrub are less common or absent.[1071]~~

~~Based on this analysis, the RMDP/SCP project and other past, present, and reasonably foreseeable future projects would result in a cumulative loss of approximately 20,500 acres of coastal scrub in the SCRW. This loss represents about 54 percent of the total 37,890 acres loss of all vegetation communities in the SCRW due to past, present, and reasonably foreseeable projects, including the RMDP/SCP project; i.e., most of this development in the watershed~~

~~1064 Westman, "Diversity Relations and Succession in Californian Coastal Sage Scrub," 439–455.~~

~~1065 The RMDP/SCP project includes all development, including RMDP infrastructure, the Specific Plan, VCC, and Entrada.~~

~~1066 California Department of Fish and Game, Vegetation Classification and Mapping Program, List of California Vegetation Alliances (October 22, 2007).~~

~~1067 Westman, "Diversity Relations and Succession in Californian Coastal Sage Scrub," 439–455; J.F. O'Leary, "Californian Coastal Sage Scrub: General Characteristics and Considerations for Biological Conservation," in *Endangered Plant Communities of Southern California: Proceedings of the 15th Annual Symposium*, ed. A.A. Schoenherr (Claremont, California: Southern California Botanists, 1990), 24–41.~~

~~1068 J.L. Atwood, "California Gnatcatchers and Coastal Sage Scrub: The Biological Basis for Endangered Species Listing," in *Proceedings of the Symposium: Interface between Ecology and Land Development in California*, ed. J.E. Keeley (Los Angeles, California: Southern California Academy of Sciences, 1993), 149–170.~~

~~1069 F.W. Davis, P.A. Stein, and D.M. Stoms, "Distribution and Conservation Status of Coastal Sage Scrub in Southwestern California," *Journal of Vegetation Science* 5 (1994), 743–756.~~

~~1070 J.F. O'Leary, "Coastal Sage Scrub: Threats and Current Status," *Fremontia* 23(4) (1995), 26–31; R.A. Minnich and R.J. Dezzani, "Historical Decline of Coastal Sage Scrub in the Riverside–Perris Plain, California," *Western Birds* 29 (1998), 366–391; P.W. Rundel, "Sage scrub," in *Terrestrial Vegetation of California*, ed. M.G. Barbour, T. Keeler-Wolf, and A.A. Schoenherr (Berkeley, California: University of California Press, 2007), 208–228.~~

~~1071 J.R. Stephenson and G.M. Calcarone, *Southern California Mountains and Foothills Assessment: Habitat and Species Conservation Issues* (Albany, California: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture, 1999).~~

~~has or will take place on land dominated by coastal scrub. The RMDP/SCP project's direct (RMDP/SCP) and indirect (buildout of the Specific Plan, VCC, and Entrada planning areas, including Mission Village) effects would result in the permanent removal of approximately 1,520 acres of coastal scrub communities, which includes the Mission Village project area (see **Table 4.3-8**), or about 35 percent of the 4,340 acres of coastal scrub communities present in the RMDP/SCP project area; proportionally lower than the overall estimated loss, but still substantial. Also, when considered from a landscape level, the coastal scrub community on site represents a relatively large, intact tract within this portion of the SCRW. Due to coastal scrub's high habitat value for a variety of special-status plants and wildlife, the extensive coastal scrub losses in Southern California prior to 1998, and the substantial acreage lost as a result of past, present, and reasonably foreseeable projects, including the RMDP/SCP project, the loss of 20,500 acres of coastal scrub could be a potential significant cumulative effect. The proposed Mission Village project's contribution to this loss would be cumulatively considerable.~~

~~Whether the proposed Mission Village project's cumulatively considerable contribution to the potential significant cumulative effect of coastal scrub loss in the SCRW can be reduced to a level less than significant is considered in the broader context of conservation planning for the community. In some regions of Southern California, regional planning projects have been designed to limit continued losses of coastal scrub (e.g., state Natural Community Conservation Planning (NCCP) and federal Habitat Conservation Plan (HCP) programs). These programs are designed to preserve large, contiguous tracts of coastal scrub and other natural vegetation communities in permanent managed open space areas and to minimize fragmentation and other secondary impacts to these preserved areas to mitigate for the losses that do occur. There is currently no similar comprehensive, large-scale planning effort in the SCRW to ensure long-term coastal scrub conservation in large, unfragmented tracts within the watershed.~~

~~In addition, long-term secondary (off-site) impacts to coastal scrub would occur near developed areas after project buildout. These landscape-level impacts and "edge" effects include the increased risk of non-native, invasive plant and animal species (e.g., Argentine ants), human disturbance (e.g., trampling, illegal trails), and shortened fire intervals that could result in type conversion of coastal scrub to annual grassland. These RMDP/SCP project-induced secondary impacts to coastal scrub are mitigated at the project-level to a level less than significant primarily through dedication of lands in the High Country SMA/SEA 20, River Corridor SMA/SEA 23, Salt Creek area, which include approximately 1,900 acres of coastal scrub, as well as preservation of smaller patches in Open Areas within or adjacent to the proposed development areas.~~

~~Despite implementation of the mitigation measures required by the Newhall Ranch Specific Plan Program EIR and recommended by this EIR, implementation of the RMDP/SCP project would result in a net loss of approximately 1,520 acres of coastal scrub, which includes the Mission Village project. In the (1) context of the extensive historical losses of coastal scrub in Southern California, the estimated loss of 20,500 acres in the watershed as a result of the proposed Mission Village project and other past, present, and reasonably foreseeable future projects within the SCRW; (2) the importance of this habitat to a variety of special-status plants and animals; and (3) the absence of a~~

~~regional conservation effort to conserve or manage remaining coastal scrub in the watershed, the proposed Mission Village project would result in a cumulatively considerable contribution to a potential significant and unavoidable cumulative loss of coastal scrub in the SCRW.~~

(2) Impacts to Common Wildlife Organized by Species Guilds and Other Associations

The cumulative impact analysis for common wildlife also uses the "project list" approach for the watershed, as applied to the wildlife guilds[1072] shown in **Table 4.3-24**. For each wildlife guild or other association, the habitat relationships were analyzed in the same manner as the vegetation communities and land covers described above in ~~**subsection**~~**Subsection 4.3.11.c.1**.

[1072] Species guilds are groups of species that use or exploit similar resources or have similar life history characteristics even though they may represent different taxonomic groups.

Table 4.3-24
Summary of Cumulative Impacts to Wildlife Guilds in the Santa Clara River Watershed (GAP Data are Approximate)[1]

Wildlife Guild	Habitat Relationships[2]	Total Acres of Habitat in Watershed	Permanent Direct and Indirect Impact Acres of RMDP/SCP Project	Total Impact Acres in Watershed From Present and Reasonably Foreseeable Projects (Not Including RMDP/SCP Project)	Estimated Cumulative Impact Acres in Watershed Including RMDP/SCP Project Plus Present and Reasonably Foreseeable Projects
Insect Guild; Bat Guild; and Overall General Impacts	Coastal scrub Chaparral California annual grassland Riparian Oak and walnut woodland Agriculture Disturbed	836,000	5,590	32,300	37,890
Reptile—Low Mobility Guild Mammal—Low Mobility	Coastal scrub Chaparral California annual grassland	747,000	3,050	31,000	34,050
Reptile and Amphibian--Semi-Aquatic Guild Bird-Riparian	Riparian	25,000	230	800	1030
Bird-Upland Scrub and Chaparral	Coastal scrub Chaparral	725,000	1,980	31,000	32,890
Bird-Upland Grassland	Non-native grassland	22,000	1,070	50	1,120
Bird-Upland Woodland	Oak woodland	5,170	95	0	95
Mammal-High Mobility	Coastal scrub Chaparral Riparian Oak woodland	755,000	2,300	32,000	34,300

[1] Acreages were not quantified for the Mollusk guild (including aquatic and terrestrial species) because impacts are site-specific or limited to scattered microhabitat areas; for the Fish guild because the distribution of the species in the guild is limited to the Santa Clara River; and for the Bird -- Raptor and Mammal -- Moderate Mobility guilds because habitat used by the species in these guilds is too diverse to generate a broad, watershed-scale estimate.
*[2] Acreages based on California GAP Vegetation Communities (UCSB, California Gap Analysis Project) for areas outside of the RMDP/SCP project boundaries and on the project-level data for areas within the SCP project area boundaries. Acreages are based on the totals reported in **Table 4.3-23** and are rounded to nearest 1,000 acres for totals greater than 20,000 acres at watershed level and to nearest 10 acres for project-level impacts.*

The Santa Clara River Watershed is Relatively Undeveloped and Has Substantial Existing and Designated Open Space Providing Habitat For Wildlife. As shown in **Table 4.3-23**, approximately 991,000 acres of the SCRW are currently undeveloped and capable of providing habitat for wildlife.[1073] With regard to vegetation communities and land covers mapped in the RMDP/SCP project area that also occur elsewhere in the watershed, the watershed includes approximately 836,000 acres. The amount of undeveloped habitat for the different wildlife guilds in the SCRW ranges from approximately 5,200 acres of oak woodlands for the Bird—Upland Woodland guild to approximately 836,000 acres for the Insect and Bat guilds.[1074] This latter figure reflects the fact that insects and bats can use virtually all the undeveloped habitat in the SCRW. Of the approximately 991,000 acres of undeveloped land in the SCRW, approximately 734,000 acres are existing or classified open space (**Figure 4.3-22**), including 635,000 acres of lands designated for public use. Of the 734,000 acres of existing or classified open space, approximately 593,000 are comprised of the types of vegetation communities and land covers occurring on the RMDP/SCP project.

Cumulative Net Increase in Jurisdictional Waters and Wetlands Providing Wildlife Habitat. Waters and wetlands are critical resources for several of the wildlife guilds. The guilds most reliant on waters/wetlands throughout the SCRW include the Reptile and Amphibian—Semi-Aquatic guild, the Fish guild, the Bird—Riparian guild, and the Bird—Raptor guild (primarily for raptor nesting habitat). As shown in **Table 4.3-24, Summary of Cumulative Impacts to Wildlife Guilds in the Santa Clarita River Watershed,** a small proportion of the habitat used by these guilds have been or would be affected by development in the SCRW. Also, according to the Santa Clara River Watershed Study,[1075] mitigation measures for activities permitted by CDFG and Corps between 1988 and 2006 in Los Angeles and Ventura counties have resulted in a cumulative net increase in jurisdictional waters/wetlands area in the SCRW. These estimated net increases are consistent with CDFG's and Corps' "no net loss" policies for wetlands discussed above. Although the Watershed Study acreages assume 100 percent mitigation success, and although it is likely that some of the mitigated acreage has not been successful for various reasons (e.g., poor design, inappropriate soils or hydrology, poor maintenance), it is reasonable to conclude that there has been no net cumulative loss of waters/wetland acreage from agency-permitted activities in the watershed since 1988 because of the estimated net increases. However, as concluded by Ambrose et al.,[1076] acreage losses and gains resulting from agency-permitted activities do not always reflect wetland functions and values/services, and hence, wildlife

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1073 This approximately 991,00 acres figure is derived by subtracting the number of existing development acres (47,270) from the total size of the entire SCRW (1,038,100 acres).

1074 This does not mean, however, that species in each guild actually use all of the available habitat; nor does it mean that species in each guild have been observed on each acre of available habitat. For example, agricultural and disturbed lands are considered habitat for the Insect and Bat guilds and, therefore, are included in the total acreage of habitat for these guilds; however, both insects and bats tend to concentrate activities in microhabitats within the larger landscape and, therefore, are not uniformly distributed through the 836,000 acres.

1075 Dudek, *Santa Clara River Watershed Study*.

1076 R.F. Ambrose, J.C. Callaway, and S.F. Lee, *An Evaluation of Compensatory Mitigation Projects Permitted Under Clean Water Act Section 401 by the California State Water Quality Control Board, 1991–2002* (August 2006).

habitat value. Based on Ambrose et al.'s [1077] review of 143 section 401 permits across 12 regional Water Boards and subregions in California, approximately 27 percent of mitigation acreage consisted of drier riparian and upland habitats that were outside of jurisdictional areas. Wildlife species that rely on wetter habitats, such as semi-aquatic amphibians and reptiles, may not use the drier riparian and wetland habitats to the same extent or for certain phases of their life cycle (e.g., reproduction).

Although the success of past permitted activities likely has been mixed with regard to mitigation for impacts to waters and wetland functions and values/services, new projects are approved and constructed with updated technologies for protecting and restoring waters/wetlands. These new technologies are expected to enhance the functions and values/services of the waters and wetlands within the SCRW. To this end, the Mission Village project applicant would implement conservation measures that are designed to permanently preserve the Santa Clara River corridor and portions of tributary drainages through the proposed Mission Village project reach and to protect and manage the waters/wetlands on the proposed Mission Village project site. These conservation measures include previously incorporated mitigation measures from the Newhall Ranch Specific Plan Program EIR and additional mitigation measures recommended by this EIR. The River Corridor SMA/SEA 23 is approximately 977 acres and includes approximately 332 acres of combined southern cottonwood-willow riparian forest and southern willow scrub. The River Corridor SMA/SEA 23 provides restoration and enhancement opportunities for riparian vegetation; and all riparian vegetation permanently removed from the proposed Mission Village project would be replaced in kind at a minimum 1:1 ratio for Low Reach Value vegetation (e.g., arrow weed scrub) up to a 4:1 ratio for High Reach Value southern cottonwood-willow riparian forest (e.g., see **Mitigation Measure 4.3-31** (wetlands mitigation plan and riparian restoration activities on the project site) and **Table 4.3-11** in ~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures). Implementation of these mitigation measures would result in a net increase of wetland/riparian habitat and are expected to improve the overall value of the River corridor and associated aquatic, semi-aquatic, and riparian wildlife guilds. In addition, conservation measures include protection and enhancement of riparian and wetland habitat in the High Country SMA/SEA 20 and Salt Creek area, as well as in the Open Area, with associated wetland mitigation plans subject to the approval of the Corps and CDFG that ensure no net loss of similar functions and values/services (see **Mitigation Measures MV 4.3-1** (restriction of construction activities in the riverbed to specified areas), **MV 4.3-23** (development of a conceptual wetlands mitigation plan), and **MV 4.3-31 through 4.3-43** (wetlands mitigation plan and riparian restoration activities on the project site) in ~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures).

Land Use Classification and Present and Reasonably Foreseeable Projects. Similar to **Table 4.3-23** for vegetation communities and land covers, **Table 4.3-24** provides a breakdown of the estimated cumulative loss of wildlife habitat (by guild) that would result from (1) the RMDP/SCP project, and (2) present and reasonably

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1077 Ambrose, Callaway, and Lee, *Evaluation of Compensatory Mitigation Projects.*

foreseeable development as set forth in the "project lists" provided by the various land use jurisdictions within the SCRW.

Present and reasonably foreseeable projects, including the RMDP/SCP project, would result in habitat losses ranging from approximately 980 acres for the Reptile and Amphibian, Semi-aquatic and Bird, and Riparian guilds, to approximately 38,000 acres for the Insect and Bat guilds. Cumulative impacts to oak woodlands could not be quantified due to the coarseness of the vegetative mapping. Based on the GAP data[1078] alone, there would be 0 acres of impacts to habitat for the Bird— Upland Woodland outside of the RMDP/SCP project boundaries. However, based on project-level mapping, there would be 95 acres of habitat loss for this guild in the RMDP/SCP project area. There are almost certainly oak woodlands on the sites of other present and reasonably foreseeable projects and, consequently, it is expected that there would be impacts to oak woodlands resulting from these projects, even though the lack of refined mapping prevents quantification of those impacts. As discussed above, mitigation for loss of upland habitats such as coastal scrub, chaparral, and grassland due to present and reasonably foreseeable projects is uncertain. While CDFG and Corps "no net loss" policies for wetlands, as well as the oak mitigation required by Los Angeles and Ventura counties, are intended to offset impacts to these resources, some net loss of function and value for wildlife, such as semi-aquatic amphibians and reptiles, could occur even if there is no net loss of acreage. Due to the likely permanent net loss of several tens of thousands acres of upland habitats (e.g., coastal scrub, chaparral, and grassland) and the potential loss of some functions and values/services of riparian, wetland, and oak woodland habitats for wildlife, the cumulative impact on wildlife guild habitats could be potentially significant.

The RMDP/SCP Project's Contribution to the Potential Cumulative Impact. The RMDP/SCP project's contribution to this potential cumulative impact, broken down by wildlife guild, ranges from 95 acres for the Bird—Upland Woodland guild to 5,590 acres for the Insect and Bat guilds. By proportion, the RMDP/SCP project's largest contribution to the potential cumulative impact on habitat is 1,070 acres of the total 1,120 acres for the Bird—Upland Grassland guild. Without accounting for mitigation, the RMDP/SCP project's contribution to the potential cumulative impact on wildlife guilds could be cumulatively considerable. However, the mitigation measures recommended in this EIR, when added to those imposed by the Newhall Ranch Specific Plan Program EIR, render the RMDP/SCP project's contribution "less than cumulatively considerable," as that term is used in the State CEQA Guidelines.[1079] These mitigation measures include replacing the functions and values/services of riparian vegetation communities that may be lost through construction, as well as the dedication and maintenance of existing natural lands in the Open Area, River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area, totaling approximately 9,753 acres. Mitigation also includes compliance with permits from federal and state

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1078 UCSB, *California Gap Analysis Project.*

1079 California Code of Regulations, title 14, section 15130, subdivision (a)(3).

agencies for impacts to wetlands and water quality (i.e., NPDES and section 401 water quality certifications, section 404 individual permits, and section 1602 Streambed Alteration Agreements). These mitigation measures would reduce the impacts of the direct removal of wildlife habitats in the RMDP/SCP project area. Thus, with the mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIR, the RMDP/SCP project area, including the proposed Mission Village project, would not result in a cumulatively considerable contribution to potential significant cumulative impacts to wildlife guilds in the SCRW.

(3) Impacts to Wildlife Habitat Linkages, Wildlife Corridors, and Wildlife Crossings

This subsection evaluates, on a guild-by-guild basis, the RMDP/SCP project's contribution to potential cumulative impacts on wildlife habitat linkages, wildlife corridors, and wildlife crossings. Note that the analysis primarily focuses on watershed-level habitat linkages rather than on a project-level movement corridors and connectivity. Because project-level data from off-site projects are not available, it is speculative to state whether and to what extent project-specific movement corridors and crossings on those properties would be affected by present and future projects. However, it can be assumed that other projects with broad impacts over a landscape would be expected to constrain wildlife use and distribution on site, and have a potential to block movement through certain areas, including through established wildlife corridors and crossings.

As described in **~~subsection~~Subsection 4.3.9.b.1.e**, Wildlife Habitat Linkages, landscape habitat linkages in the SCRW consist of relatively large open space areas that (1) contain natural habitat, and (2) provide connection between at least two larger adjacent open spaces that can provide for both diffusion and dispersal of many species. Linkages can form contiguous tracts of habitat when adjacent to other open space areas. Large open space networks can be formed in this way to connect and conserve habitat throughout entire regions.[1080]

Figure 4.3-9 shows the conceptual regional open space connectivity identified by Penrod et al.[1081] that would provide for landscape-scale habitat connectivity between the Santa Susana Mountains to the south and the Los Padres National Forest to the north. These conceptual linkages encompass the High Country SMA/SEA 20 and the Salt Creek area within the RMDP/SCP project area and the Santa Clara River west of the RMDP/SCP project area. Penrod et al.[1082] developed this connectivity concept using a "least cost analysis."[1083] According to Penrod et

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[1080] A.F. Bennett, *Linkages in the Landscape: The Role of Corridors and Connectivity in Wildlife Conservation* (World Conservation Union, 2003).

[1081] K. Penrod et al., *South Coast Missing Linkages Project: A Linkage Design for the Santa Monica-Sierra Madre Connection (*Idyllwild, California: South Coast Wildlands, in cooperation with the National Park Service, Santa Monica Mountains Conservancy, California State Parks, and The Nature Conservancy, 2006).

[1082] Penrod et al., *South Coast Missing Linkages Project*.

[1083] A "least cost analysis" refers to the calculation of the movement path that has the lowest net impact on a species in relation the factors such as metabolic costs, available shelter and food, and risk factors such as roads; the path that results in the lowest risk of mortality.

al.,[1084] the High Country SMA/SEA 20 and Salt Creek area, along with regional open space conservation areas and the limitations on development imposed by initiatives such as "SOAR,"[1085] constitute important components of a regional linkage design—one that would connect the Santa Monica Mountains, the San Gabriel Mountains, and the Sierra Madre Mountains.

The High Country SMA/SEA 20 and Salt Creek area within the RMDP/SCP project area provide a key component of the east-west linkage that crosses Interstate 5 and connects to the Angeles National Forest in the San Gabriel Mountains to the east and to Ventura County SOAR open space to the southwest. They also provide a key component of the north-south linkage between the Santa Susana Mountains and the "Fillmore Greenbelt" to the northwest that further links to the Los Padres National Forest and the Angeles National Forest to the north. Most of the upland wildlife species probably use the High Country SMA/SEA 20 and Salt Creek area extensively.

North-south movement between the Santa Susana Mountains and the "Fillmore Greenbelt"[1086] requires wildlife to cross SR-126. **Figure 4.3-23, Wildlife Connectivity Crossings**, shows the three existing crossings in Ventura County west of the RMDP/SCP project area (including the Mission Village project site) that can be accessed by wildlife moving along the Santa Clara River. These crossings, which would not be affected by the RMDP/SCP project, are arched culverts large enough for vehicles and wildlife to pass through. These crossings measure about 4.4 meters (14 feet, 7 inches) in height, 7.5 meters (25 feet) in width, and 51.8 meters (170 feet) in length, resulting in an openness factor of 0.65, which well exceeds the openness factor of 0.25 found by Donaldson to be adequate for white-tailed deer.[1087] The easternmost of these crossings would serve wildlife movement within and through the RMDP/SCP project area via the Salt Creek corridors, as well as Tapo Canyon in Ventura County.

The Mission Village project site includes potential north–south local wildlife corridors between Santa Clara River and the Santa Susana Mountains to the south. Under current conditions, the function of these potential wildlife corridors to facilitate north–south wildlife movement and access to and from the Santa Clara River is somewhat limited because a large portion of the Mission Village tract map area is currently used for agriculture and frequently

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1084 Penrod et. al., *South Coast Missing Linkages Project*.

1085 Save Open-Space and Agricultural Resources (SOAR) initiative passed by Ventura County voters in 1998 that amended the County's General Plan to limit development on agricultural, open space, and rural lands within Ventura County. See Ventura County, "Goals, Policies, and Programs," *General Plan* (2008), 6–8.

1086 The Fillmore Greenbelt is a voluntary agreement between the Ventura County Board of Supervisors and Fillmore regarding development of agricultural and/or open space areas beyond City limits. The Greenbelt is designed to protect open space and agricultural lands and reassure property owners located within these areas that lands will not be prematurely converted to agriculturally incompatible uses.

1087 B.M. Donaldson, *The Use of Highway Underpasses by Large Mammals in Virginia and Factors Influencing Their Effectiveness* (Charlottesville, Virginia: Virginia Transportation Research Council, 2005).

devoid of vegetative cover. Wildlife movement through the project site probably occurs mostly along the wooded canyons and through native habitat areas.

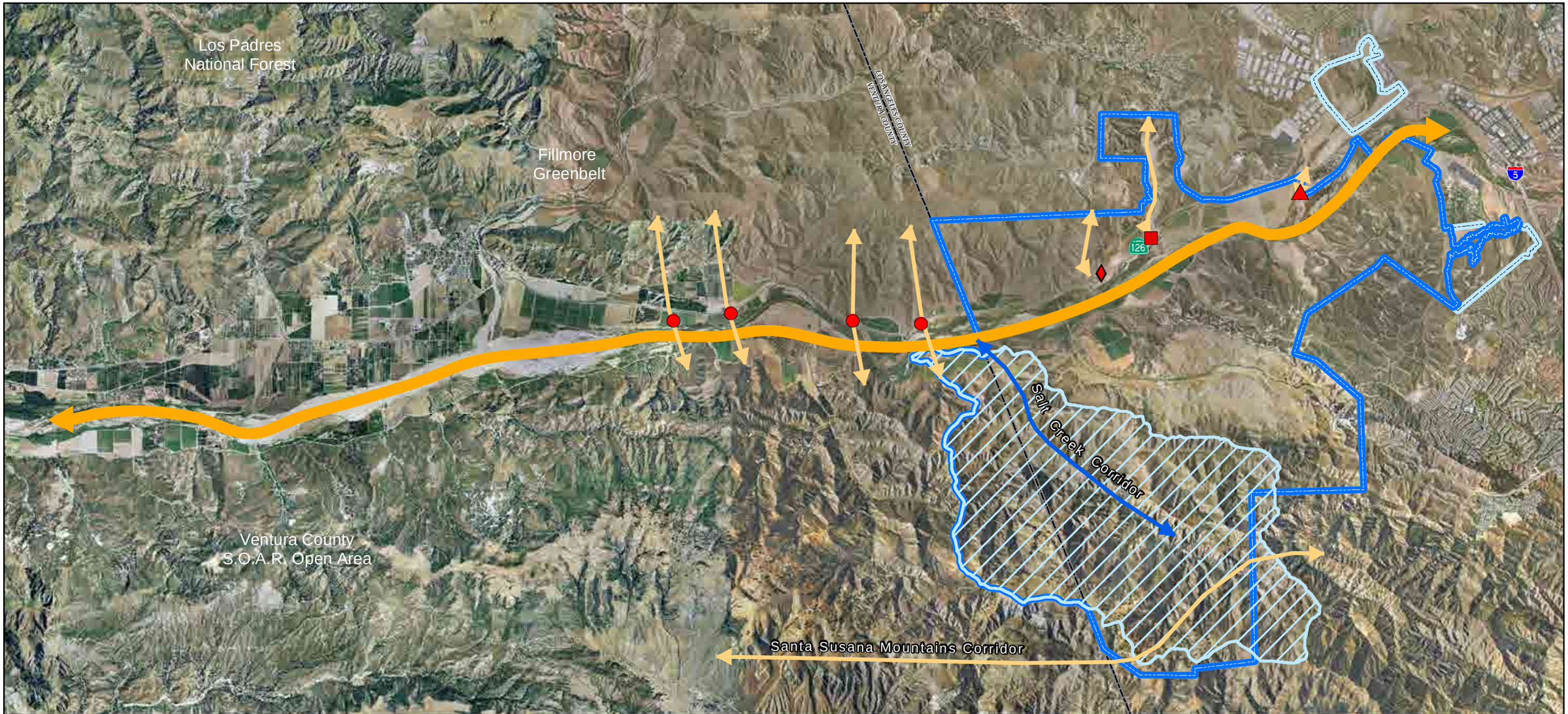
In addition to the High County SMA/SEA 20 and Salt Creek area, the Santa Clara River corridor, including the reach through the Mission Village project site, is a regionally important riparian and wetland resource, in part due to its role as a functioning wildlife corridor and habitat linkage for east-west wildlife movement. The 100-year floodplain of the River corridor that lies within the RMDP/SCP project area would be approximately 700 to 2,000 feet wide after development and thus would remain sufficiently wide to accommodate flood events while maintaining the existing mosaic of habitat types currently present along the river.[1088] Combined with upland natural open space adjacent to the River corridor, wildlife habitat along the corridor would be a minimum of 1,000 feet wide.

Specifically within the Mission Village project site, the River would be maintained as open space with a minimum width of about 1,000 feet. The RMDP[1089] provides for minimum 100-foot-wide "transition" areas between development and the River Corridor SMA/SEA 23, restricts recreational uses of the River Corridor SMA/SEA 23, and provides for long-term management to ensure that it continues to function as a habitat linkage and movement corridor. With the transition zones along the River, the overall width of natural habitat will be a minimum of approximately 1,200 feet wide. The River corridor will therefore maintain sufficient dimensions to convey a variety of larger, mobile wildlife species, such as mule deer, coyote, gray fox, bobcat, and mountain lion. It will also allow for dispersal of many smaller and less mobile species, including birds, small mammals, reptiles, and amphibians that live in the River Corridor. The Commerce Center Drive Bridge will somewhat constrict the Santa Clara River and corridor but for a rather short distance, about 100 feet. Commerce Center Drive Bridge would be approximately 1,250 feet long, 117 feet wide, and have a vertical clearance of 11 to 22 feet, which is more than adequate to allow for unconstrained movement of wildlife beneath the bridge. This is discussed in ~~**subsection**~~**Subsection 4.3.9.b.1.e**.

The Castaic/Hasley corridor (**Figure 4.3-24, Alternative 2 Impacts to RMDP/SCP Regional Wildlife Connectivity Corridors**), which is not located on the Mission Village project site, would also remain intact as Open Space/Open Area following implementation of the RMDP/SCP and buildout of the Specific Plan, VCC, and Entrada planning areas, including the proposed Mission Village project.

1088 Pacific Advanced Civil Engineering, Inc (PACE), *Newhall Ranch Resource Management Development Plan Floodplain Hydraulics Impacts Assessment - Santa Clara River* (Fountain Valley, California: PACE, 2009).

1089 The RMDP is incorporated by reference, as permitted in section 15150 of the *State CEQA Guidelines*. All referenced documents are available for public inspection and review upon request to: County of Los Angeles, Department of Regional Planning, 320 West Temple Street Los Angeles, California 90012 (Samuel Dea; (213) 974-6461) or Impact Sciences, Inc., 803 Camarillo Springs Road, Suite A-1, Camarillo, California 93012 (Susan Tebo; (805) 437-1900). Additionally, this document can also be obtained from the California Department of Fish and Game's website at http://www.dfg.ca.gov/regions/5/newhall/docs/.



Legend

- RMDP Boundary
- SCP Boundary
- County Boundary
- Salt Creek Watershed
- Castaic Creek
- Chiquito Canyon
- San Martinez
- Ventura County
- Wildlife Corridor
- River Corridor

0 0.5 1 2 Miles **APPROXIMATE SCALE IN MILES**

AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-23

Mission Village EIR

Wildlife Connectivity Crossings

DUDEK

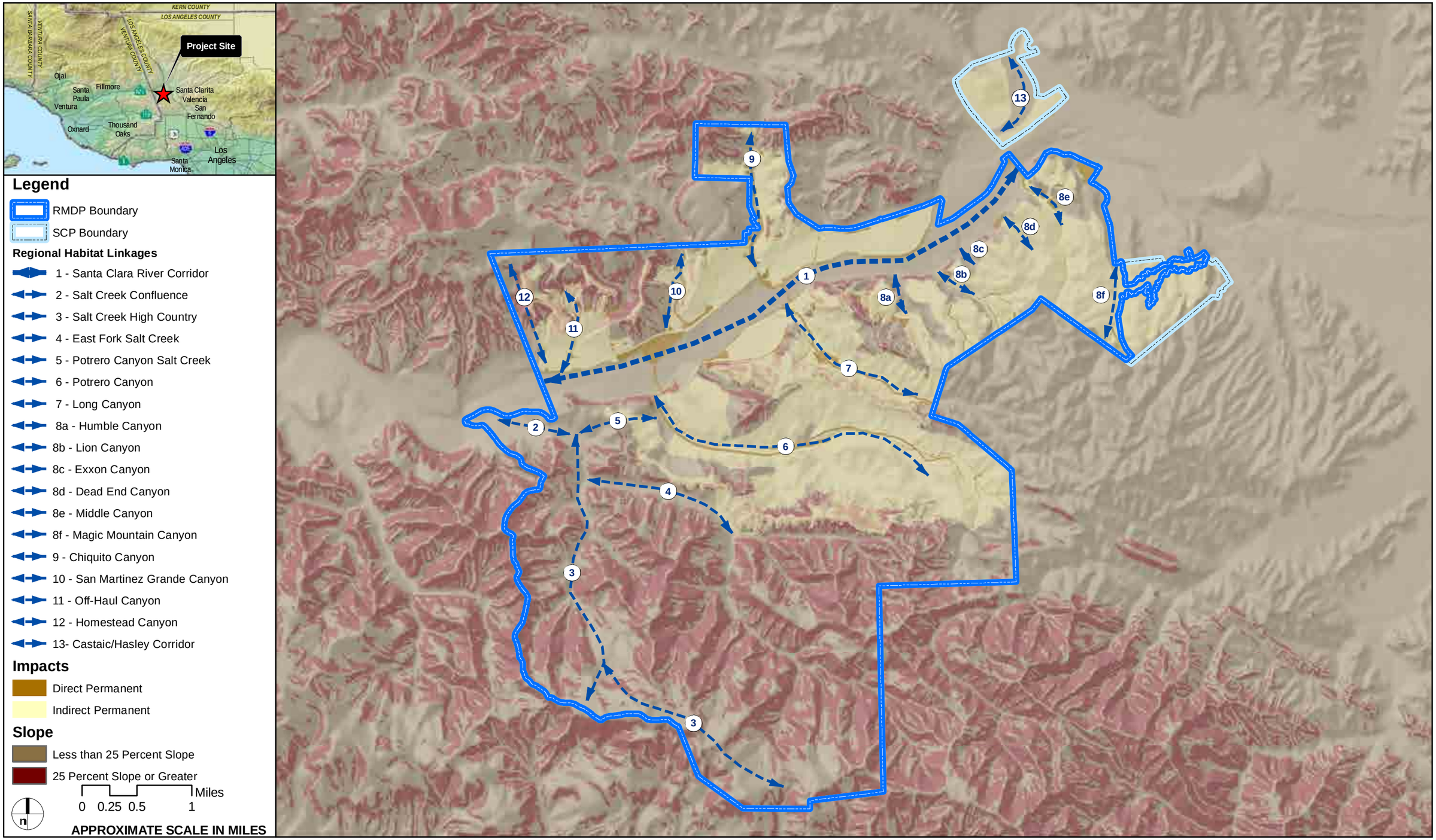


IMAGE SOURCE: USGS 24K Quad

FIGURE 4.3-24

Mission Village EIR

DUDEK

Alternative 2 Impacts to RMDP/SCP Regional Wildlife Connectivity Corridors

This corridor would allow for movement of many Mammal — High Mobility species (e.g., coyote, mule deer, and possibly mountain lion and bobcat), and would function as live-in habitat and movement habitat for the other species guilds. The Castaic/Hasley corridor would continue to have connectivity value between the Santa Clara River and upland habitats to the northeast of the RMDP/SCP project area extending to Castaic Lake and the Angeles National Forest.

Other existing habitat areas currently function as linkage habitat in the undeveloped landscape and may be used by wildlife for movement between the Santa Susana Mountains to the south and the Los Padres National Forest to the north. Some of these linkages would be somewhat constrained by buildout of the Specific Plan area, including Potrero Canyon and Long Canyon south of the River corridor and Chiquito Canyon and San Martinez Grande Canyon north of the River (**Figure 4.3-24**). These wildlife corridors are located west of the Mission Village project site.

The project's potential to cause cumulative impacts to wildlife landscape habitat linkages is assessed against the following significance criterion, as previously identified in ~~**subsection**~~**Subsection 4.3.9.a:** Will the proposed project, in combination with present and reasonably foreseeable development, interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors?

As discussed above, the Santa Clara River is an important regional habitat linkage in the SCRW. The combined High Country SMA/SEA 20 and Salt Creek area provide the most direct connections between the River corridor habitat and large upland habitat areas south of the River, and are those identified by Penrod et al.[1090] as important components of regional habitat connectivity. Notwithstanding the preservation of these key areas, the loss of approximately 5,590 acres associated with the RMDP/SCP project, including 1,854.5 acres associated with the Mission Village project area, and the approximately 32,300 acres of impacts from present and reasonably foreseeable projects, would reduce both the size and availability of linkages and corridors in the SCRW. This is particularly true for areas adjacent to the Santa Clara River where both agricultural practices and the development of commercial and residential developments have focused.

Open space, public land, and wildlife compatible uses within the SCRW include National Forest Service lands (both the Los Padres and Angeles National Forests), other designated public ownerships (e.g., BLM, State Parks), utility corridors, agricultural and pasture lands, and undeveloped private areas. The SCRW also includes commercial, industrial, and residential development. Water infrastructure including dams associated with Bouquet, Piru, and Castaic Creeks and diversion structures such as the Freeman diversion dam on the Santa Clara River are also

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[1090] Penrod et al., *South Coast Missing Linkages Project*.

present. The rapid expansion of population centers and urban growth in this region (particularly the Santa Clara Valley) has resulted in the continued loss of undeveloped lands, and the degradation of riparian and upland habitats that support populations of unique or rare species. Natural and wilderness areas in the SCRW, particularly near the Santa Clara River, are gradually being displaced by development, and wildlife movement corridors in the region have been modified to the extant that the movement of wildlife is curtailed or limited in some areas,[1091] and expanding urban population centers are degrading the habitat values in urban/wilderness edge areas.

As indicated in **Table 4.3-23**, the SCRW consists of approximately 1,038,100 acres of land and supports a variety of vegetation communities and land covers. According to the California GAP data,[1092] approximately 47,300 acres of the watershed had been developed as of 1998. In addition, project list information for the watershed within Ventura and Los Angeles counties indicates that another 37,890 acres are expected to be developed in the foreseeable future, based on past, present, and reasonably foreseeable projects, including the RMDP/SCP project (which includes the Mission Village project area), resulting in a total of approximately 85,200 acres of watershed being developed.

Figure 4.3-19 shows that most of the approximately 99,000 acres of land converted to development land uses in the SCRW (i.e., agriculture, and residential, commercial, industrial, infrastructure development) has occurred (1) in the southern portion of the watershed along the Santa Clara River, where agricultural uses dominate, and (2) in the cities of Ventura, Santa Paula, Santa Clarita, and the communities of Valencia and Acton, where urban development dominates. In the these portions of the SCRW, urbanization has resulted in alterations to the natural landscape and the fragmentation of natural vegetation communities, isolation of wildlife habitat, and the creation of discontinuous movement corridors. This is demonstrated in portions of the Santa Clara River Valley where development along the Interstate 5 corridor has narrowed the existing landscape features and now inhibits movement along much of the Valley floor. However, a large amount of relatively unobstructed and natural land still exists within this region, including large contiguous areas within the Angeles and the Los Padres National Forests and within private lands including the Forest Service lands. Development within Forest Service lands in this area is primarily limited to small residential communities on private in holdings or recreational cabins, OHV use, reservoirs and aqueducts, ranger stations, recreational areas and campgrounds, utility corridors, access roads, hiking trails, and fuel breaks.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project (which encompasses the Mission Village project area), could constrain the use of habitat linkages, wildlife corridors, and wildlife crossings in developing regions of the SCRW, especially where north-south wildlife movement occurs along several canyons between the Santa Clara River and the Santa Susanna Mountains to the south, and east-west movement occurs along the Santa Clara River itself. The RMDP/SCP project would constrain the use of some regional landscape-level linkages, local wildlife corridors (i.e., within the

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[1091] Penrod et al., *South Coast Missing Linkages Project*.

[1092] UCSB, *California Gap Analysis Project.*

RMDP/SCP project development area), and wildlife crossings within the developed portions of the RMDP/SCP project area and large areas of habitat loss would occur. The Mission Village project's contribution to impacts to local and regional wildlife movement would not be cumulatively considerable, and therefore would be less than significant (see ~~**subsection**~~**Subsection 4.3.9.b.1.e**). Wildlife movement through the project site along Magic Mountain Canyon, Middle Canyon, and Dead-End Canyon would be eliminated because these canyons would be developed. Wildlife movement along Exxon Canyon and Lion Canyon also would be precluded because these canyons would become dead-ends. The Santa Clara River corridor will maintain its function for east-west regional wildlife movement and connects directly to Castaic Creek, which provides for north-south wildlife movement. The open space in the River corridor within the Mission Village project site will be a minimum of 1,000 feet wide, and, with the minimum 100-foot transition areas between development and the River corridor, the minimum functional width of the corridor will be about 1,200 feet. As noted above, the Commerce Center Drive Bridge will somewhat constrict the Santa Clara River and corridor but for a short distance, about 100 feet, with a height of approximately 11 to 22 feet to allow for unconstrained movement of wildlife beneath the bridge.

Although impacts to regional and local wildlife movement are less than significant, a variety of mitigation measures are recommended by Newhall Ranch Specific Plan Program EIR and this EIR that would further reduce impacts to wildlife corridors, including dedication of the River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area, controls on public access to dedicated open space areas, controls on lighting at the urban-open space interface, controls on pet, stray, and feral cats and dogs, and homeowner education about sensitive biological resources.

While much of the SCRW likely would remain undeveloped or designated as public lands, including the National Forests, urbanization of the Santa Clara River corridor as a whole is where most development is expected to occur in the future. This would result in the expansion of barriers to wildlife movement in and around the River Valley. However, based on existing information for present and reasonably foreseeable projects and the RMDP/SCP project, which are the scope of this cumulative analysis, movement through the Santa Clarita Valley would be maintained between both National Forests and private lands such as the Simi Hills, as shown in **Figure 4.3-9, South Coast Wildlands Open Space Connectivity and Linkage,** and **Figure 4.3-24**. It was concluded in the Newhall Ranch Specific Plan that combined High Country SMA/SEA 20 and Salt Creek area provide the most direct connections between the River corridor habitat and large upland habitat areas south of the River, and that these habitat linkages would remain intact and functional after implementation of buildout of the RMDP/SCP project area, including the proposed Mission Village project, under Alternative 2. It was for these reasons that at the project-level, it was determined that impacts to landscape habitat linkages would be adverse, but not significant. It follows, therefore, that if regional wildlife movement via the large habitat linkages identified by Penrod et al.,[1093] including the River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area, are maintained on site, the contribution of

1093 Penrod et al., *South Coast Missing Linkages Project*.

the RMDP/SCP project (which includes the Mission Village project area) to constraints on regional wildlife movement in the SCRW would not be cumulatively considerable. Thus, with the mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended by this EIR, the proposed Mission Village project would not result in a cumulatively considerable contribution to potential significant cumulative impacts to regional wildlife habitat landscape linkages and local wildlife movement corridors in the SCRW.

(4) Impacts to Special-Status Species

The cumulative impact analysis for special-status species also uses the "project list" approach for the watershed. This analysis is organized into five separate special-status categories:

1. State and/or Federally Listed and California Fully Protected Wildlife Species
2. California Species of Special Concern (CSC)
3. California Special Animals, California Watch List Species, Specially Protected Mammals, and CDFG Trust Resource Species
4. State and/or Federally Listed Plant Species
5. California Native Plant Society (CNPS) and Locally Regulated Plant Species

The listed and California Fully Protected Species are analyzed in the greatest detail because they have the greatest sensitivity and generally would be expected to be most affected by cumulative impacts. For each species, the habitat relationships were analyzed in the same manner as the vegetation communities and land covers described above in **~~subsection~~Subsection 4.3.11.c.1**. Except where noted, the combined California GAP data[1094] and project-level data were used for the cumulative impact analyses because the analysis is within the context of the entire watershed.

Because of the numerous wildlife species in the two categories: (1) California Species of Special Concern (CSC); and (2)Special Animals, Watch List, Specially Protected Mammals, and Trust Resources, the analyses for the two categories are generalized to the guild level (e.g., Bird—Raptor, Reptile and Amphibian—Semi-aquatic). The detail of the analysis is scaled to the sensitivity of the species group. For example, CSC Bird—Riparian species are analyzed in more detail than Special Animal Bird—Riparian. Where the detailed analyses for the Listed and California Fully Protected Species are applicable to species in the lower sensitivity categories (e.g., least Bell's vireo analysis to the CSC Bird—Riparian guild), cumulative impacts are incorporated and summarized.

1094 UCSB, *California Gap Analysis Project.*

(a) Listed and California Fully Protected Wildlife Species

This section addresses cumulative impacts to the following federally and state-listed and/or California Fully Protected Species:

- arroyo toad (FE)
- American peregrine falcon (CE, CFP)
- California condor (FE, CE, CFP)
- coastal California gnatcatcher (FT)
- California red-legged frog (FT)
- golden eagle (CFP)
- least Bell's vireo (FE, CE)
- ringtail cat (CFP)
- southern steelhead (FE)
- southwestern willow flycatcher (FE, CE)
- unarmored threespine stickleback (FE, CE, CFP)
- western yellow-billed cuckoo (CE)
- white-tailed kite (CFP).

The cumulative impact analysis of listed and California Fully Protected Species is summarized below. See ~~**subsection**~~**Subsection 4.3.9.b.1.h** for the full detail of impacts and mitigation measures as they relate to each of the species and to ~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures, for full descriptions of all mitigation measures.

Arroyo Toad (FE). Within the RMDP/SCP portion of the Santa Clara River adjacent to the Mission Village project site, the arroyo toad (tadpoles only) has been documented upstream and downstream of the proposed Commerce Center Drive Bridge site and near the Valencia Water Treatment Plant (**Figure 4.3-25, RMDP/SCP Arroyo Toad Species Occurrences/Critical Habitat**). Arroyo toad has also been documented in the following areas outside the RMDP/SCP project boundaries: (1), the Santa Clara River just east of I-5; (2) Castaic Creek, including above the reservoir (Castaic Lake); (3) Upper San Francisquito Creek; (4) the Santa Clara River adjacent to Castaic Junction; (5) the Santa Clara River near the confluence of San Francisquito Creek; and (6) the Soledad Canyon area. The arroyo toad also occurs elsewhere in the SCRW, in Sespe Creek and Piru Creek. The Sespe Creek population is

located in the Los Padres National Forest, primarily within the Sespe Wilderness, and is one of the largest populations in the Los Padres National Forest, with thousands of juveniles observed during years of successful reproduction.[1095] The Piru Creek population occurs both upstream and downstream of the Pyramid Reservoir in the Los Padres National Forest.[1096] The upper Piru Creek population has been expanding, likely in part due to seasonal campground closures and the elimination of suction-dredge mining.[1097] The lower Piru Creek population below Pyramid Reservoir has experienced habitat degradation due to perennial water releases, excessive flows, and invasive predators; but future releases are intended to mimic natural flows and this should benefit the arroyo toad.[1098]

~~In 2005, USFWS designated 11,695 acres of critical habitat for arroyo toad (substantially downsizing the 95,655 acres proposed in February 2004). In that Final Rule, effective May 13, 2005, the USFWS deleted the entire Newhall Ranch Specific Plan area from the designated critical habitat for the arroyo toad. Note, however, that USFWS is currently reassessing the 2005 Final Rule to determine whether the critical habitat designation should be adjusted. The USFWS has proposed changes to the 2005 Final Rule, published in the Federal Register on October 13, 2009.~~ The USFWS issued a final rule for critical habitat for the arroyo toad on February 9, 2011.[1099] The revised critical habitat designation totals 98,366 acres in 21 habitat units, some of which are further divided into subunits. The revised critical habitat designation for arroyo toad includes Subunit 6b located in the Santa Clara River and Castaic Creek and the proposed RMDP/SCP project site includes a portion of this Subunit (**Figure 4.3-25, Arroyo Toad Species Occurrences/Critical Habitat)**. Subunit 6b comprises approximately 1,003 acres (approximately 1%) of the total 98,366 acres of arroyo toad critical habitat. Of this, arroyo toad critical habitat within the proposed RMDP/SCP project area totals 594 acres.

In 1999, USFWS published the Arroyo Southwestern Toad Recovery Plan,[1100] but the Santa Clara River was not specifically identified in the Recovery Plan as having a conservation role in the recovery strategy for the species. In the Santa Clara River watershed, six federal biological opinions were issued for the arroyo toad between 1993 and 2006 (**Table 4.3-19**), including one for the Natural River Management Plan upstream of the RMDP/SCP project.

[1095] 70 FR 19584.
[1096] 70 FR 19584.
[1097] 70 FR 19584.
[1098] 70 FR 19584.
[1099] 76 FR 7246.
[1100] USFWS, *Arroyo Southwestern Toad (*Bufo microscaphus californicus*) Recovery Plan* (Portland, Oregon: USFWS, 1999).

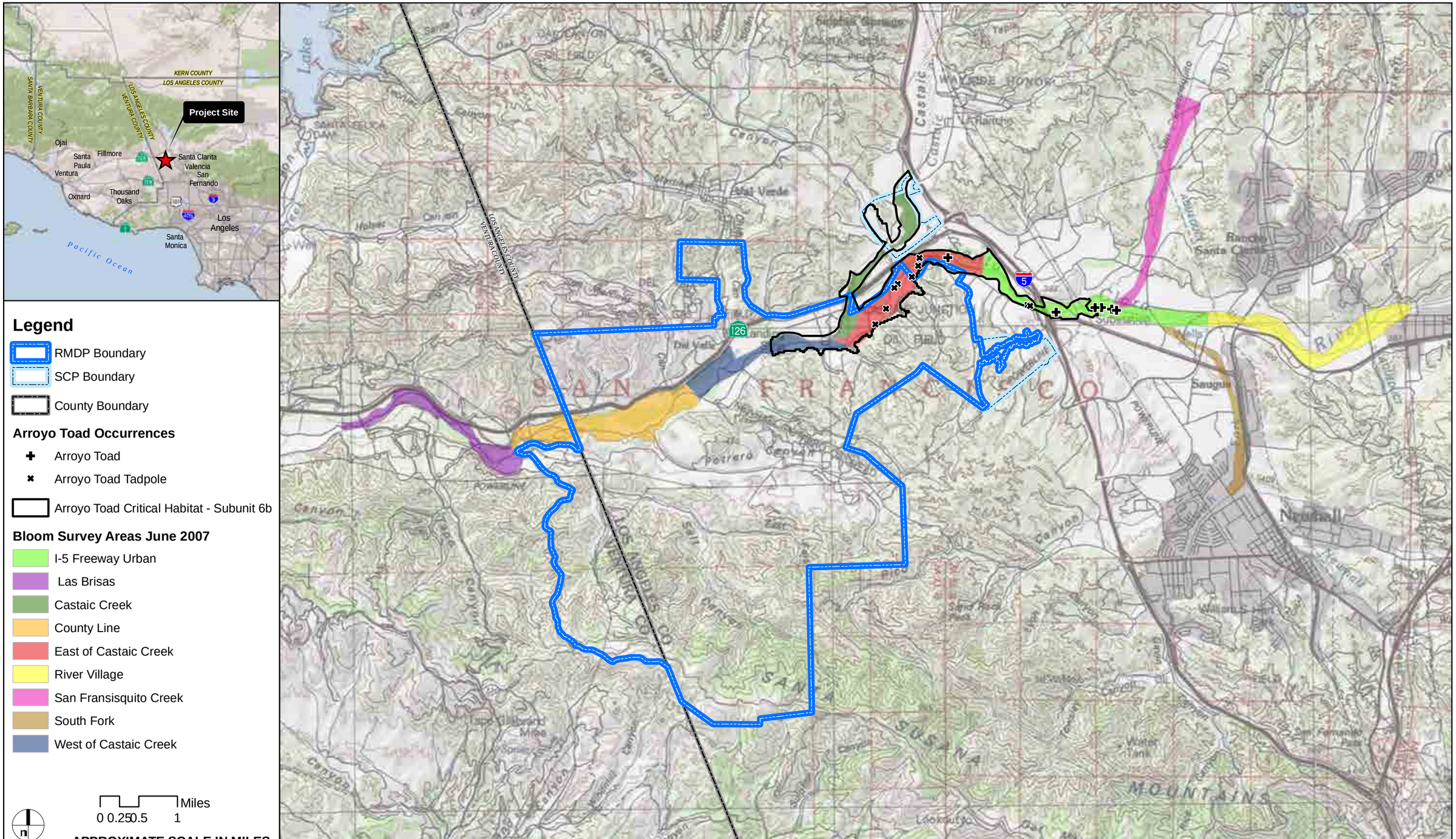

IMAGE SOURCE: USGS 24K Quad, CRITICAL HABITAT: USFWS 2011

FIGURE 4.3-25

Mission Village EIR

DUDEK

RMDP/SCP Arroyo Toad Species Occurrences/Critical Habitat

~~The California GAP data are not refined enough to portray suitable arroyo toad habitat.~~ Implementation of the RMDP and buildout of the Specific Plan, VCC, and Entrada planning areas would result in the permanent loss of ~~59~~120 acres (~~7.4~~20%) of ~~modeled Category 1~~arroyo toad critical habitat ~~on~~in the RMDP/SCP project site, ~~defined as habitat containing all the primary constituent elements used to designate critical habitat for the species.[1101] However, 25.~~ Approximately 434 acres (~~32.6~~73%) of ~~Category 2 habitat (habitat containing most of the primary constituent elements)~~critical habitat would be protected ~~and 705 acres (66.6 percent) of Category 3 habitat (primarily uplands~~managed in the River Corridor SMA/SEA 23 adjacent to the ~~Santa Clara River corridor that could be used for aestivation and hibernation, but which lack hydrology to support breeding) would also be permanently lost. Upland portions of the~~ Mission Village project site.~~ slated for development include RMDP/SCP Category 3 habitat, and a small area of river wash within the Santa Clara River that would be impacted is Category 1 arroyo toad habitat (see **Figure 4.3-4-A3**).~~ Without accounting for past, present, or reasonably foreseeable mitigation, impacts to arroyo toad habitat in the SCRW resulting from present and reasonably foreseeable projects, including the RMDP/SCP project, could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential significant cumulative impact could be cumulatively considerable, absent mitigation.

~~**Figure 4.3-25 — RMDP/SCP Arroyo Toad Species Occurrences**~~

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, in close proximity to occupied arroyo toad habitat also could result in long-term secondary effects, including disruption of nocturnal activities and greater vulnerability to predation by nocturnal predators (such as owls and coyotes) as a result of nighttime lighting; greater vulnerability to predation by pet, stray, and feral cats and dogs as well as other mesopredators;1102 collecting by children; degradation of habitat from increased human use (e.g., trampling, trash, and off-road vehicles) and altered fire regimes (likely too frequent fire); invasion by exotic plant (e.g., giant reed, tamarisk, and pampas grass) and wildlife species (e.g., Argentine ants, bullfrogs, African clawed frogs, exotic fish, and crayfish); use of pesticides; and increased risk of roadkill on roads adjacent to occupied areas. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential significant cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by both the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIR to offset project-level significant impacts to arroyo toad habitat would result in a large, managed open space system (see ~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures). This open space system would also reduce long-term secondary impacts on arroyo toad habitat. These mitigation measures include

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~~1101 70 FR 19562.~~

1102 See K.R. Crooks and M.E. Soulé, "Mesopredator Release and Avifaunal Extinctions in a Fragmented System," *Nature* 400 (1999), 563–566.

preservation, restoration, and enhancement of riparian and wetland habitat, controls on public access, invasive species controls, conformance with permits from federal and state agencies for impacts to wetlands and water quality (i.e., NPDES and section 401 permits), and lighting controls. Large areas of suitable habitat for this species would be protected in the River Corridor SMA/SEA 23. The Floodplain Hydraulics Impacts Assessment[1103] found that neither the Mission Village project nor the broader RMDP/SCP project would cause long-term significant impacts in water flows, velocities, depth, sedimentation, or floodplain and channel conditions downstream of the proposed Mission Village project area. This same impact assessment also determined that such hydrologic effects would be insufficient to alter the amount, location, and nature of aquatic and riparian habitats within the Santa Clara River adjacent to the Mission Village project site and downstream into Ventura County. The technical analysis further determined that the River would retain sufficient width to allow natural fluvial processes to continue. Following buildout, the River Corridor floodplain within the RMDP/SCP project area would remain 700 to 2,000 feet wide and retain the mosaic of habitats, including the relatively narrow wetted channel, benches, and dry terraces that support various special-status species and meet their life history needs. These habitats and the populations of the species within and immediately adjacent to the River Corridor would not be substantially affected. ~~A total of 738 acres (92.6 percent) of existing Category 1 habitat for the arroyo toad on the RMDP/SCP project site would be maintained within the River Corridor SMA/SEA 23.~~

A variety of specific mitigation measures also would be implemented by the proposed Mission Village project to avoid and reduce potential long-term secondary impacts to arroyo toad. Such measures would control human activities in the River Corridor SMA/SEA 23, educate homeowners and restrict recreational activities. Pet, stray, and feral cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. All lighting along the open space-urban interface would be downcast. Pesticides would be controlled through an integrated pest management (IPM) plan. Argentine ant invasions of upland habitats in the open space system would be monitored and controlled to extent feasible. Implementation of these measures would allow this species to persist after development in the River Corridor SMA/SEA 23 adjacent to the Mission Village project site.

In conclusion, ~~the vast majority of existing Category 1 habitat (92.6~~73 percent~~)~~ (434 acres) of critical habitat for the arroyo toad would be protected and managed in the River Corridor SMA/SEA 23 adjacent to the Mission Village project site~~, and~~. In addition, lands outside the 100-year floodplain would be conserved. This preservation and management would also reduce potential long-term secondary impacts to a level that is adverse but not significant. The arroyo toad has not been documented to breed on the Mission Village site, as indicated by no observations of adult toads during focused surveys. The flow regime from the wastewater treatment plant upstream of the Mission Village project site fluctuates daily and does not support hydrologic regimes consistent with breeding habitat (i.e., semi-permanent breeding pools). It is not expected that there would be a loss of an extant breeding population ~~and~~

1103 PACE, *Floodplain Hydraulics Impacts Assessment - Santa Clara River*.

~~no substantial loss of Category 1 habitat for this species on site.~~on site. The largest populations in the SCRW occur in the Los Padres National Forest in Sespe and Piru creeks. These populations are not at risk from urban development and, with proper management, they are expected to expand in the future.

For the reasons set forth above, the proposed the Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

American Peregrine Falcon (CE, CFP). The American peregrine falcon occurs occasionally in the proposed Mission Village project area and immediate vicinity. One American peregrine falcon was observed hunting along the Santa Clara River corridor near Grapevine Mesa by Guthrie in July 2000,[1104] and an adult male was observed hunting over the Wolcott agricultural field by Bloom Biological, Inc. in late December 2007.[1105] No other occurrences of this species have been documented in the project vicinity during annual bird surveys between 1988 and 2008. American peregrine falcons have never been documented nesting in the proposed Mission Village project area or larger RMDP/SCP project area. This species is sensitive to human disturbance and usually nests in areas that are remote from human activities, such as cliffs, although tall buildings, bridges, or other tall man-made structures are also suitable for nesting if they are protected from human disturbance. Such features that would be suitable for nesting by the peregrine falcon are absent from the Mission Village project site; therefore, it is not expected to nest on site.

The California breeding range for the American peregrine falcon has been expanding and now includes the Channel Islands, the coast of southern and ~~Northern~~northern California, inland north coastal mountains, the Klamath Mountains, Cascade Range and the Sierra Nevada.[1106] In California, the American peregrine falcon is an uncommon breeder or winter migrant throughout much of the state.[1107] Active nests have been documented along the coast north of Santa Barbara, in the Sierra Nevada, and in other mountains of ~~Northern~~northern California. As a transient species, the American peregrine falcon may occur almost anywhere that suitable habitat and prey are present.[1108] For example, one pair occurs within the Angeles National Forest,[1109] and another occurs on the Vincent Thomas Bridge at the Port of Los Angeles in Los Angeles County. Wintering migrants can be seen inland

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1104 Guthrie, *Bird Surveys along the Santa Clara River, 2000*.

1105 Bloom Biological, Inc., *Interim Report of Winter Surveys*.

1106 CDFG, *The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000–2004* (2005).

1107 Zeiner et al., *California's Wildlife: Volume II*.

1108 Garrett and Dunn, *The Birds of Southern California*.

1109 Stephenson and Calcarone, *Southern California Mountains and Foothills Assessment*.

throughout the Central Valley, in the western Sierra Nevada, along the coast, and occasionally on the Channel Islands.[1110]

Based on the California GAP data,[1111] there are approximately 103,000 acres of potentially suitable foraging habitat for the peregrine falcon within the SCRW (riparian, California annual grassland, agriculture, and disturbed land). However, this species is not expected to forage in all 103,000 acres in the SCRW. Foraging sites are often located near rivers or lakes, as well as in coastal and inland wetlands.[1112] It is expected that foraging by this species in the SCRW would be concentrated along the Santa Clara River and adjacent upland habitats and agricultural areas. Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP area (which encompasses the Mission Village project site), would cause the loss of 4,815 acres of 103,000 acres of foraging habitat. Without accounting for past, present, or reasonably foreseeable mitigation, this could be a significant cumulative impact because several thousand acres of potential foraging habitat would be permanently lost and loss of habitat along the Santa Clara River would also affect the abundance and distribution of important prey such as waterfowl. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 3,515 acres, including approximately 680 acres of permanent and temporary disturbance to potential foraging habitat on the Mission Village project site. This contribution by the proposed Mission Village project to the overall potential significant impact in the SCRW could be cumulatively considerable, absent mitigation.

However, the American peregrine falcon only uses the proposed Mission Village project site and the larger RMDP/SCP project area for occasional foraging. It does not nest on site. Further, despite existing and anticipated projects in the watershed, approximately 98,000 acres of potentially suitable foraging habitat would remain in the SCRW, although most of its foraging in the watershed is expected to be concentrated within and adjacent to the Santa Clara River floodplain.

Without accounting for past, present, or reasonably foreseeable mitigation, secondary cumulative impacts from present and reasonably foreseeable projects in the SCRW, including the Mission Village project, could be significant. Such secondary impacts include increased human activity in developed areas and adjacent open space which could disrupt foraging activities, and use of pesticides which could cause poisoning. At the watershed level these secondary effects could be a potential significant cumulative effect. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

1110 Zeiner et al., *California's Wildlife: Volume II*.

1111 UCSB, *California Gap Analysis Project.*

1112 American Ornithologists' Union (AOU), *Checklist of North American Birds* (Washington, D.C.: American Ornithologists' Union, 1998); N.L. Brown, California State University Stanislaus, "Endangered Species Recovery Program," http://esrp.csustan.edu/speciesprofiles/profile.php?sp=fape; S.A. Snyder, Fire Effects Information System, U.S. Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory, "*Falco peregrinus*," http://www.fs.fed.us/database/feis.

The mitigation required by both the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIR to offset project-level significant impacts to American peregrine falcon foraging habitat would result in a large, managed open space system (see ~~subsection~~**Subsection 4.3.10**, Project Mitigation Measures). These mitigation measures include habitat preservation, restoration, enhancement, and management of the River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area—areas that would form a large, contiguous open space system totaling approximately 6,300 acres comprised of riparian and upland habitats that provide foraging habitat for American peregrine falcon. This set-aside also would reduce potential long-term secondary effects, such as increased human activity, because birds would have substantial alternative habitat in which to forage. Potential secondary poisoning from pesticides would be controlled through an integrated pest management (IPM) plan.

In addition to these mitigation measures which would reduce impacts at the project-level, this species is an occasional visitor and only expected to forage on the Mission Village project site and within the larger RMDP/SCP project area. This species is known to forage throughout the suitable habitat within the watershed and California. Its nesting is usually limited to areas with limited human disturbance. American peregrine falcon is known to forage within National Forest system lands within the watershed in association with rivers and lakes.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

California Condor (FE, CE, CFP). California condor populations exist in Arizona, Southern California, Utah, and northern Baja California.[1113] California condors are known to exist and nest in the Sespe Condor Sanctuary within the SCRW approximately 30 miles northwest of the proposed Mission Village project site. This species is extremely mobile with an extensive foraging range. The Sespe population of California condor has been known to forage over the Mission Village project site and larger RMDP/SCP project area. Surveys for the California condor were included as part of other raptor and avian species surveys that were conducted along the Santa Clara River and throughout upland areas of the RMDP/SCP project area.[1114] While California condor foraging flights have been known to take individuals over the Santa Clarita Valley, these flights are generally at high altitudes. Until April 2008, California condors had not been known to nest or land within the RMDP/SCP project area within the last 25 years.[1115] In April 2008, a California condor was observed feeding on a dead calf in a Potrero side canyon by Bloom Biological,

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[1113] CDFG, *The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000–2004.*

[1114] Bloom Biological, Inc., *Summary of Late Winter and Spring Avian Survey with Focus on the California Condor*; Bloom Biological, Inc., *Interim Report of Winter Surveys*.

[1115] Bloom Biological, Inc., *Late Winter and Spring Avian Survey*; Bloom Biological, Inc., *Interim Report of Winter Surveys.*

Inc, wildlife biologist Chris Niemela[1116] (**Figure 4.3-26, ~~RMDP/SCP —~~ Listed and California Fully Protected Wildlife Species Occurrences**). The USFWS also provided information to Bloom Biological, Inc. that California condors fitted with GPS transmitters had landed on Newhall Ranch on several days from April through July 2008.[1117] In January 2009, up to five California condors were detected feeding on a dead calf in the middle section of Potrero Canyon south of Potrero Mesa between January 27 and 30.[1118] A follow-up visit by Chris Niemela was conducted at the request of the USFWS to photodocument the calf carcass and site where the feeding occurred.

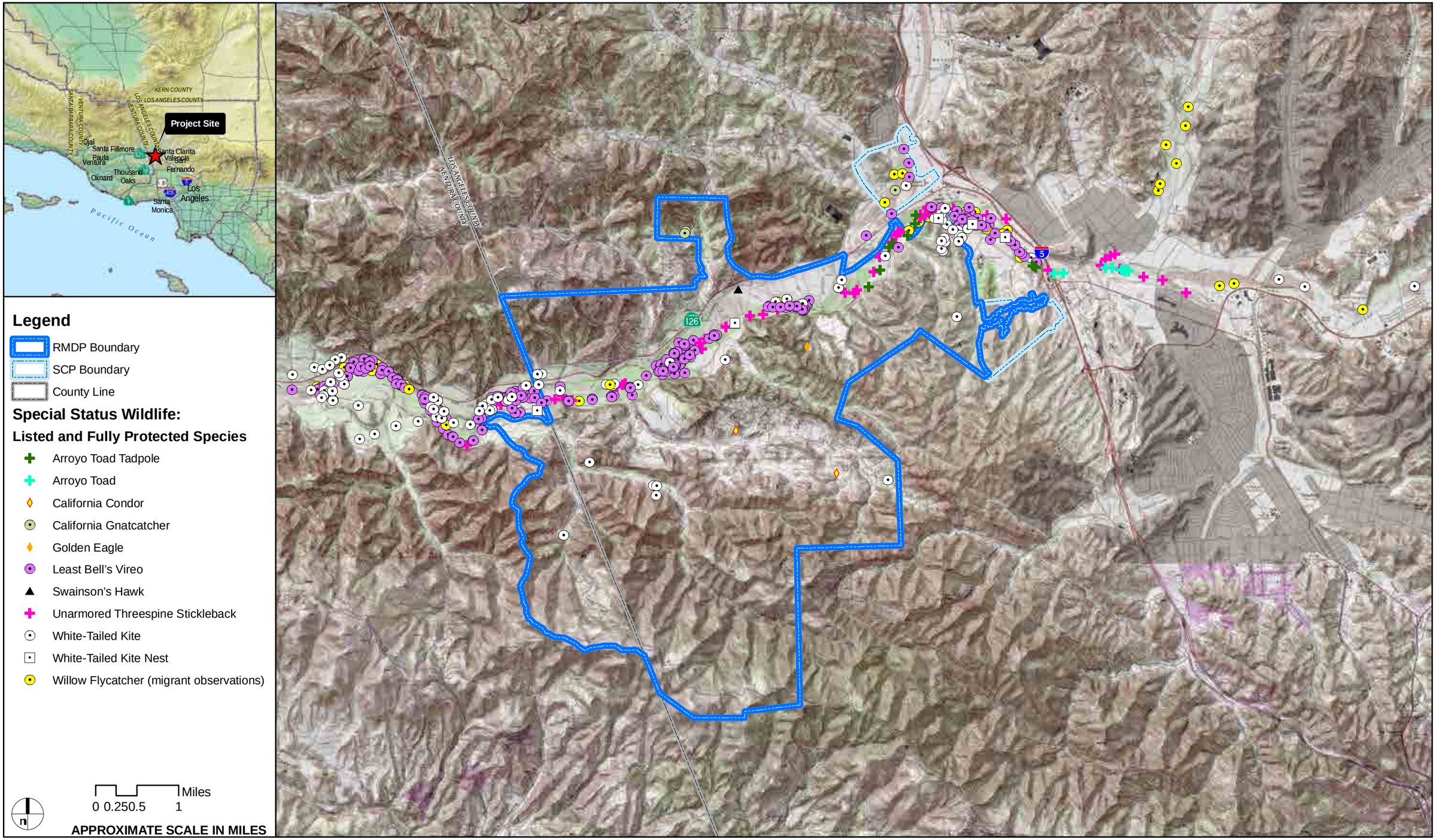
A review of the updated 2009 condor flight data provided by the USFWS shows that the Mission Village project site and the proposed mitigation lands in the High Country SMA, Salt Creek area, and River Corridor SMA are located under a commonly used California condor flight path between the Sespe Wilderness area to the northwest and the San Gabriel Mountains National Forest to the southeast of the Mission Village project site. In addition, California condors routinely overfly the project vicinity and are known to feed in portions of the larger RMDP/SCP area where grazing currently occurs and cattle carcasses are sometimes available. The data also suggest that condors will likely opportunistically feed on cattle carcasses or other large mammal carcasses (*e.g.*, mule deer) in the Mission Village project vicinity and proposed mitigation lands in the future. The review of the 2009 USFWS flight data, in addition to coordination with USFWS staff, also suggests that the condor is expanding its use of the region and can be expected to continue overflights of the Santa Clarita Valley and adjacent National Forests to the north and southwest of the Mission Village project site.

Specifically, the condor telemetry/GPS data flight data from the USFWS are available in three data ranges: April 20, 2002, to January 29, 2009; January 1, 2009, to July 30, 2009; and August 1, 2009, to August 31, 2009. There is minor overlap in the data during the month of January 2009. Between April 20, 2002, and January 29, 2009 (80,402 total points), 161 points (0.2 percent of the overall recorded points) representing 16 unique birds were recorded within the Newhall Ranch Specific Plan area, Salt Creek area, Entrada, Valencia Commerce Center, and Legacy. Between January 1, 2009, and July 30, 2009 (36,377 total points), 300 points (0.8 percent of the overall recorded points) representing 13 unique birds were recorded within the Newhall Ranch Specific Plan area, Salt Creek area, Entrada, Valencia Commerce Center, and Legacy. Between August 1, 2009, and August 31, 2009 (6,800 total points), no points were recorded within the Newhall Ranch Specific Plan area, Salt Creek area, Entrada, Valencia Commerce Center, and Legacy.

1116 M. Carpenter, Personal communication by M. Carpenter (Newhall Land and Farming Company) reporting that a California condor was observed feeding on a dead calf in a Potrero side canyon by wildlife biologist Chris Niemela in a Potrero side canyon (2008).

1117 R.P. Root, "Acknowledgement of Request for Formal Consultation on the Proposed Newhall Ranch Specific Plan, Santa Clarita, Los Angeles County, California," letter from R.P. Root (USFWS) to A.O. Allen (USACE) (November 12, 2008).

1118 C. Niemela, Memo from C. Niemela (Bloom Biological) to Jesse Grantham (USFWS) regarding observations of California condor in Potrero Canyon in January 2009 (March 11, 2009).



AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-26

Mission Village EIR

DUDEK

~~RMDP/SCP -~~ Listed and California Fully Protected Wildlife Species Occurrences

Critical habitat for the California condor was designated by the USFWS on September 22, 1977;[1119] however, no critical habitat was designated on the RMDP/SCP project area, which includes the Mission Village project site. The nearest critical habitat area is the Sespe-Piru Condor Area, 6 to 7 miles north of the RMDP/SCP project area. The California Condor Recovery Plan was published by the USFWS on February 26, 1980;[1120] however, no recovery activities were identified for the RMDP/SCP project area or nearby vicinity.

The California condor requires habitat that contains an adequate food supply (carrion), open space areas, and reliable winds and air movement to allow for long-duration soaring during foraging. Nest habitat typically includes cliff faces and, occasionally, large tree snags with cavities. Condors are not expected to nest in the Mission Village project site or larger RMDP/SCP project area due to the general lack of adequate nesting habitat. They likely forage on the Mission Village project site only when an opportunity presents itself. To the extent condors use the other present and foreseeable future project sites analyzed here, such use is probably limited to occasional foraging. In general, these areas probably do not support large populations of large mammals (e.g., mule deer) across the broad landscape area or suitable nesting sites.

For these reasons, the proposed Mission Village, in combination with other present and foreseeable future projects, is not expected to result in a potential significant cumulative impact to this species due to the loss of foraging habitat.

The risk of direct injury or mortality of individual California condors due to construction activities associated with present and reasonably foreseeable projects, including the proposed Mission Village project, is low. However, construction debris, litter, leaking equipment, or road kill can attract this species to construction sites. This could subject condors to strikes by construction vehicles. Condors are curious birds and have been documented in close association with oil pumps and human activity on the Los Padres National Forest. During cleanup activities at trash sites, for example, condors have been observed sitting on guard rails adjacent to the cleanup activities. If individuals were injured or killed during construction activities, this could be a significant cumulative impact because the loss of any individuals of this species may reduce its chance for long-term survival in the wild. The contribution of the proposed Mission Village project to this potential significant cumulative impact could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed Mission Village project, also could result in secondary effects to the California condor. Adverse secondary effects to condors may occur as a result of the animal's collection of

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1119 42 FR 47840-47845.

1120 USFWS, *California Condor Recovery Plan* (Prepared by the USFWS in cooperation with the Recovery Team (S.R. Wilbur, D. Esplin, R.D. Mallette, J.C. Borneman, and W.H. Radtkey), 1980).

microtrash (i.e., broken glass, paper and plastic waste, small pieces of metal). This waste is often brought back to nest sites where young birds ingest the material. This can possibly lead to mortality of young birds. Ethylene glycol, a component in antifreeze and petroleum products can also be ingested by condors, which could possibly result in injury or mortality. Secondary impacts related to phone towers, power lines, and utility poles, could increase the potential for collisions; increased microtrash within residential and commercial areas, which has been known to attract and be ingested by California condors, causing sickness or possibly mortality; and the presence of various contaminants, such as radiator fluid, which have been known to be ingested by California condors, causing sickness or possibly mortality. At the watershed level these secondary effects could be a potential significant cumulative effect. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The California condor sporadically forages in the RMDP/SCP project area, potentially including the Mission Village project site, and possibly in other present and foreseeable future project sites, but nesting is not expected to occur. Nest habitat typically includes cliff faces and, occasionally, large tree snags with cavities. Condors are not expected to nest on the Mission Village project site or in the larger RMDP/SCP project area due to the general lack of adequate nesting habitat. Other past, present, and reasonably foreseeable projects also tend to be located in the lower elevations of the watershed that lack these necessary microhabitat features. It was determined above that the loss of habitat resulting from present and foreseeable future projects, including the proposed Mission Village project, would not be a significant cumulative impact. Potential foraging habitat is present in the upper regions of the High Country SMA/SEA 20 and Salt Creek area but would not be affected by the proposed Mission Village project or broader buildout of the Specific Plan, VCC, or Entrada planning areas. The mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIR would result in a large, managed open space system (**~~subsection~~Subsection 4.3.10, Project Mitigation Measures**). Generally, protection, restoration and enhancement, and management habitat in the High Country SMA/SEA 20 and Salt Creek area would provide California condors with a large tract (5,720 acres) of relatively undisturbed habitat suitable for foraging. Although the number of cattle would be reduced in the project vicinity ongoing resource management using cattle would occur and deer herds would continue to use the High Country SMA/SEA 20 and Salt Creek area, providing foraging opportunities for condors.

To reduce or avoid potential construction-related injury or mortality of individuals, the Applicant would implement measures during construction to monitor for the presence of birds, and collect all litter, small items, vehicle fluids, and food waste from the Mission Village project site on a daily basis. Workers would be trained on the issue of microtrash; what it is, its potential effects to California condors, and how to avoid the deposition of microtrash. In the event California condors are observed landing in the construction area, all work activities shall be suspended until the bird has left the area.

To reduce long-term secondary impacts, limited recreational usage and access restrictions within the High Country SMA/SEA 20, control of pets in or near open space areas, trail signage, and homeowner education regarding special-status resources in preserved natural habitat areas would help protect California condors foraging in the High Country SMA/SEA 20 and Salt Creek area. Installation of new or relocation of existing phone and cell towers, power lines, and utility poles in the High Country SMA/SEA 20 and Salt Creek area would be coordinated with CDFG and structures would be designed in accordance with Avian Power Line Interaction Committee guidelines[1121] and operated with anti-perching devices to help reduce collisions and electrocutions of California condors.

In addition to these mitigation measures which would reduce project-related construction and long-term impacts to California condor and provide foraging opportunities in the project vicinity (although on a more limited scale than currently exists), this species has an extremely large foraging range that spans the SCRW and beyond. California condors are frequently observed in National Forest system lands, but individuals opportunistically forage on dead cattle on large cattle ranches within the SCRW, including Newhall Ranch.[1122]

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Coastal California Gnatcatcher (FT). Resident breeding populations of the coastal California gnatcatcher on the Mission Village project site or within the larger RMDP/SCP project area have not been documented during USFWS protocol-level focused surveys conducted between 1995 and 2007; however, individual birds have been observed twice in the RMDP/SCP project area during the course of biological monitoring. One observation was in October 2007 in the VCC planning area and the other in August 2008 east of the Del Valle Training Center (which is just outside the RMDP/SCP project boundary, north of SR-126 and west of Chiquito Canyon). In both cases, the observed birds were considered dispersing individuals because no breeding gnatcatchers have been observed in the RMDP/SCP project area and the observations were made when dispersal would be expected to occur. Generally, there are few documented coastal California gnatcatcher populations in the SCRW. In addition to the two individuals reported in the RMDP/SCP project area, there were occurrences of individuals approximately 6 miles to the east in Plum Canyon in 1999, Golden Valley Road in 2001, and Golden Valley Ranch in 1997 (**Figure 4.3-27, California Gnatcatcher Observations and Habitat within the Greater Newhall Ranch Region**). The nearest

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1121 Avian Power Line Interaction Committee (APLIC), *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (Washington, D.C. and Sacramento, California: Edison Electric Institute, APLIC, and the California Energy Commission, 2006).

1122 J. Grantham, personal communication regarding foraging activities of condor in the Santa Clara River watershed, from J. Grantham (USFWS) to C. Huntley (Aspen) (March 25, 2009).

observation of a coastal California gnatcatcher pair (assumed breeding pair observed in 1999) is in Chivas Canyon 3.6 miles to the south, but that location is outside the SCRW boundary and on the southern side of the Santa Susanna Mountains. The nearest relatively large breeding population is in Moorpark (15 occurrences) outside the SCRW, about 12 miles to the southwest of the RMDP/SCP project area and south of the Santa Susana Mountains

Based on these observations, the coastal California gnatcatcher is considered to be an irregular visitor to the Mission Village project area and larger RMDP/SCP project area in association with dispersal. Although the Mission Village project site appears to provide habitat for dispersal and nesting has not been documented during protocol-level surveys, it is unknown whether the site could support nesting populations of coastal California gnatcatcher in the future (e.g., whether there could be colonization of the site by breeding individuals).

AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-27

Mission Village EIR

DUDEK

California Gnatcatcher Observations and Habitat within the Greater Newhall Ranch Region

On December 19, 2007, the USFWS published the Revised Designation of Critical Habitat for the coastal California gnatcatcher.[1123] The Revised Designation reduced the final critical habitat designation by 298,492 acres compared to the 2003 Proposed Rule. The Revised Designation included a re-evaluation of Unit 13 (which included the RMDP/SCP project area, and the USFWS determined that the portions of the Santa Clarita Valley including the RMDP/SCP project area, are "not essential to the conservation of the coastal California gnatcatcher."[1124] The USFWS determined that the excluded area does not have the spatial configuration and primary constituent elements essential to the conservation of the species. Designated critical habitat (Unit 13) extends north to the southern boundary of Newhall Land that includes the High Country SMA/SEA 20, but the nearest proposed development zone in Potrero Canyon is approximately 2.2 miles north of the critical habitat boundary. No recovery plan for the coastal California gnatcatcher has been published.

Based on the California GAP data,[1125] there are approximately 174,000 acres of coastal scrub habitat that support, or have the potential to support, the coastal California gnatcatcher, at least during dispersal. Because of the few and scattered observations of the species in the SCRW, however, it is likely that the vast majority of coastal scrub habitat in the watershed is not used by the coastal California gnatcatcher. This vocal species is highly detectable within its breeding range, so most important breeding locations probably have been documented. In addition, especially in the higher elevations of the watershed, temperatures are, on average, much colder and conditions are wetter. Even in the main portion of this species' range in Southern California, 99 percent of occurrences are below 2,500 feet.[1126]

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, would cause the loss of approximately 20,000 acres of coastal scrub, although it is not expected that the coastal California gnatcatcher uses all of this habitat. Without accounting for past, present, or reasonably foreseeable mitigation, or the RMDP/SCP project's individual contribution to mitigation for loss of suitable habitat (including the proposed Mission Village project), this could be a significant cumulative impact on habitat that is suitable for the species. Because this federally-listed species occurs sporadically in the watershed and its selection of habitat for dispersal and potentially breeding in the SCRW is not understood, the relative value of coastal scrub habitat in the watershed for this species also is not known. Even a small loss of habitat in the SCRW, if located in a strategic area for dispersal or breeding, could have a substantial adverse effect on the coastal California gnatcatcher if it disrupted dispersal or breeding activities. The RMDP/SCP project's contribution to this potentially significant cumulative impact is 1,520 acres of coastal scrub, including approximately 667 acres of coastal scrub on the Mission Village project site, which would

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[1123] 72 FR 72009–72213.
[1124] 72 FR 72013.
[1125] UCSB, *California Gap Analysis Project.*
[1126] 65 FR 63680.

be permanently or temporarily disturbed. This contribution by the proposed Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed Mission Village project, could also result in long-term secondary impacts, including habitat fragmentation; wildfire; increased human activity; lighting; pesticides, which may cause secondary poisoning and loss of food resources; harassment by pet, stray, and feral cats and dogs and other mesopredators; and Argentine ants that may prey on nestlings. At the watershed level these secondary effects could be a significant cumulative effect. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

Based on existing survey information, two dispersing coastal California gnatcatcher individuals have been documented in the RMDP/SCP project vicinity and nesting has not been observed. Approximately 154,000 acres of coastal scrub habitat would remain in the watershed, although how much of this habitat is suitable for dispersal or breeding is unknown. There is at least one breeding occurrence in the SCRW in Plum Canyon. In addition, mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIR would result in a large, managed open space system (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures). The RMDP/SCP project also includes large mitigation areas in the High Country SMA/SEA 20 and Salt Creek area that would conserve approximately 1,940 acres of coastal scrub and would allow for dispersal by coastal California gnatcatchers.

Long-term secondary impacts would be minimized through several mitigation measures in addition to the preservation of 1,940 acres of suitable habitat in the High Country SMA/SEA 20 and Salt Creek area. Lighting restrictions along the perimeter of natural areas would help reduce predation of nest sites by predators and reduce behavioral disturbances and physiological stress. Limited recreational usage and access restrictions within the High Country SMA/SEA 20; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas would help protect coastal California gnatcatchers by allowing them to nest and forage without disturbance. Controls on pesticides would reduce the chance of direct and secondary poisoning and loss of food sources.

The coastal California gnatcatcher has not been observed nesting in the RMDP/SCP project area and only one breeding occurrence has been documented in the SCRW. Although suitable habitat is present in the RMDP/SCP project area, it is unknown why this species does not breed on site. Dispersal through the RMDP/SCP project area would not be precluded and this species is still relatively common in the main portion of its range, south of the RMDP/SCP project area.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

California Red-Legged Frog (FT). The California red-legged frog has not been observed on the proposed Mission Village project site or larger RMDP/SCP project area during the numerous wildlife surveys conducted since 1992. The species is believed to be absent from the Mission Village project region. The San Marino Environmental Associates report[1127] states that Thomas Haglund observed red-legged frogs in the mid-1970s in the Santa Clara River at Fillmore and that "this may represent the last sighting of this species in the Santa Clara River."[1128] The Museum of Vertebrate Zoology[1129] lists 17 specimens from Soledad Canyon (Santa Clara River channel) in its collection from as recently as 1953 (more precise locality data are unavailable). The California Academy of Sciences[1130] also lists a Soledad Canyon specimen, from 1950. The nearest specific locality upstream of the Mission Village project area is approximately 15 miles away, near the confluence with Agua Dulce Creek. Jennings and Hayes[1131] and the CNDDB indicate that this species still occurs in the SCRW in sites along San Francisquito Creek 5 to 10 miles northeast of the RMDP/SCP project area, and in tributaries to the Santa Clara River in Ventura County. The closest documented Ventura County occurrence is in Piru Creek 4.5 miles north of the community of Piru,[1132] about 7 miles northwest of the RMDP/SCP project area. San Marino Environmental Associates[1133] also cite a personal communication from Sam Sweet reporting sighting of red-legged frogs in Piru Creek, but no date for the observation(s) is provided. San Marino Environmental Associates[1134] suggested that it probably has a low probability of colonizing the RMDP/SCP area because of the relatively long distances to extant occurrences within tributaries upstream and downstream of the RMDP/SCP area. No designated critical habitat units for the California red-legged frog include any portion of the proposed Mission Village project site or larger RMDP/SCP project area. The nearest critical habitat unit is upstream in the San Francisquito Creek (LOS-1) Unit, which is located approximately 5 miles northeast of the RMDP/SCP area. This distance, coupled with the existing stream conditions

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1127 SMEA, *Sensitive Aquatic Species Survey*.

1128 SMEA, *Sensitive Aquatic Species Survey*, 37.

1129 University of California, Berkeley, Online Data Access. Museum of Vertebrate Biology, http://mvz.berkeley.edu/. 2003.

1130 California Academy of Sciences (CAS), California Academy of Sciences Department of Herpetology Collections Catalogue, 2003.

1131 M.R. Jennings and M.P. Hayes, *Amphibian and Reptile Species of Special Concern in California (*Rancho Cordova, California, 1994).

1132 USFWS, *Biological Opinion for the Natural River Management Plan, Santa Clarita, Los Angeles County, California* (2002).

1133 SMEA, *Sensitive Aquatic Species Survey*.

1134 SMEA, *Sensitive Aquatic Species Survey*.

in San Francisquito Creek (i.e., dry gaps, absence of flowing water during most of the year), likely limit the potential for this species to disperse through RMDP/SCP area, including the Mission Village project site. Furthermore, existing hydrologic conditions in the Santa Clara River probably limit its potential to establish breeding sites in the River adjacent to the Mission Village project site. California red-legged frogs generally avoid large river channels with widely fluctuating flows, because such habitat usually does not permit reproductive activity.[1135] For example, episodic winter flooding typical of the Santa Clara River may dislodge egg masses. Further, fluctuating water levels before summer typical of the Santa Clara River could kill tadpoles before they could metamorphose. Given these characteristics, other portions of the Santa Clara River within the larger RMDP/SCP project area are also not expected to provide breeding habitat for the species.

Critical habitat was originally designated for the California red-legged frog in 2006,[1136] but revised critical habitat was proposed in September 2008 to better characterize those areas containing essential features for the species.[1137] Based on the proposed revised critical habitat designation, two critical habitat units are in the SCRW: the 4,231-acre San Francisquito Creek (LOS-1) Unit located approximately 5 miles northeast of the RMDP/SCP project area, and the 8,837-acre Piru Creek (VEN-2) Unit located 7 miles northwest of the RMDP/SCP project area. These two critical habitat units were not changed in the 2008 proposed revision. Three other critical habitat units were designated in Ventura County in the proposed revision: the 2,915-acre San Antonio Creek (VEN-1) Unit; the 5,000-acre Upper Las Virgenes Canyon (VEN-3) Unit; and the eastern portion of the 145,121-acre Upper Santa Ynez River and Matilija Creek, which overlaps with the western portion of Ventura County. These three other critical habitat areas are outside the SCRW. No designated critical habitat units for the California red-legged frog include any portion of the RMDP/SCP project site. The Recovery Plan for the Red-legged Frog was published by the USFWS on May 28, 2002.[1138] In Recovery Unit 7, a core area is identified as the Ventura River-Santa Clara River. However, the portion of the Santa Clara River within the RMDP/SCP project area is not in this core area and is not included in the Recovery Plan.[1139]

Although the SCRW, including the Mission Village project site, is within the potential distribution of the California red-legged frog, the species is not likely to colonize the project site because it has limited long-distance dispersal capabilities, the distances to extant upstream and downstream locations are relatively long, and existing hydrologic

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1135 M.P. Hayes and M.R. Jennings, "Habitat Correlates of Distribution of the California Red-Legged Frog (*Rana aurora draytonii*) and the Foothill Yellow-Legged Frog (*Rana boylii*): Implications for Management," in *Proceedings of the Symposium on the Management of Amphibians, Reptiles, and Small Mammals in North America*, technical coordinators R. Sarzo, K.E. Severson, and D.R. Patton (1988), 144–158.

1136 71 FR 19244–19346.

1137 73 FR 53492–53680.

1138 USFWS, *Recovery Plan for the California Red-Legged Frog (*Rana aurora draytonii*) (*Portland, Oregon: USFWS, Region 1, 2002).

1139 USFWS, *Recovery Plan for the California Red-Legged Frog*.

conditions are not conducive to breeding. However, for the purpose of this cumulative analysis, it is assumed that there is some potential for the species to use the Mission Village project site and larger RMDP/SCP project area for dispersal and breeding.

Based on the California GAP data,[1140] there are approximately 25,000 acres of riparian habitat in the SCRW. However, not all 24,000 acres support California red-legged frogs or could be reasonably expected to support them. As noted above, the documented distribution of the California red-legged frog in the SCRW is very scattered and confined to a few locations.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (which encompasses the Mission Village project site), would cause the loss of 1,030 acres of 25,000 acres of riparian habitat. Without accounting for past, present, or reasonably foreseeable mitigation, or the RMDP/SCP project's individual contribution to mitigation for loss of riparian habitat, the loss of riparian habitat in the SCRW could result in a potential significant impact on potential habitat for the California red-legged frog. However, as described above, the permanent loss of riparian habitat from present and reasonably foreseeable projects would be reduced by CDFG and Corps mitigation requirements consistent with their policies for no net loss of wetlands (although net functions and values/services of wetland habitats may be reduced)[1141]. The RMDP/SCP project's contribution to this potentially significant cumulative impact is approximately 230 acres, including approximately 89 acres of riparian habitat on the Mission Village project site that would be permanently or temporarily disturbed. This contribution by the proposed Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed Mission Village project, could also result in potential long-term secondary effects, including increased human activity; habitat degradation and collection; lighting invasive species, including Argentine ant and invasive plants such as giant reed; pet, stray, and cats and feral dogs; vehicle collisions; and use of pesticides. At the watershed level these secondary effects could be a significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

Both the Newhall Ranch Specific Plan Program EIR and this EIR recommend extensive mitigation measures that protect riparian habitat and establish a large, managed open space system (~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures). These measures would reduce impacts to the California red-legged frog, if it were to colonize

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1140 UCSB, *California Gap Analysis Project.*

1141 Ambrose, Callaway, and Lee, *An Evaluation of Compensatory Mitigation Projects Permitted Under Clean Water Act Section 401 by the California State Water Quality Control Board, 1991–2002*.

the Mission Village project area in the future. These mitigation measures include preservation, restoration, and enhancement of riparian and wetland habitat. Large areas of suitable habitat for this species would be protected in the River Corridor SMA/SEA 23. The Floodplain Hydraulics Impacts Assessment[1142] found that there would be no significant impacts in water flows, velocities, depth, sedimentation, or floodplain and channel conditions downstream of the Mission Village project area over the long term as a result of the proposed project improvements (although, as noted above, existing hydrologic conditions probably are not conducive to breeding by this species).

The River Corridor SMA/SEA 23 would provide a large, protected open space area that would help also offset long-term secondary impacts. Several specific mitigation measures would also be implemented to control human activities in the River Corridor SMA/SEA 23, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. All lighting along the open space-urban interface would be downcast. Pesticides would be controlled through an integrated pest management (IPM) plan. Argentine ant invasions of upland habitats in the open space system would be monitored and controlled to the extent feasible. Implementation of these measures would allow this species to persist on site after development in the River Corridor SMA/SEA 23 if it were to colonize the site in the future.

In addition to these measures, which would reduce project-related impacts to this species, California red-legged frog has not been documented within the Mission Village project site or larger RMDP/SCP area and the nearest known occurrences are 5 and 7 miles away from the RMDP/SCP project area, respectively.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Golden Eagle (CFP). The golden eagle has been occasionally observed during the annual bird surveys conducted from 1988 through 2008 along the Santa Clara River within the riparian scrub and woodland habitat in the RMDP/SCP project area. Off site, this species was observed along the Santa Clara River east and west of the RMDP/SCP area. No nesting has been observed on the Mission Village project site or within the RMDP/SCP project area. In winter 2008, one juvenile and one pair was seen in upper Potrero Canyon west of the Mission Village project site, and it is believed that this is likely a resident pair, but no nest site has been identified to date.[1143] In addition, in March 2008 a helicopter survey was conducted over Newhall Land property to search for raptor nests on cliffs and in steep canyons, with the focus on upland areas of the ranch. One active golden eagle nest

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[1142] PACE, *Floodplain Hydraulics Impacts Assessment - Santa Clara River*.

[1143] Bloom Biological, Inc., *Interim Report of Winter Surveys*.

was located off Newhall Land property on a north-facing cliff at the top of Dewitt Canyon, which is a drainage off Pico Canyon. In fall 2008 two golden eagles were observed resting on a rugged outcrop in the upper portion of the Salt Creek area in Ventura County.[1144] The CNDDB contains three records for past nest sites for the golden eagle in Los Angeles County and two records for Ventura County, but none of the occurrences are in the SCRW—four of the five are in the Santa Monica Mountains and one is in the Tehachapi Mountains. The SCRW supports a large amount of potential nesting and foraging habitat for the golden eagle, especially in the Los Padres National Forest, and in the RMDP/SCP area, within the preserved areas of the High Country SMA/SEA 20 and Salt Creek area.

Based on the California GAP data,[1145] within the SCRW there are approximately 257,000 acres of suitable nesting and foraging habitat (California annual grassland, agriculture, disturbed land, coastal scrub, and oak woodland) for the golden eagle, although it cannot be assumed that golden eagles actually use all 257,000 acres. Foraging territories are related to nest locations, prey density and availability, and the openness of terrain. Even though home ranges, which probably reflect an individual's total foraging territory, can be large, individuals focus their activity in a smaller core area that provide these resources.[1146] Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP area (which encompasses the Mission Village project site), would cause the loss of approximately 24,000 acres of 257,000 acres of suitable nesting and foraging habitat. It is assumed for this analysis that some of this habitat could occur in core activity areas, the loss of which could alter the individual's use of its territory and potentially cause nest abandonment. Without accounting for past, present or reasonably foreseeable mitigation (particularly for upland habitats), or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of habitat in the SCRW potentially would result in a potential significant cumulative impact on suitable habitat for the golden eagle. The RMDP/SCP project's contribution to this potentially significant cumulative impact is 4,905 acres, including approximately 1,356 acres on the Mission Village project site that would be permanently or temporarily disturbed. This contribution by the proposed Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed Mission Village project, also could result in potential long-term secondary effects, including an increased potential for collisions with phone towers, power lines, and utility poles, resulting in physical injury or death as a result of the collision or from electrocution. Reproductive success also could be affected by increased noise; lighting; pesticides that may cause secondary poisoning and loss of prey; human disturbances of nest sites; and pet, stray, and feral cats and dogs. At the watershed level these secondary

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1144 D. Bedford, "Eagle Sightings in High Country," email from D. Bedford (CDFG) to C. Huntley (Aspen), P. Behrends (Dudek), and Matt Carpenter (Newhall Land) (March 5, 2009).

1145 UCSB, *California Gap Analysis Project.*

1146 J.M. Marzluff et al., "Spatial Use and Habitat Selection of Golden Eagles in Southwestern Idaho," *Auk* 114 (1997), 673–687.

effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by both the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would result in a large, managed open space system comprised of the High Country SMA/SEA 20, Salt Creek area, and River Corridor SMA/SEA 23 that provides approximately 4,070 acres of suitable foraging and nesting habitat for the golden eagle. This open space system would also help protect the golden eagle from long-term secondary impacts, such as collisions with phone towers, power lines, and utility poles, and "edge effects" caused by human activity. Several specific mitigation measures for long-term secondary effects would also be implemented. Lighting restrictions along the perimeter of natural areas would help reduce impacts to potential nest sites. Limited recreational usage and access restrictions within the High Country SMA/SEA 20, control of pet, stray, and feral cats and dogs in or near open space areas, trail signage, and homeowner education regarding special-status resources in preserved natural habitat areas would help protect golden eagles during foraging activities and potential nest sites. Controls on pesticides (including rodenticides) would reduce the chance of accidental poisoning and potential loss of prey. Installation of new or relocation of existing phone and cell towers, power lines, and utility poles in the High Country SMA/SEA 20 and Salt Creek area would be coordinated with CDFG and structures would be designed in accordance with Avian Power Line Interaction Committee guidelines[1147] and operated with anti-perching devices to help reduce collisions and electrocutions of golden eagles.

In addition to these measures, which would reduce project-related impacts to this species, golden eagle is known to occur within much of the watershed, including National Forest system lands. While this species has not been documented to nest within the RMDP/SCP project area, the RMDP/SCP project would not impede use of the High Country SMA/SEA 20 and Salt Creek area or other open space within the watershed for foraging or nesting.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Least Bell's Vireo (FE, CE). The least Bell vireo's breeding distribution extends to eight California counties: Imperial, Kern, Los Angeles, Riverside, Santa Barbara, San Bernardino, San Diego and Ventura.[1148] About half of the least Bell vireo in California occur at Camp Pendleton in San Diego County.[1149] The least Bell's vireo nests in

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1147 APLIC, *Avian Protection on Power Lines*.

1148 CDFG, *The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000–2004*.

1149 CDFG, *The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000–2004*.

moderate numbers in the SCRW. The USFWS[1150] conducted a 5-year status review of the least Bell's vireo that compiled comprehensive survey data for 5-year increments from 1977 to 2005, and from which the USFWS estimated least Bell's vireo territories.[1151] An estimated 173 territories occurred in Los Angeles and Ventura counties as of 2006, which accounted for about 6 percent of the estimated total of 2,968 territories in California (**Table 4.3-25**).[1152] Of the 173 territories in Los Angeles and Ventura counties, 119 (69 percent) occur in the Santa Clara River population unit identified in the Draft Recovery Plan.[1153] Annual survey data have been collected for the least Bell's vireo along the Santa Clara adjacent to and in the vicinity of the Mission Village project site between 1988 and 2007. Regularly surveyed areas include the Specific Plan and VCC planning areas and a portion of the Entrada planning area, as well as adjacent areas of Newhall Land property from the Las Brisas Bridge crossing on the west in Ventura County to I-5 on the east. Least Bell's vireo, including breeding pairs, territorial males, and/or nests, have been observed almost every year along the Santa Clara River within the Specific Plan area, and over multiple years within the VCC planning area and adjacent to the RMDP/SCP project area in Castaic Junction in riparian scrub habitat (**Figure 4.3-28, Least Bell's Vireo Critical Habitat in Santa Clara River Critical Habitat Unit**). While consistently observed between 1988 and 2007, vireos exhibit annual fluctuations in levels of occupancy and breeding activity in the Santa Clara River. There is one least Bell's vireo occurrence in the Santa Clara River between Middle Canyon and Dead-End Canyon from the 2004-2007 survey period and several occurrences in the River northeast of Airport Mesa to I-5. While the Mission Village project site supports potential riparian nesting habitat for least Bell's vireo, the large majority of this potential habitat, primarily southern cottonwood-willow riparian, is within the Santa Clara River portion of the site and would not be developed or directly disturbed. The riparian vegetation within the tributaries on the project site subject to development is less suitable as nesting habitat for this species because the riparian zones tend to be narrower (i.e., smaller patch sizes). This is illustrated in **Figure 4.3-4-A3** where a narrow, linear patch of southern cottonwood-willow riparian extends into the lower portions of Middle Canyon, compared to the wide swaths of the riparian in the Santa Clara River.

1150 USFWS, *Least Bell's Vireo (*Vireo bellii pusillus*), 5-Year Review Summary and Evaluation* (Carlsbad, California: USFWS, Carlsbad Fish and Wildlife Office, 2006).

1151 It should be noted that these data represent a minimum estimate of least Bell's vireo territories because they are a composite of multiple surveys covering different reaches and may exclude large stretches of suitable habitat that were not surveyed ("USFWS, *Least Bell's Vireo, 5-Year Review Summary and Evaluation*); in other words, these data do not represent a single snapshot of the entire occupied vireo range.

1152 USFWS, *Least Bell's Vireo, 5-Year Review Summary and Evaluation*.

1153 USFWS, *Draft Recovery Plan for the Least Bell's Vireo (*Vireo bellii pusillus*)* (Portland, Oregon: USFWS, Region 1, 1998).

Table 4.3-25
Estimate of Least Bell's Vireo Territories by County[1]

Estimate of Least Bell's Vireo Territories (and Percentage of the Total Population) for a Given Range of Years[2]					
County	**1977–1985[3]**	**1986–1990**	**1991–1995**	**1996–2000**	**2001–2005**
San Diego[4]	223 (77%)	401 (76%)	1,118 (78%)	1,899 (76%)	1,609 (54%)
Riverside[5]	29 (10%)	50 (9%)	223 (16%)	395 (16%)	898 (30%)
Orange	1 (<1%)	3 (1%)	16 (1%)	68 (3%)	177 (6%)
San Bernardino	0 (0%)	2 (<1%)	5 (<1%)	20 (1%)	87 (3%)
Los Angeles	6 (2%)	1 (<1%)	4 (<1%)	13 (1%)	56 (2%)
Ventura[6]	5 (2%)	8 (2%)	35 (2%)	86 (3%)	117 (4%)
Santa Barbara[7]	26 (9%)	57 (11%)	32 (2%)	12 (<1%)	12 (<1%)
Inyo	0 (0%)	4 (1%)	5 (<1%)	0 (0%)	11 (<1%)
Kern	0 (0%)	0 (0%)	1 (<1%)	0 (0%)	0 (0%)
Monterey	0 (0%)	3 (1%)	0 (0%)	0 (0%)	0 (0%)
San Benito	1 (<1%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Stanislaus	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (<1%)
Total	**291**	**529**	**1,439**	**2,493**	**2,968**
Percent Increase from Previous Period	—	*82%*	*172%*	*73%*	*20%*
Percent Increase since Listing	—	*82%*	*394%*	*753%*	*920%*

[1] *Reproduced from USFWS, Least Bell's Vireo, 5-Year Review Summary and Evaluation.*
[2] *Estimates based on composite of surveys across the specified range of years.*
[3] *From the original listing (51 FR 16474).*
[4] *Approximately 50 percent or greater from Camp Pendleton.*
[5] *Approximately 90 percent or greater from the Santa Ana River and its tributaries.*
[6] *Approximately 90 percent or greater from the Santa Clara River.*
[7] *Approximately 90 percent or greater from the Santa Ynez River.*

AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-28

Mission Village EIR

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Least Bell's Vireo Critical Habitat in Santa Clara River Critical Habitat Unit

The USFWS made a final critical habitat designation for the least Bell's vireo on February 2, 1994.[1154] The USFWS vireo critical habitat designation covers approximately 38,000 acres at 10 different locations in six counties in Southern California: Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego. The RMDP/SCP project site includes a portion of the Santa Clara River critical habitat unit located in Ventura and Los Angeles counties (**Figure 4.3-28**). The Santa Clara River unit includes all land within a 3,500-foot-wide zone along the Santa Clara River south of State Route 126 (SR-126) from a point approximately 2.3 miles east of the intersection of Main Street and SR-126 in Piru on the west to the intersection of SR-126 and The Old Road and eastward and southward along The Old Road to its intersection with Rye Canyon Road. The Santa Clara River critical habitat unit comprises approximately 4,410 acres (approximately 12 percent) of the total 38,000 acres of least Bell's vireo critical habitat. Of this, least Bell's vireo critical habitat within the RMDP/SCP project area totals 2,252 acres (**Figure 4.3-28**). However, 405 acres of the 2,252-acre least Bell's vireo critical habitat designation within the RMDP/SCP project area consists of primary constituent elements of vireo critical habitat.

A Draft Recovery Plan for the Least Bell's Vireo (*Vireo bellii pusillus*) was published by the USFWS in 1998.[1155] The recovery strategy focuses on two major causes of decline of the species: (1) habitat loss and degradation, and (2) brown-headed cowbird parasitism. The Draft Recovery Plan identified 14 vireo "population/metapopulation units," including the Santa Clara River population unit. The Draft Recovery Plan does not identify the geographic limits of the Santa Clara population unit, simply stating that "habitat for the [vireo] occurs in patches along much of the river, with location and quality varying from year to year as conditions in the river change following winter storm events."[1156]

Fourteen federal biological opinions were issued for the least Bell's vireo between 1993 and 2006 in the SCRW (**Table 4.3-19**). CDFG has recently issued four take authorizations for least Bell's vireo in the general regional vicinity of the RMDP/SCP project (**Table 4.3-20**).

Based on the California GAP data,[1157] there are approximately 25,000 acres of riparian habitat in the SCRW. However, not all 25,000 acres support least Bell's vireos or could be reasonably expected to support them. Because the vireo primarily is limited to the Santa Clara River within the watershed, it is likely that a relatively large proportion of riparian habitat in the SCRW is not occupied because it does not support the primary constituent elements of vireo habitat. As described above, the reach of the Santa Clara River within the RMDP/SCP area consistently has supported a breeding population since surveys began in 1988 and is designated critical habitat for this species.

1154 59 FR 4845.

1155 USFWS, *Draft Recovery Plan for the Least Bell's Vireo*.

1156 USFWS, *Draft Recovery Plan for the Least Bell's Vireo*, 58.

1157 UCSB, *California Gap Analysis Project.*

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, (encompassing the Mission Village project site) would cause the loss of 1,030 acres of the 25,000 acres of riparian habitat within the watershed; however, the proportion of occupied least Bell's vireo habitat that could be impacted by development is probably substantially higher because most occupied habitat is probably in the Santa Clara River and the larger tributaries where development pressure is higher. Smaller and more remote drainages that support riparian habitat, but which is less likely to be occupied by the vireo, probably are under less development pressure. Without accounting for past, present or reasonably foreseeable mitigation, or the RMDP/SCP project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW could be a significant cumulative impact on potential habitat for the least Bell's vireo. However, as described above, the permanent loss of riparian habitat from past, present, and reasonably foreseeable cumulative development would be reduced by CDFG and Corps mitigation requirements consistent with their policies for no net loss of wetlands (although net functions and values/services of wetland habitats may be reduced)[1158]. The RMDP/SCP project's contribution to this potentially significant cumulative impact is approximately 230 acres, including approximately 5 acres of permanent disturbance and 25 acres of temporary disturbance of southern willow scrub and southern cottonwood-willow riparian on the Mission Village project site. This contribution by the proposed Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed Mission Village project, also could result in potential long-term secondary effects, including nest parasitism by cowbirds; traffic noise; nighttime illumination; increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. Habitat quality for the least Bell's vireo could be reduced by diminished water quality and invasion by exotic plant species. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation measures required by both the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended in this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would protect riparian habitat and establish a large, managed open space system, all of which would reduce impacts to the least Bell's vireo. This mitigation would result in the preservation and management of at least 332 acres of suitable habitat, primarily in the River Corridor SMA/SEA 23, that would be available for future breeding populations of least Bell's vireo. These mitigation measures also include restoration and enhancement of riparian and wetland

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1158 Ambrose, Callaway, and Lee, *An Evaluation of Compensatory Mitigation Projects Permitted Under Clean Water Act Section 401 by the California State Water Quality Control Board, 1991–2002*.

habitat. Specific measures to reduce secondary impacts include controls on public access; invasive species controls; conformance with permits from federal and state agencies for impacts to wetlands and water quality (i.e., NPDES and section 401 Permits); lighting controls; pesticides controls; and cowbird trapping.

In addition to site-specific mitigation measures, and mitigation anticipated for other present and reasonably foreseeable project impacts to achieve the no net loss of riparian acreage, recent population estimates for the vireo indicate that the breeding populations are expanding both in range and size as a result of restoration and enhancement of riparian habitat and management of brown-headed cowbirds.[1159] Within the watershed breeding vireo occur both upstream and downstream of the Mission Village project site and larger RMDP/SCP area in areas that would not be subject to disturbance of present and reasonably foreseeable projects.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Ringtail Cat (CFP). The ringtail cat was not observed on the Mission Village site or larger RMDP/SCP area during track/scent station monitoring for mammals or during numerous wildlife surveys conducted in the Specific Plan area. The nearest recent documented occurrence of ringtail cat is a 2007 observation in Elderberry Canyon approximately 0.5 mile above Castaic Dam in a narrow, rocky canyon.[1160] There are also two recorded occurrences of ringtail cat in Los Angeles County: in the Santa Monica Mountains and on the southern flank of the San Gabriel Mountains.[1161] If this species occurs in the SCRW, it is most likely to occur in canyons and ravines associated with water sources and riparian and woodland habitats, including lower elevation oak woodlands, higher elevation coniferous forests, and juniper and pinyon woodlands.

Based on the California GAP data,[1162] habitat within the SCRW considered suitable for ringtail cats consists of approximately 25,000 acres of riparian habitat. However, habitat used by ringtail cats is strongly associated with microhabitats that include perennial water sources, rocky outcrops in canyons, tree cavities, etc. Although there have been few observations of ringtail cats in the region, this species could occur within suitable habitat within the watershed. It is likely that most of this potentially suitable habitat is not occupied, probably due to a lack of the microhabitat elements necessary for occupation, such as permanent waters sources.

[1159] USFWS, *Least Bell's Vireo, 5-Year Review Summary and Evaluation*.

[1160] C. Huntley, "Re: Rare plant locations for *Juncus* and ringtail," email from C. Huntley (Aspen) to M. Carpenter (Newhall Land) (January 19, 2009).

[1161] L. Belluomini, "Status of Ringtail in California," (California Department of Fish and Game, 1980).

[1162] UCSB, *California Gap Analysis Project*.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, would cause the loss of 1,030 acres of 25,000 acres of riparian habitat. Without accounting for past, present or reasonably foreseeable mitigation, or the RMDP/SCP project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW could be a significant cumulative impact on potential habitat for the ringtail cat. The RMDP/SCP project's contribution to this potentially significant cumulative impact is approximately 230 acres, including approximately 89 acres of riparian habitat on the Mission Village project site that would be permanently or temporarily disturbed. This contribution by the proposed Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects including increased human activity; habitat fragmentation; increased vehicle collisions; nighttime lighting; increased predation; and pesticides. If the ringtail were present, at the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation measures required by both the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would reduce these impacts to a less than significant level. Specifically, approximately 1,170 acres of potentially suitable habitat for this species would be preserved and managed in a large open space system composed of the River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area. Not all 1,170 acres of potentially suitable habitat would contain the microhabitats typically used by the ringtail, but if the species is present on site, it would be within the 1,170 acres. Several specific mitigation measures would also be implemented to reduce potential long-term secondary effects, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. Pesticides, including rodenticides, would be controlled through an integrated pest management (IPM) plan.

In addition to these measures, which reduce project-related impacts, this species has not been identified on the Mission Village project site or within the larger RMDP/SCP area and is not expected to occur on the project site. Ringtail cat is expected to occur within the SCRW, but only in association with its required microhabitats. Where this species has been observed within the SCRW, it occurs within National Forest system lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Southern Steelhead (FE). The range of the southern steelhead is from the Santa Maria River along the San Luis Obispo-Santa Barbara County line in the north to the Tijuana River just north of the U.S.-Mexico border in the south. Its historic range within many of these coastal streams was limited by natural barriers, above which no known Southern California populations of native rainbow trout or steelhead previously existed. Definitive records of southern steelhead are not available for many of the small coastal streams within the Southern ESU; however, it is believed that most of the streams were inhabited by the species. The distribution of southern steelhead within the ocean is not well known, but some evidence indicates that they remain relatively close to the coast and even near the mouths of their natal streams which contrasts with other Pacific salmonid species that range widely in the ocean.[1163]

The southern steelhead has been recorded within the last decade in Ventura County in the Santa Clara River and the Ventura River. Within the Santa Clara River drainage, southern steelhead historically inhabited Piru Creek, Sespe Creek, Santa Paula Creek, Hopper Creek, and possible Pole Creek.[1164] Presently, southern steelhead occur in the Santa Clara River watershed in Piru Creek between the confluence with the Santa Clara River and Santa Felicia Dam; in Sespe Creek; in Santa Paula Creek; and possibly Hopper and Pole Creeks.[1165] There is no historic record of steelhead use of the Santa Clara River or tributaries upstream of Piru Creek and the Dry Gap approximately 5 miles downstream of the RMDP/SCP area.

The southern steelhead was listed as federally endangered in 1997 in the Southern Evolutionarily Significant Unit (ESU) that extends from the Santa Maria River in the north southward to Malibu Creek without Critical Habitat.[1166] In 2002 the range of the Southern California ESU was extended south to the United States-Mexico Border.[1167] In 2005, USFWS issued a Final Rule designating Critical Habitat Designation for the Southern California Coast ESU.[1168] In 2006 the endangered status of the southern steelhead was re-affirmed for 10 Distinct Population Segment (DPS) of West Coast Steelhead.[1169]

In the Santa Clara River watershed, designated critical habitat includes the Santa Clara River and its tributaries from Piru Creek (below Santa Felicia Dam) to the Santa Clara River confluence and downstream to the Pacific Ocean. The upstream extent of designated critical habitat is approximately 5 miles downstream of the RMDP/SCP area in Ventura County, California.

1163 National Marine Fisheries Service (NMFS), *Federal Recovery Outline for the Distinct Population Segment of Southern California Coast Steelhead* (NMFS, Southwest Regional Office, 2007).

1164 Titus, Erman, and Snider, *History and Status of Steelhead*.

1165 Stoeker and Kelly, *Santa Clara River Steelhead Trout*.

1166 62 FR 43937–43954.

1167 67 FR 21586–21598.

1168 70 FR 37159–37204.

1169 71 FR 834.

A Recovery Plan for southern steelhead, as required by the FESA, has not been published to date. However, a Southern California ESU recovery team has been formed and is currently working on a draft Recovery Plan for southern steelhead within the Santa Clara River and the Southern California ESU. In September 2007, a Federal Recovery Outline for the DPS of southern steelhead was released.[1170]

The project-level impacts analysis includes a characterization of existing habitat suitability along the Santa Clara River within the RMDP/SCP area. ENTRIX[1171] conducted quantitative fish habitat surveys of the Santa Clara River and concluded that the channel in the RMDP/SCP reach of the River (including the portion of the River adjacent to the Mission Village project site) has very low gradient runs and riffles and is dominated by sandy substrate with little or no riparian canopy along the flowing stream. The southern steelhead is not expected to successfully spawn in this reach due to inadequate substrate material (e.g., lack of gravel for redd development) and sub-optimum water quality conditions related to wastewater outflows from upstream of the RMDP/SCP area reach. The habitat for southern steelhead in this reach of the River also lacks requisite channel structure and pool habitat necessary to support rearing. If the southern steelhead could migrate into the RMDP/SCP area reach, requiring passage through the Dry Gap area (an area downstream of the Los Angeles County/Ventura County line where surface flows in the river are lost to the Piru groundwater basin), it would face significant challenges in successfully completing its life history cycle due to unsuitable River and tributary spawning and rearing habitat. For these reasons, the Mission Village project-level analysis was conducted under the assumption that southern steelhead and its habitat for spawning and rearing are not present in the larger RMDP/SCP area that encompasses the Mission Village project site, and thus concluded that impacts to southern steelhead spawning and rearing habitat would be less than significant for the Mission Village project. It was also concluded that no impacts to habitat would occur as a result of buildout of the Specific Plan, VCC, and Entrada areas. For these reasons, the proposed Mission Village project is not expected to contribute to a potential significant cumulative impact on habitat for steelhead in the SCRW that may occur as a result of downstream projects.

With respect to potential impacts on individuals, the project-level analysis assumed that vagrant southern steelhead could be found in the River adjacent to the Mission Village project site during surveys or fish exclusion activities prior to construction, although this event is considered to be very unlikely due to the lack of historical records for this species upstream of Piru and the Dry Gap. As noted above, these individuals would not be expected to spawn in the larger RMDP/SCP area. The impact to southern steelhead individuals resulting from the proposed Mission Village project, therefore, was determined to be less than significant. For these reasons, the RMDP/SCP project is not expected to contribute to a potential significant cumulative impact to individual steelhead that may occur as a result of downstream projects.

1170 NMFS, *Federal Recovery Outline for Southern California Coast Steelhead*.

1171 ENTRIX, Inc., *Focused Special-Status Fish Species Habitat Assessment*.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, could result in potential long-term secondary effects such as hydrologic, geomorphic, and water quality impacts. It was determined that the proposed Mission Village project has the potential to affect southern steelhead individuals and habitat downstream of the RMDP/SCP area through short- or long-term hydrologic, geomorphic, or water quality alterations of the River. These potential impacts include long-term effects associated with operation of RMDP facilities and buildout of the RMDP/SCP project area such as physical changes in the River and increased discharges. Specific impacts include alterations in base flows, timing and duration of flood flows, biochemical changes, condition and composition of the substrate, aquatic and riparian vegetation (including exotic species), and water temperatures, as well as increased pollutants from irrigation runoff and increased runoff from roadways. Additional secondary impacts associated with increased human presence include incidental litter and trash from recreation activity; impacts such as fecal material from pet, stray, and feral cats and dogs entering the aquatic system; and increased predation by exotic predators, such as bullfrogs and non-native fish. However, due to the approximately 5-mile distance from documented occurrences of southern steelhead at Piru Creek and the intervening Dry Gap, these potential secondary effects would be substantially attenuated before they could affect any downstream habitat and individuals. Therefore, the proposed the Mission Village project is not expected have a considerably cumulatively contribution to potential significant secondary cumulative impacts in the SCRW.

Although the Mission Village project would not contribute to potential significant secondary impacts to the steelhead in the SCRW, and, therefore, no mitigation for secondary cumulative impacts is required, the combined mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would additionally reduce the potential for secondary impacts to southern steelhead and its habitat downstream of the Mission Village project site. Impacts such as increased chemical pollutants, sedimentation, and increased human activity would be mitigated by measures such as the protection and management of the River Corridor SMA/SEA 23, creation of buffer areas between the River Corridor SMA/SEA 23 and development, water quality requirements, and restrictions on public access. PACE[1172] found that there would be no significant impacts to water flows, velocities, depth, sedimentation, or floodplain and channel conditions downstream of the RMDP/SCP area over the long term as a result of RMDP/SCP project improvements. Furthermore, the Newhall Ranch Wastewater Reclamation Plant (WRP) would be a near-zero discharge facility, and only limited discharge from the WRP to the Santa Clara River would occur during the winter months. Based on an analysis of post-development conditions within the Dry Gap,[1173] it was determined that the future WRP discharge would not affect the seasonality (i.e., ephemeral nature) of flows through the Dry Gap.

[1172] PACE, *Floodplain Hydraulics Impacts Assessment - Santa Clara River*.

[1173] GSI Water Solutions, Inc., *Assessment of Future Surface Water Conditions in the Dry Gap of the Santa Clara River* (2008).

Impacts to southern steelhead habitat and vagrant individuals and downstream secondary effects would be less than significant. Potential impacts would be further reduced by a set of mitigation measures for other special-status fish that occur in Santa Clara River adjacent to the Mission Village project site (arroyo chub, Santa Ana sucker, unarmored threespine stickleback) required by the Newhall Ranch Specific Plan Program EIR and recommended by this EIR (~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures). Therefore, the proposed Mission Village project would not contribute to potential significant cumulative impacts to southern steelhead in the SCRW.

Southwestern Willow Flycatcher/Willow Flycatcher (FE, CE). Breeding populations of the willow flycatcher exist in isolated meadows of the Sierra Nevada and along the Kern, Santa Margarita, San Luis Rey and Santa Ynez Rivers in Southern California.[1174] Breeding populations of the southwestern willow flycatcher exist in Kern, Santa Barbara and San Diego counties and several other locations in Southern California.[1175] Outside of California, breeding populations of the southwestern willow flycatcher exist in Arizona, Colorado, Nevada, New Mexico and Utah.[1176] The willow flycatcher has a sporadic breeding distribution throughout California, where three of the subspecies occur, including little willow flycatcher (*E. t. brewsteri*), *E. t. adastus* (which has no common name other than "willow flycatcher"), and southwestern willow flycatcher (*E. t. extimus*).[1177] The different subspecies of willow flycatcher each occupy distinct breeding ranges and have subtle differences in color and morphology.[1178] The southwestern willow flycatcher was formerly a common summer resident throughout California, but has been extirpated from most of its historical breeding range in the state. The smallest of the breeding populations consists of approximately five pairs and the largest is approximately 50 pairs. The number of southwestern willow flycatchers in California has been estimated at approximately 200, recorded at 22 locations within 13 drainages.[1179]

The full species willow flycatcher has been detected almost every year within the River corridor in the RMDP/SCP project area during the focused bird surveys conducted from 1988 to 2007, but no nesting southwestern willow flycatchers have been confirmed on site. All of the observations of willow flycatchers within the region were determined to be migrants because they were only detected once and/or early in the breeding season and not during the June-July period when the southwestern willow flycatcher would be expected if nesting on site. The most recent nearby documented breeding locations for the southwestern willow flycatcher are from the Santa Clara River near

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1174 CDFG, *The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000–2004*.

1175 CDFG, *The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000–2004*.

1176 CDFG, *The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000–2004*.

1177 D. Craig and P.L. Williams, "Willow Flycatcher (*Empidonax traillii*)," California Partners in Flight Riparian Bird Conservation Plan, http://www.prbo.org/calpif/htmldocs/riparian_v-2.html; J.A. Sedgwick, "Willow Flycatcher (*Empidonax traillii*)," in *The Birds of North America*, ed. A. Poole and F. Gill (Philadelphia, Pennsylvania: The Birds of North America, Inc., 2000).

1178 M.K. Sogge et al., *A Southwestern Willow Flycatcher Natural History Summary and Survey Protocol* (National Park Service, U.S. Department of the Interior, 1997).

1179 D.M. Finch, J.F. Kelly, and J-L.E. Cartron, "Migration and Winter Ecology," in *Status, Ecology, and Conservation of the Southwestern Willow Flycatcher*, ed. D.M. Finch (2000).

Fillmore, downstream of the RMDP/SCP area. Two breeding pairs were observed in 2006 by J. Gallo, with one nest producing two successful fledglings and the other nest failing.[1180] Currently, the RMDP/SCP project area, including the portion of the Santa Clara River adjacent to the Mission Village project site, appears to be a migratory stop for one or more of the subspecies of willow flycatcher, but breeding populations of the southwestern willow flycatcher could expand to the RMDP/SCP project area in the future. While the Mission Village project site supports potential riparian nesting habitat for southwestern willow flycatcher, the large majority of this potential habitat, primarily southern cottonwood-willow riparian is within the Santa Clara River portion of the site and would not be developed or directly disturbed. The riparian vegetation within the tributaries on the project site subject to development is less suitable as nesting habitat for this species because the riparian zones tend to be narrower (i.e., smaller patch sizes). This is illustrated in **Figure 4.3-4-A3** where a narrow, linear patch of southern cottonwood-willow riparian extends into the lower portions of Middle Canyon, compared to the wide swaths of the riparian in the Santa Clara River.

On October 19, 2005, critical habitat was designated for the southwestern willow flycatcher.[1181] Critical habitat in California is designated in Kern, Santa Barbara, San Bernardino, and San Diego counties, but there is no designated critical habitat in the SCRW. The Final Recovery Plan for the Southwestern Willow Flycatcher was published by the USFWS on August 30, 2002.[1182] The RMDP/SCP project area is located within the Coastal California Recovery Unit of the Final Recovery Plan, and establishment of new territories is part of the recovery criteria for the subspecies. Within the Santa Clara River, the reach from Bouquet Canyon Road to the Pacific Ocean, which crosses through the RMDP/SCP project area, has been identified as a Management Unit where recovery actions should be focused.[1183]

Six federal biological opinions were issued for the southwestern willow flycatcher between 1993 and 2006 in the SCRW (**Table 4.3-19**). The CDFG has recently issued four take authorizations for southwestern willow flycatchers in the general regional vicinity of the RMDP/SCP project area (**Table 4.3-20**).

Based on the California GAP data,[1184] there are approximately 25,000 acres of riparian habitat in the SCRW that provide potential habitat for migrating and nesting willow flycatchers. However, not all 25,000 acres support willow flycatchers or southwestern willow flycatchers or could be reasonably expected to support them. Based on the few documented nesting locations in the SCRW, only a small proportion of this habitat would be expected to support nesting, probably due to a lack of constituent habitat elements necessary for this species. As noted above, within the

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1180 Root, "Acknowledgement of Request for Formal Consultation."

1181 70 FR 60886-61009.

1182 USFWS, *Southwestern Willow Flycatcher Recovery Plan* (Albuquerque, New Mexico: USFWS, 2002).

1183 USFWS, *Southwestern Willow Flycatcher Recovery Plan*.

1184 UCSB, *California Gap Analysis Project*.

vicinity of the RMDP/SCP area, breeding has been documented only in the Fillmore area, located approximately 13 miles to the west of the RMDP/SCP area. A larger proportion of this habitat is expected to support temporarily migrating birds based on the regular observation of migrating individuals in the RMDP/SCP area.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (which encompasses the Mission Village project site), would cause the loss of 1,030 acres of 25,000 acres of riparian habitat within the watershed; however, the proportion of habitat potentially used for migration and nesting that could be impacted by development is probably substantially higher because most of this potential habitat is probably in the Santa Clara River and the larger tributaries where development pressure is higher. Smaller and more remote drainages that support riparian habitat, but which is less likely to be used by the southwestern willow flycatcher/willow flycatcher, probably are under less development pressure. Without accounting for past, present or reasonably foreseeable mitigation, or the RMDP/SCP project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW could be a potential significant impact on potential habitat for the southwestern willow flycatcher/willow flycatcher. The RMDP/SCP project's contribution to this potentially significant cumulative impact is approximately 230 acres, including approximately 5 acres of permanent disturbance and 25 acres of temporary disturbance of southern willow scrub and southern cottonwood-willow riparian on the Mission Village project site. This contribution by the proposed Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects, include nest parasitism by cowbirds; traffic noise (southwestern willow flycatcher is unlikely to nest in close proximity to the bridge crossing of the Santa Clara River due to traffic noise); nighttime illumination; increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. Habitat quality for the southwestern willow flycatcher/willow flycatcher could be reduced by diminished water quality and invasion by exotic plant species. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The Newhall Ranch Specific Plan Program EIR and this EIR recommend extensive mitigation measures that would protect riparian habitat and establish a large, managed open space system, all of which would reduce impacts to the southwestern willow flycatcher/willow flycatcher (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures). This mitigation would result in the preservation and management of at least 332 acres of suitable habitat, primarily in the River Corridor SMA/SEA 23, that would be available for migrating individuals and a breeding population of the southwestern willow flycatcher. These mitigation measures also include restoration, and enhancement of riparian and wetland habitat. Species measures to reduce potential long-term secondary impacts include controls on public

access, invasive species controls, conformance with permits from federal and state agencies for impacts to wetlands and water quality (i.e., NPDES and section 401 permits), lighting controls, pesticides controls, and cowbird trapping.

In addition to the measures described above, which reduce project-related impacts~~,~~, this species has not been observed to breed in the RMDP/SCP area but is known to use the area as a migratory stop-over. Most of the recorded breeding populations of this species occur well outside of the watershed. While typical nesting habitat (structure of riparian canopy, separation from disturbance, etc.) associated with this species does not occur on the Mission Village project site or within the RMDP/SCP area, the documented occurrence of the breeding population downstream in the Fillmore area suggests that expansion of the breeding population to the Santa Clara River within the RMDP/SCP area, including the portion of the River adjacent to the Mission Village project site, could occur. Because of the extensive proposed riparian habitat mitigation, the proposed Mission Village project would not preclude the expansion of the breeding population onto the RMDP/SCP area.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Unarmored Threespine Stickleback (FE, CE, CFP). Unarmored threespine stickleback populations exist in five California counties: Los Angeles, San Bernardino, San Diego, San Luis Obispo, and Ventura.[1185] Surveys for the unarmored threespine stickleback over several years have documented the species within the Santa Clara River portion of the RMDP/SCP area. The unarmored threespine stickleback is confined to perennial aquatic habitat in the Santa Clara River, which comprises a small portion of the wetland/riparian habitat in the River and has high temporal variability. The RMDP/SCP project area is within the Del Valle Zone of the designated essential habitat for this species (**Figure 4.3-29, Habitat in RMDP/SCP for Unarmored Threespine Stickleback**).[1186] The species is known in two other areas of the SCRW that are also designated as essential habitat: San Francisquito Creek and Soledad Canyon.

1185 CDFG, *The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000–2004.*

1186 USFWS, *Unarmored Threespine Stickleback Recovery Plan*; "essential habitat" is a term that appears in the USFWS' 1985 Unarmored Threespine Stickleback Recovery Plan (Revised). It coincides with the area proposed in 1980 as unarmored threespine stickleback critical habitat (USFWS, *Unarmored Threespine Stickleback Recovery Plan*, 7). In 2002, USFWS determined that the 1980 proposed designation of unarmored threespine stickleback critical habitat should not be made final (67 FR 58580). As a result, the term "essential habitat" lacks any regulatory significance.

On November 17, 1980, the USFWS proposed designating approximately 51 kilometers (31.7 miles) of streams in Los Angeles and Santa Barbara counties as critical habitat for the unarmored threespine stickleback).[1187] However, on September 17, 2002, the USFWS determined that a designation of critical habitat for unarmored threespine stickleback should not be made,[1188] a determination that was upheld by the Ninth Circuit Court of Appeals in 2006.[1189]

The Unarmored Threespine Stickleback Recovery Plan (Revised) was published by the USFWS on December 26, 1985.[1190] The Recovery Plan designated three areas as very important for the survival and recovery of the species: (1) two disjunct reaches of the Santa Clara River in Los Angeles County; (2) a short reach of San Francisquito Canyon; and (3) and the lowermost 8.4 miles in San Antonio Creek in Santa Barbara County. One of the reaches in the Santa Clara River is the area from San Martinez Grande Canyon upstream to the I-5 bridge, which runs through the RMDP/SCP project area and is the same area proposed but later rejected as critical habitat.[1191]

Thirteen federal biological opinions were issued for the unarmored threespine stickleback between 1993 and 2006 in the SCRW (**Table 4.3-19**). The CDFG has recently issued three take authorizations for other species in the general regional vicinity of the RMDP/SCP project, which authorizations also discussed, but did not authorize take of, unarmored threespine stickleback (**Table 4.3-20**).

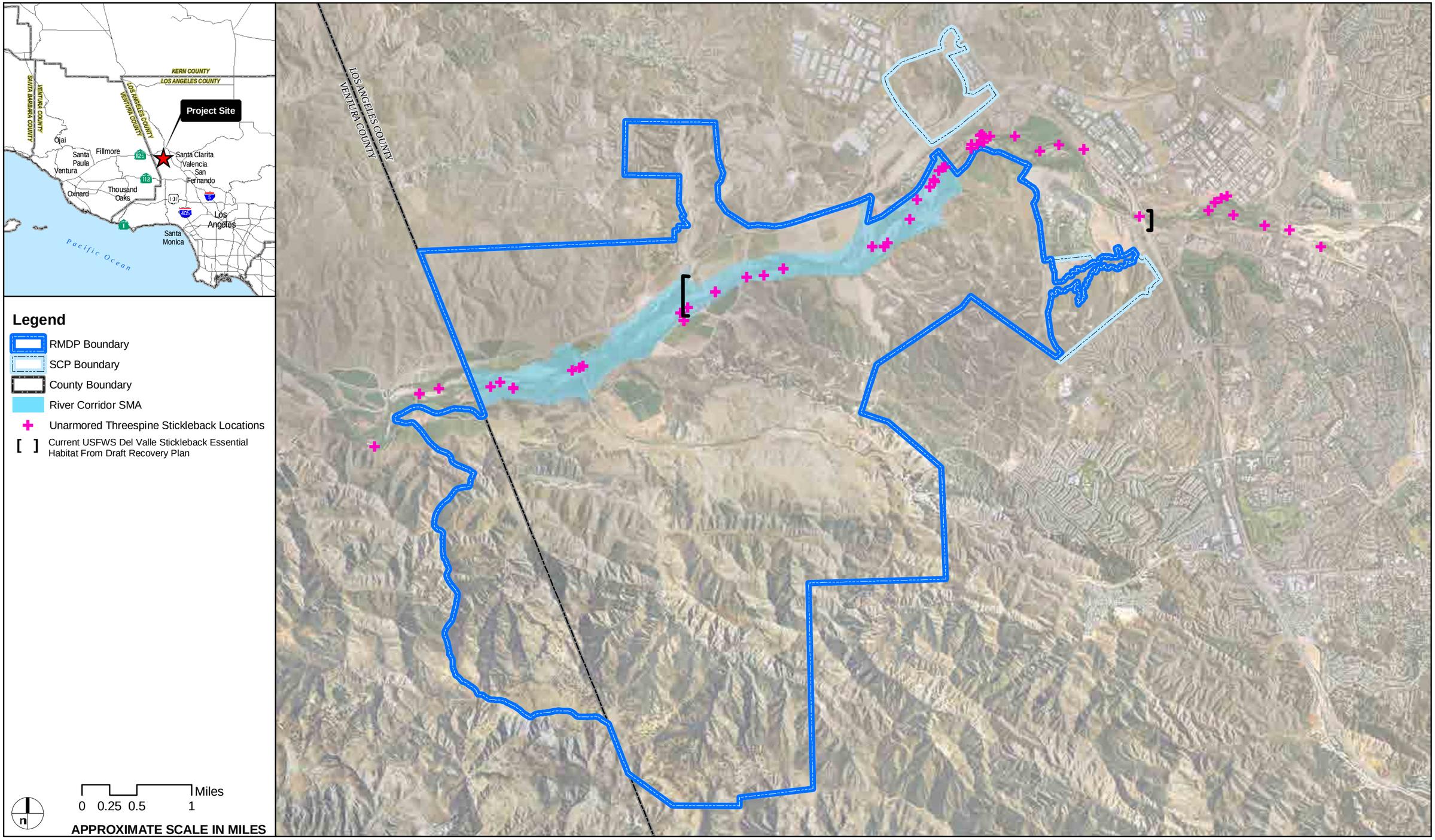
1187 45 FR 76012.

1188 67 FR 58850–58582.

1189 *Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.*, 450 F.3d 930 (9th Cir. 2006).

1190 USFWS, *Unarmored Threespine Stickleback Recovery Plan*.

1191 45 FR 76012; 67 FR 58850–58582.



AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-29

Mission Village EIR

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Habitat in RMDP/SCP for Unarmored Threespine Stickleback

Because the unarmored threespine stickleback is confined to perennial aquatic habitat in the Santa Clara River that is subject to high temporal variability, suitable aquatic habitat was not quantified for the purpose of the impact analysis in this EIR. ENTRIX[1192] concluded that no long-term, permanent significant effects on unarmored threespine stickleback habitat would occur as a result of implementation of the RMDP and buildout of the Specific Plan (including the Mission Village project site), VCC, and Entrada planning areas, because the general morphology of the Santa Clara River, adjacent rearing habitat, and high-flow riparian refugia would not be substantially altered. Further, there would be no impacts to unarmored threespine stickleback habitat resulting from impacts to tributaries to the Santa Clara River, due to the absence of unarmored threespine stickleback, perennial flows, and poor aquatic habitat quality. None of the tributaries have surface water connectivity with the Santa Clara River, except for Middle and Potrero canyons, which have substantial blockages (bedrock headcuts or cascades) that are impassable to fish.[1193]

Some temporary impacts to habitat would occur when construction occurs directly in aquatic habitat, such as the active stream channel. Bridge construction in particular could directly affect aquatic habitat occupied by unarmored threespine stickleback through direct impacts to the flowing stream, stream diversion, and dewatering when construction is occurring within the River corridor. However, such temporary impacts would not contribute to a potential significant cumulative effect of projects in the SCRW.

Construction-related impacts on individuals (including adults and juveniles), if not mitigated, could result in a cumulatively considerable contribution to a potential significant cumulative impact in the SCRW because of the local nature and vulnerability of this species in the Santa Clara River. However, the Newhall Ranch Specific Plan Program EIR mitigation measures, as well as the mitigation measures recommended in this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures), would reduce such impacts to less than significant. These measures include pre-construction surveys for any construction activity within 300 feet of river habitat to assure that stickleback are avoided or excluded, particularly during the sensitive periods such as spawning or when juvenile fish (fry) are present. These measures also specify the methods to be used for excluding stickleback, as well as how temporary diversion channels would be constructed to assure that adequate rearing habitat is present for stickleback during construction. These measures also employ provisions for constructing permanent and temporary stream crossings in the Santa Clara River in a manner that would allow for unimpeded movement upstream and downstream. Numerous water quality measures, such as construction stormwater BMPs (e.g., silt fencing, erosion control materials, sediment basins) and the installation of water quality treatment facilities are also included to minimize impacts from pollutants related to storm runoff during storm events.

1192 ENTRIX, *Focused Special-Status Fish Species Habitat Assessment*.

1193 ENTRIX, *Focused Special-Status Fish Species Habitat Assessment*.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the Mission Village project, also could result in potential long-term secondary effects, including potential physical changes in the River; altered base and flood flows; biochemical, substrate, and temperature alterations; vegetative changes (e.g., invasive plant species); increased human activity; impacts from pet, stray, and feral animals; and increased predation by exotic predators. Mitigation measures implemented to reduce these potential secondary impacts include protection and management of the River Corridor SMA/SEA 23; creation of buffer areas between the River Corridor SMA/SEA 23 and development, water quality requirements; restrictions on public access; controls on pet, stray and feral animals; and control on invasive predators such as bullfrog and African clawed frog. Mitigation measures related to hydrology and water quality will also ensure that potential impacts to any downstream populations of the unarmored threespine stickleback are not significant.

No long-term, permanent significant effects on unarmored threespine stickleback habitat would occur as a result of implementation of the RMDP and buildout of the Specific Plan (including the Mission Village project site), VCC, and Entrada planning areas, because the general morphology of the Santa Clara River, adjacent rearing habitat, and high-flow riparian refugia would not be substantially altered. No loss of unarmored threespine stickleback individuals would occur. Potential long-term secondary impacts would be mitigated to a less than significant level on site.

For the reasons set forth above, contribution of the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Western Yellow-Billed Cuckoo (CE). The western yellow-billed cuckoo has occasionally been documented within the Santa Clara River corridor during surveys conducted from 1988 to 2007, although the locations of these observations were not mapped. This species has been observed historically in 1979, 1981, and 1992;[1194] however, no observations of nesting, paired, or territorial western yellow-billed cuckoos have been documented within the RMDP/SCP project area. Currently, the RMDP/SCP project area appears to be a migratory stop for individual western yellow-billed cuckoos but may also be used for post-migratory movements. For breeding, this species primarily uses large blocks of riparian habitat, particularly cottonwood-willow riparian woodlands.[1195] Large blocks of riparian habitat suitable for western yellow-billed cuckoo generally are absent from the Santa Clara River within the RMDP/SCP project area, and likely elsewhere along the River corridor. In particular, the Mission Village

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1194 Labinger, Greaves, and Haupt, *1996 Avian Survey Results*.

1195 66 FR 38611–38626.

project site lacks suitable large patches of riparian habitat for the western yellow-billed cuckoo. The riparian vegetation within the tributaries on the project site subject to development is not suitable for this species. This is illustrated in **Figure 4.3-4-A3** where a narrow, linear patch of southern cottonwood-willow riparian extends into the lower portions of Middle Canyon, compared to the wide swaths of the riparian in the Santa Clara River.

Based on the California GAP data,[1196] there are approximately 25,000 acres of riparian habitat in the SCRW. However, not all 25,000 acres support western yellow-billed cuckoos or could be reasonably expected to support them. This species appears to be rare in the SCRW, based on the lack of documented nesting, although it probably migrates through the area on occasion. Also, as noted above, this species typically nests in large blocks of riparian habitat that are probably uncommon in the watershed.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, would cause the loss of approximately 1,030 acres of 25,000 acres of riparian habitat within the watershed; however, the proportion of potential western yellow-billed cuckoo habitat that could be impacted by development may be substantially higher because most potential habitat is probably in the Santa Clara River and the larger tributaries where development pressure is higher. Smaller and more remote drainages that support riparian habitat, but which is less likely to be occupied by the yellow-billed cuckoo, probably are under less development pressure. Without accounting for past, present or reasonably foreseeable mitigation, or the RMDP/SCP project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW could be potential significant cumulative impact on potential habitat for the western yellow-billed cuckoo. The RMDP/SCP project's contribution to this potentially significant cumulative impact is approximately 230 acres, including approximately 4 acres of permanent disturbance and 25 acres of temporary disturbance of southern cottonwood-willow riparian habitat on the Mission Village project site. This contribution by the proposed Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the Mission Village project, also could result in potential long-term secondary effects, including nest parasitism by cowbirds; traffic noise; nighttime illumination; increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. Habitat quality for the western yellow-billed cuckoo could be reduced by diminished water quality and invasion by exotic plant species. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

[1196] UCSB, *California Gap Analysis Project.*

The Newhall Ranch Specific Plan Program EIR and this EIR recommend extensive mitigation measures that would protect riparian habitat and establish a large, managed open space system, all of which would reduce impacts to the western yellow-billed cuckoo (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures). This mitigation would result in the preservation and management of at least 332 acres of suitable habitat, primarily in the River Corridor SMA/SEA 23, that would be available for migrating individuals and a breeding population of the western yellow-billed cuckoo. These mitigation measures also include restoration, and enhancement of riparian and wetland habitat. Specific measures to reduce potential secondary impacts include controls on public access, invasive species controls, conformance with permits from federal and state agencies for impacts to wetlands and water quality (i.e., NPDES and section 401 permits), lighting controls, pesticides controls, and cowbird trapping.

In addition to the measures described above, which reduce project-related impacts, this species has not been observed to breed in the RMDP/SCP project area but is known to use the RMDP/SCP project area as a migratory stop-over. Most of the recorded breeding populations of this species occur well outside of the watershed. Typical nesting habitat (structure of riparian canopy, proximity to disturbance, etc.) associated with this species does not occur on the Mission Village project site or within the RMDP/SCP project area.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

White-Tailed Kite (CFP). Bird surveys have been conducted in the riparian areas of the Santa Clara River and Castaic Creek from 1988 through 2007. During these surveys, the white-tailed kite has been observed primarily along the Santa Clara River, where it nests in associated riparian woodlands and forages in adjacent grasslands, open sage scrub, and agricultural fields (**Figure 4.3-30**, **RMDP/SCP White-Tailed Kite Occurrences**). This cumulative analysis assumes that the white-tailed kite could occur throughout the Santa Clara River corridor, as well as other areas of the SCRW where riparian and woodland habitats are with upland foraging areas, including agriculture, California annual grassland, and coastal scrub, and other scrub habitats. There are three documented nest locations for the white-tailed kite in the vicinity of the Mission Village project site in the Santa Clara River northeast and east of Airport Mesa. In addition, kites have been observed flying, hunting, and perching on the project site (**Figure 4.3-30**, **RMDP/SCP White-Tailed Kite Occurrences**).

AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-30

DUDEK

Mission Village EIR

RMDP/SCP White-Tailed Kite Occurrences

Based on the California GAP data,[1197] there are approximately 282,000 acres of suitable nesting and foraging habitat for the white-tailed kite (riparian, oak woodland, California annual grassland, agriculture, disturbed land, and coastal scrub habitats), although it would be incorrect to conclude that white-tailed kites actually use all 282,000 acres. White-tailed kites tend to forage in areas that are in proximity to nesting and roosting habitat (riparian and woodland habitat). For example, within the RMDP/SCP project area, most of the observations of hunting, flying, and perching white-tailed kites are along or adjacent to the Santa Clara River Corridor (**Figure 4.3-30**). Based on observations within the Mission Village project site and larger RMDP/SCP project area, the kite is most likely to nest and forage along the Santa Clara River and adjacent uplands.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, would cause the loss of approximately 25,400 acres of 282,000 acres of suitable nesting and foraging habitat for the white-tailed kite. Without accounting for past, present or reasonably foreseeable mitigation (particularly for upland habitats), or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of habitat in the SCRW could be a potential significant impact on suitable nesting and foraging habitat for the white-tailed kite. The RMDP/SCP project's contribution to this potentially significant cumulative impact is approximately 5,130 acres, including approximately 1,445 acres of permanent and temporary disturbance on the Mission Village project site. This contribution by the proposed Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the Mission Village project, also could result in potential long-term secondary effects, including nest predation; nighttime illumination; increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by both the Newhall Ranch Specific Plan Program EIR and this EIR (~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures) would establish a large, managed open space system that would protect white-tailed kite habitat and reduce the effects of long-term secondary impacts. Approximately 4,421 acres of suitable habitat for this species, including 1,546 acres of nesting habitat and 2,875 acres of foraging habitat (i.e., foraging habitat within 0.5 mile of suitable nesting habitat) would be conserved in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area.

[1197] UCSB, *California Gap Analysis Project.*

Long-term secondary impacts would be avoided and reduced through a variety of mitigation measures. Lighting restrictions along the perimeter of natural areas would help reduce predation of nest sites by predators and reduce behavioral disturbances and physiological stress. Limited recreational usage and access restrictions within the High Country SMA/SEA 20; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas would help protect white-tailed kites by allowing them to nest and forage without disturbance. Controls on pesticides would reduce the chance of direct and secondary poisoning, and loss of prey. Provision of a large, relatively undisturbed open space system providing nesting and foraging habitat away from development areas would also help mitigate for increased collisions with vehicles and man-made structures.

In addition to the measures described above, which would reduce the project-related impacts, the Mission Village project would not preclude the continued foraging and nesting by white-tailed kite along the Santa Clara River and within the preserved High Country SMA/SEA 20 and Salt Creek area within the RMDP/SCP project area, as well as along the Santa Clara River corridor upstream and downstream of the RMDP/SCP project area.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

(b) California Species of Special Concern (CSC)

This section addresses cumulative impacts to the CSC species as organized by the different wildlife guilds.

Mollusk. The mollusk guild includes the recently described spring snail.[1198] *Pyrgulopsis castaicensis* n. sp. is not currently a CSC, but this analysis assumes that it meets the criteria for the designation. *Pyrgulopsis castaicensis* **n. sp.** is known to occur only in the Middle Canyon Spring in the RMDP/SCP project area (within the Mission Village project area) and is not documented to occur elsewhere in the SCRW. Therefore, there would be no other known impacts to this species by other projects in Los Angeles and Ventura counties and, therefore, there would be no cumulative impacts.

Reptile – Low Mobility. This guild includes coast horned lizard, coast patch-nosed snake, and silvery legless lizard.

The coast horned lizard occurs in the Santa Clara River adjacent to the Mission Village project site and elsewhere along the River in the RMDP/SCP project area. It also occurs in the High Country SMA/SEA 20. In addition, coast

1198 Hershler and Liu, *Pyrgulopsis* (Gastropoda: Hydrobiidae).

horned lizard has been observed in the SCRW along the Santa Clara River in Oxnard to Soledad Canyon in the east, Saugus, Fillmore, Castaic Lake area, and near Sespe Creek.

Legless lizard has not been documented on the Mission Village site, but has been observed in Chiquito Canyon and Long Canyon west of the project site within the RMDP/SCP project area. Outside of the RMDP/SCP project area, there are a few documented occurrences of the silvery legless lizard at the eastern edge of SCRW in the Leona Valley area near Lancaster and Palmdale. These coast horned lizard and silvery legless lizard are expected to occur throughout the watershed in suitable habitat.

There are no CNDDB occurrences reported in Los Angeles or Ventura counties for the coast patch-nosed snake, but this species is expected to occur uncommonly in suitable habitat in the SCRW, and potentially on the Mission Village project site and within the larger RMDP/SCP project area.

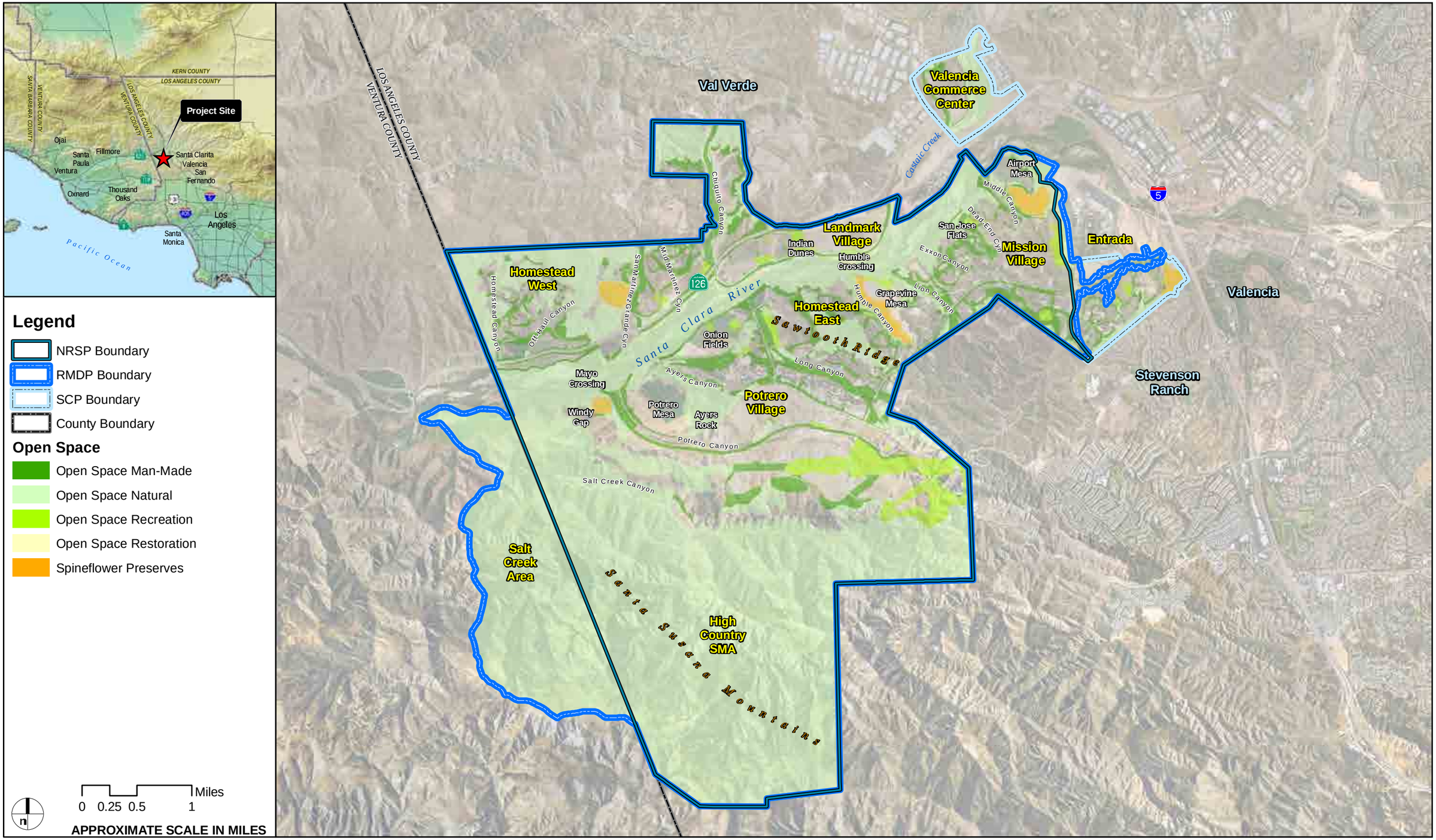
As a group, these species use a wide variety of shrubland (scrub and chaparral), grassland, riparian, and woodland habitats, although each species is expected to primarily use a smaller subset of habitats. For example, coast horned lizard is primarily a grassland and shrubland species, the coast patch-nosed snake a shrubland species, and the silvery legless lizard a riparian and woodland species. However, each could potentially occur in any of these habitat types. Based on the California GAP data,[1199] there are approximately 777,000 acres of suitable habitat for the coast horned lizard, coast patch-nosed snake, and silvery legless as a combined group. However, it is not expected that all 777,000 acres are occupied by these species. For example, silvery legless lizards typically are found only in loose soils; coast horned lizard occur in association with native ant colonies that are its primary prey; and coast patch-nosed snakes appear to be uncommon and sparsely distributed.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (which encompasses the Mission Village project site), would cause the loss of approximately 35,000 acres of 777,000 acres of suitable habitat for the coast horned lizard, coast patch-nosed snake, and silvery legless lizard. With the estimated permanent loss of more than 35,000 acres of habitat, and without accounting for past, present or reasonably foreseeable mitigation (particularly for upland habitats used by this guild), or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of habitat in the SCRW could be a potential significant impact on the habitat for these species. The RMDP/SCP project's contribution to this potentially significant cumulative impact is approximately 3,380 acres, including approximately 871 acres of permanent and temporary disturbance on the Mission Village project site. This contribution by the proposed Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

[1199] UCSB, *California Gap Analysis Project.*

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the Mission Village project, also could result in potential long-term secondary effects to these species, including habitat fragmentation and isolation of some local populations, making the species more vulnerable to extirpation from smaller habitat patches. In addition, the close proximity of urban development to suitable habitat for these species could result in disruption of essential behavioral activities (e.g., foraging, reproduction) and greater vulnerability to several potential secondary impacts, including human-caused habitat degradation (e.g., trampling of vegetation and introduction of invasive species, such as Argentine ants (primarily affecting coast horned lizard), or off-road vehicles); harassment and collection; predation by pet, stray, and feral cats and dogs; increased roadkill; and use of pesticides, which may reduce its prey or cause secondary poisoning.

The required Newhall Ranch Specific Plan Program EIR mitigation measures and additional mitigation measures recommended by this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would result in a large, permanent open space system that would provide substantial suitable habitat to support the these species (approximately 5,687 acres for coast horned lizard, 3,724 acres for coast patch-nosed snake, and 6,058 acres for silvery legless lizard) in the RMDP/SCP project vicinity. Implementation of these mitigation measures would result in protection, restoration and enhancement, and management of suitable habitat in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area (**Figure 4.3-31, RMDP Study Area**). Restoration and enhancement of habitat used by the coast horned lizard, coast patch-nosed snake, and silvery legless lizard in these areas would improve habitat quality for these species.



AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 4.3-31

Mission Village EIR

RMDP Study Area

DUDEK

Several specific mitigation measures would also be implemented to reduce long-term secondary effects due to human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. Pesticides would be controlled through an integrated pest management (IPM) plan. Argentine ant invasions of upland habitats would be monitored and controlled to the extent feasible. Implementation of these measures would allow these species to persist on site in the large amount of permanent open space that would be protected and managed.

In addition to these measures reducing impacts to these species at the project level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Reptile and Amphibian—Semi-Aquatic. This guild includes south coast garter snake, southwestern pond turtle, two-striped garter snake, and western spadefoot toad.

South coast garter snakes have not been documented on the Mission Village project site or within the RMDP/SCP project area, but they have been observed within the Santa Clara River downstream of the RMDP/SCP project area.

The southwestern pond turtle occurs in the Santa Clara River adjacent to the Mission Village project site and within the larger RMDP/SCP project area. It also has been documented in various locations throughout the SCRW (specific locations are suppressed in the CNDDB database in order to protect populations), including the Los Padres and Angeles National Forests, and is expected to occur wherever habitat conditions are suitable.

The two-striped garter snake has been documented in the Santa Clara River adjacent to the Mission Village project site, within the larger RMDP/SCP project area, and throughout the SCRW outside the RMDP/SCP project area, including Maple Creek north of Fillmore, south of Fillmore, Sespe Creek, Tar Creek upstream of Sespe Creek, Castaic Creek and Fish Canyon, the Santa Clara River between Salt Creek and Summer Four Crossings, Oak Spring Canyon east of Santa Clarita, and Soledad Canyon. This species is expected to occur wherever habitat conditions are suitable. The western spadefoot toad has also been documented in several locations in the SCRW outside the RMDP/SCP project area, including Cruzan Mesa north of the City of Santa Clarita, west of Sand Canyon south of Santa Clarita, San Francisquito Creek, Soledad Canyon, Plum Canyon Creek, Grasshopper Canyon northwest of Castaic Lake, just east of Oak Spring Canyon south of the Santa Clara River, and north of Tapia Canyon.

The cumulative impacts analysis for habitat impacts presented above for the California red-legged frog presented above generally is applicable to the south coast garter snake, southwestern pond turtle, two-striped garter snake, and western spadefoot toad. Based on the California GAP data,[1200] there are approximately 25,000 acres of riparian habitat in the SCRW, but not all of this habitat is expected to be occupied due to a lack of all necessary habitat elements. Upland habitats adjacent to occupied riparian habitat are expected to be used for important aspects of theses species' life histories, including aestivation, hibernation, and nesting, but the acreage of these areas cannot be accurately estimated at the watershed scale.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, would cause the loss of 1,030 acres of the 25,000 acres of riparian habitat. Without accounting for past, present or reasonably foreseeable mitigation, or the RMDP/SCP project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW potentially could be a significant cumulative impact on potential habitat for south coast garter snake, southwestern pond turtle, two-striped garter snake, and western spadefoot toad. The RMDP/SCP project's contribution to this potentially significant cumulative impact is approximately 230 acres, including approximately 89 acres of riparian on the Mission Village project site that would be permanently or temporarily disturbed. This contribution by the proposed Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation. The Mission Village project would also cause permanent loss of adjacent terrestrial habitat, such as agriculture along the Santa Clara River, that may be used by these species for aspects of their life cycles, as well as refuge from severe flood events. It is assumed that other present and reasonably foreseeable projects affecting suitable riparian habitat would also impact adjacent upland habitat, resulting in a potential significant cumulative impact, without accounting for mitigation. The contribution of the proposed Mission Village project to this potential significant cumulative impact to terrestrial habitat could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects to these species, including disruption of nocturnal activities and greater vulnerability to predation by nocturnal predators (such as owls and coyotes) as a result of nighttime lighting; greater vulnerability to predation by pet, stray, and feral cats and dogs as well as other mesopredators;[1201] collecting by children; degradation of habitat from increased human use (e.g., trampling, trash, and off-road vehicles) and altered fire regimes (likely too frequent fire); invasion by exotic plant (e.g., giant reed, tamarisk, and pampas grass) and wildlife species (e.g., Argentine ants, bullfrogs, African clawed frogs, exotic fish, and crayfish); use of pesticides; and increased risk of roadkill on roads adjacent to occupied areas. At the watershed level these secondary effects could be a potential significant cumulative

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[1200] UCSB, *California Gap Analysis Project.*

[1201] See Crooks and Soulé, "Mesopredator Release and Avifaunal Extinctions in a Fragmented System," 563–566.

impact. The contribution of the proposed Mission Village project to this potential significant cumulative secondary impact could be cumulatively considerable, absent mitigation.

As discussed previously for the California red-legged frog, the Newhall Ranch Specific Plan Program EIR and this EIR (~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures) include extensive mitigation measures that would protect riparian habitat and establish a large, managed open space system which would reduce impacts to these species. Also, the Santa Clara River corridor hydrology and habitat conditions on site or downstream would not be significantly affected by the RMDP/SCP project.[1202] Upland refugia would be available along the Santa Clara River, although under the RMDP/SCP project, construction of Potrero Bridge under the RMDP/SCP Alternative 2 at the mouth of Potrero Canyon would block access to Potrero Canyon by southwestern pond turtle. This was considered a significant unavoidable impact under Alternative 2 in the RMDP/SCP EIS/EIR because this area may be an important refuge and nesting area; however, the Mission Village project does not contribute to this condition because this important site in Potrero Canyon is located west of the Mission Village project site.

The River Corridor SMA/SEA 23 would provide a large, protected open space area that would help offset long-term secondary impacts. Several specific mitigation measures would also be implemented to control human activities in the River Corridor SMA/SEA 23, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. All lighting along the open space-urban interface would be downcast. Pesticides would be controlled through an integrated pest management (IPM) plan. Argentine ant invasions of upland habitats in the open space system would be monitored and controlled to the extent feasible. Implementation of these measures would allow these species to persist on site after development.

In addition to these measures reducing impacts to these species at the project-level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed (with the exception of the south coast garter snake), and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Fish. This guild includes arroyo chub and Santa Ana sucker, which primarily occur in the Santa Clara River and some of its main tributaries within the SCRW. These species generally use the same aquatic habitat used by the

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[1202] PACE, *Floodplain Hydraulics Impacts Assessment - Santa Clara River*.

unarmored threespine stickleback. Therefore, the cumulative analysis presented above for the unarmored threespine stickleback has been applied to these species.

Both species are considered be introduced to the Santa Clara River and associated tributaries. In addition to populations in the Santa Clara River adjacent to the Mission Village project site and the larger RMDP/SCP project area, introduced populations of arroyo chub are present in the Santa Clara River at Agua Dulce Creek and west of Chambersburg Road south of Fillmore, and in Soledad Canyon, Santa Paula Creek, and Sespe Creek along SR-33 and at the Stone Corral Creek confluence. In addition to populations in the Mission Village area and larger RMDP/SCP project area, introduced populations of the Santa Ana sucker are present in the Santa Clara River ranging from Arrastre Canyon approximately 2.5 miles east of SR-14 to Santa Paula Creek, and Piru Creek, Sespe Creek, and San Francisquito Creek.[1203]

ENTRIX[1204] concluded that no long-term, permanent significant effects on arroyo chub and Santa Ana sucker habitat would occur as a result of implementation of the RMDP and buildout of the Specific Plan (including the Mission Village project site), VCC, and Entrada planning areas, because the general morphology of the Santa Clara River, adjacent rearing habitat, and high-flow riparian refugia would not be substantially altered. Further, there would be no impacts to habitat for these species resulting from impacts to tributaries to the Santa Clara River, due to the absence of perennial flows, and poor aquatic habitat quality. For these reasons, the proposed Mission Village project would not contribute to potential significant cumulative impacts to such habitat.

Some temporary impacts to habitat for these species would occur when construction occurs directly in aquatic habitat. Impacts to the active stream channel during bridge construction could affect stream flows, and cause stream diversions and dewatering when construction is occurring within the River Corridor SMA/SEA 23. However, such temporary impacts would not contribute to a potential significant cumulative effect of projects in the SCRW.

Construction-related impacts on individuals, if not mitigated, could result in a cumulatively considerable contribution to a potential significant cumulative impact in the SCRW because of the local nature and potential vulnerability of these species in the Santa Clara River. However, the Newhall Ranch Specific Plan Program EIR mitigation measures, as well as the mitigation measures recommended in this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures), would reduce such impacts to less than significant. These measures include facilities design requirements, pre-development surveys, consultation with USFWS, biological monitoring during

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1203 C.C. Swift et al., "The Status and Distribution of the Freshwater Fishes of Southern California," *Bulletin of the Southern California Academy of Sciences* 92(3) (1993), 101–167; Stephenson and Calcarone, *Southern California Mountains and Foothills Assessment*; Northwest Economic Associates (NEA), *Draft Economic Analysis of Critical Habitat Designation for the Santa Ana Sucker* (2004); NatureServe, "An Online Encyclopedia of Life."

1204 ENTRIX, *Focused Special-Status Fish Species Habitat Assessment*.

construction, excluding fish from disturbance areas through coordination with and approval from the Corps and CDFG, and conformance with state and federal permits related to wetlands and water quality.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects, including potential physical changes in the River; altered base and flood flows; biochemical, substrate, and temperature alterations; vegetative changes (e.g., invasive plant species); increased human activity; impacts from pet, stray, and feral animals; and increased predation by exotic predators. Mitigation measures implemented to reduce these potential secondary impacts include protection and management of the River Corridor SMA/SEA 23; creation of buffer areas between the River Corridor SMA/SEA 23 and development, water quality requirements; restrictions on public access; controls on pet, stray and feral animals; and control on invasive predators such as bullfrog and African clawed frog. Mitigation measures related to hydrology and water quality also would ensure that potential impacts to any downstream populations of arroyo chub and Santa Ana sucker are not significant.

No long-term, permanent significant effects on arroyo chub and Santa Ana sucker habitat would occur as a result of implementation of the RMDP and buildout of the Specific Plan (including the Mission Village project site), VCC, and Entrada planning areas, because the general morphology of the Santa Clara River, adjacent rearing habitat, and high-flow riparian refugia would not be substantially altered. Potential short-term and long-term secondary impacts would be mitigated to a less than significant level.

For the reasons set forth above, the contribution of the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird—Raptor. This guild includes long-eared owl, northern harrier, short-eared owl, and western burrowing owl.

There are no CNDDB documented occurrences for long-eared owl, northern harrier, or the short-eared owl in the SCRW, but data developed for the RMDP/SCP project indicate that these species likely occur in suitable habitat in the watershed. The long-eared owl was observed in the RMDP/SCP project area on one occasion[1205] and, therefore, is considered to be at least a regular migrant and/or a winter visitor to the region, with some potential to breed in the riparian and woodland habitats watershed.

[1205] Dudek and Associates, Inc., *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

The northern harrier has been observed in or near the RMDP/SCP project area infrequently during the 20 years of surveys. Most of the observations of this species were probably of wintering and migrating individuals, and these surveys are considered adequate to establish that this species is at least an occasional winter migrant in the SCRW.

The short-eared owl was observed twice near the RMDP/SCP project area[1206] and it is assumed for the purpose of this analysis that the short-eared owl at least occurs in the SCRW as an occasional migrant and uses watershed for foraging.

In addition to two observations of the burrowing owl on the Mission Village site in Middle Canyon,[1207] there are two other documented occurrences of western burrowing owl in the CNDDB. The majority of documented occurrences of burrowing owl in Los Angeles County are from the Antelope Valley in the Lancaster and Palmdale areas. It is assumed for the cumulative analysis that the burrowing owl occasionally uses SCRW for wintering or during migration, but also has potential to breed in the watershed. All four of these species are considered to have potential to forage on the Mission Village project site, and there is potential nesting habitat for long-eared owl and burrowing owl on site.

These species overlap in their use of foraging habitats, with grasslands, agriculture, and disturbed lands as the most common foraging habitats used by all of the species, and which are the basis for this analysis at the guild level. Based on the California GAP data,[1208] there are approximately 78,000 acres of suitable foraging habitat these species, although based on the few observations of these species in the watershed, not all of this habitat is expected to be used for foraging. Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (which encompasses the Mission Village project site), would cause the loss of 3,790 acres of 78,000 acres of foraging habitat for these species. Without accounting for past, present or reasonably foreseeable mitigation (there are no standard mitigation requirements for loss of grassland, agriculture, or disturbed lands), or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of 3,790 acres of habitat in the SCRW could be a potential significant impact on suitable foraging habitat for these species. The RMDP/SCP project's contribution to this potentially significant cumulative impact is approximately 3,290 acres, including approximately 680 acres on the Mission Village project site that would be permanently or temporarily disturbed. The contribution of the proposed Mission Village project to this potential significant cumulative secondary impact could be cumulatively considerable, absent mitigation

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1206 Dudek and Associates, *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*; G. Olson, letter containing comments on the Draft Environmental Impact Report for Landmark Village, letter from G. Olson (Audubon California) to D. Fierros (County of Los Angeles, Department of Regional Planning) (January 19, 2007).

1207 K. Babcock, telephone call from K. Babcock (Dudek) to C. Ford (Dudek) (October 2007); S. Miller, verbal communication from S. Miller (Dudek) to C. Ford (Dudek) (November 2007).

1208 UCSB, *California Gap Analysis Project*.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects, including increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by both the Newhall Ranch Specific Plan Program EIR and this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would establish a large, managed open space system that includes approximately 995 acres of suitable foraging habitat for these species and which would reduce secondary effects. Implementation of these mitigation measures would result in protection, restoration and enhancement, and management of suitable habitat in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area (**Figure 4.3-31**). Several specific mitigation measures would also be implemented to reduce long-term secondary effects due to human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. Pesticides would be controlled through an integrated pest management (IPM) plan.

In addition to these measures reducing impacts to these species at the project level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird – Riparian. This guild includes summer tanager, tricolored blackbird, vermilion flycatcher, yellow-breasted chat, yellow-headed blackbird, and yellow warbler.

Documented occurrence data for these species in the SCRW outside of the Mission Village project site and adjacent Santa Clara River corridor are very sparse. The CNDDB includes no documented occurrences in the SCRW for summer tanager, vermilion flycatcher, tricolored blackbird, or yellow-headed blackbird. No summer tanagers have been observed during spring surveys in the Santa Clara River during surveys in the RMDP/SCP project area, one vermilion flycatcher has been observed, and occasional yellow-headed blackbirds have been observed. No nesting vermilion flycatchers or yellow-headed blackbirds have been observed in the RMDP/SCP project area. Tricolored

blackbird has been observed in the RMDP/SCP project area periodically, but was documented nesting on site only in 1994. The CNDDB includes one occurrence each for yellow-breasted chat and yellow warbler for the watershed approximately 3 miles east of Fillmore, but these two species have been commonly observed in the Santa Clara River within the RMDP/SCP project area during spring surveys and are assumed to breed in the RMDP/SCP project area and elsewhere in the SCRW where there is suitable riparian habitat. The Mission Village project site supports potential riparian nesting habitat for these species, but the large majority of this potential habitat, primarily southern cottonwood-willow riparian for the yellow warbler, yellow-breasted chat, summer tanager, and vermilion flycatcher, is within the Santa Clara River portion of the site and would not be developed or directly disturbed. The riparian vegetation within the tributaries on the Mission Village project site subject to development is less suitable as nesting habitat for these species because the riparian zones tend to be narrower (i.e., smaller patch sizes). This is illustrated in **Figure 4.3-4-A3** where a narrow, linear patch of southern cottonwood-willow riparian extends into the lower portions of Middle Canyon, compared to the wide swaths of the riparian in the Santa Clara River.

Because these species use habitats similar to those analyzed for the least Bell's vireo and southwestern willow flycatcher/willow flycatcher and would be subject to the same types of secondary impacts, the cumulative impact analysis for the two listed species is applied to the summer tanager, tricolored blackbird, vermilion flycatcher, yellow-breasted chat, yellow-headed blackbird, and yellow warbler.

Based on the California GAP data,[1209] there are approximately 25,000 acres of riparian habitat in the SCRW. However, not all 25,000 acres support these species or could be reasonably expected to support them. Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (encompassing the Mission Village project site), would cause the loss of 1,030 acres of 25,000 acres of riparian habitat; however, as noted above for least Bell's vireo, these species probably are concentrated along the Santa Clara River and immediately adjacent tributaries, so the proportionate loss of occupied habitat is probably substantially higher. Without accounting for past, present or reasonably foreseeable mitigation, or the RMDP/SCP project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW could be a significant impact on potential habitat for the species in this guild, including potential migration habitat for the summer tanager, vermilion flycatcher, and yellow-headed blackbird, and nesting habitat for the yellow-breasted chat, yellow warbler, and tricolored blackbird. The RMDP/SCP project's contribution to this potentially significant cumulative impact is approximately 230 acres, including approximately 5 acres of permanent disturbance and 25 acres of temporary disturbance of southern willow scrub and southern cottonwood-willow riparian on the Mission Village project site, the riparian habitat types most likely to be used by these species. This contribution by the proposed Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

[1209] UCSB, *California Gap Analysis Project.*

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, the proposed Mission Village project also could result in potential long-term secondary effects, including nest parasitism by cowbirds on yellow-breasted chat and yellow warbler; nighttime illumination; increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. Habitat quality for these species could be reduced by diminished water quality and invasion by exotic plant species. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The Newhall Ranch Specific Plan Program EIR and this EIR recommend extensive mitigation measures (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) that protect riparian habitat and establish a large, managed open space system, all of which would reduce impacts to these species. This mitigation would result in the preservation and management of at least 332 acres of riparian habitat, primarily in the River Corridor SMA/SEA 23, that would be available for future breeding populations of yellow-breasted chat and yellow warbler, and potentially tricolored blackbird. These mitigation measures include preservation, restoration, and enhancement of riparian and wetland habitat. Species measures to reduce potential long-term secondary impacts include controls on public access, invasive species controls, conformance with permits from federal and state agencies for impacts to wetlands and water quality (i.e., NPDES and section 401 permits), and lighting controls.

In addition to these measures reducing impacts to these species at the project level, these species generally have broad geographic ranges. The yellow-breasted chat and yellow warbler are expected to breed along most of the Santa Clara River and associated tributaries wherever there is suitable habitat. The summer tanager, vermilion flycatcher, and yellow-headed blackbird are expected to use suitable habitat within the SCRW on an occasional basis or during migration. The tricolored blackbird is expected to breed occasionally in suitable habitat in the SCRW, but its breeding status in the watershed is unknown and likely to be variable due to its itinerant breeding pattern.

For the reasons set forth above, the proposed Mission Village project, would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird—Upland Grassland. The only CSC species in this guild is the grasshopper sparrow. This species has not been observed on the Mission Village project site or within the larger RMDP/SCP project area. However, because the project site is at the edge of its summer breeding range, there is some, albeit low, potential for the species to occur. The CNDDB has one occurrence in SCRW in Tapia Canyon north of Santa Clarita.

Based on the California GAP data,[1210] there are approximately 22,000 acres of suitable grassland habitat for the grasshopper sparrow. However, it is not expected that all 22,000 acres are occupied by this species because there is only one documented occurrence in the SCRW and it has not been observed in the RMDP/SCP project area during numerous avian surveys.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (encompassing the Mission Village project site), would cause the loss of 1,120 acres of 22,000 acres of suitable habitat for the grasshopper sparrow. The contribution of the RMDP/SCP project to this impact is 1,070 acres, including approximately 66 acres of permanent and temporary disturbance on the Mission Village project site. Because the grasshopper sparrow has a low potential to winter or nest on site, based on negative surveys findings, the RMDP/SCP EIS/EIR concluded that this impact was adverse but not significant. Since the RMDP/SCP project accounts for the majority of the impact of present and reasonably foreseeable projects in the SCRW, the cumulative effect of the present and reasonably foreseeable projects, including the Mission Village project, would not be significant at the watershed level.

Although the species has a low potential to occur on the Mission Village project site, within the larger RMDP/SCP project area, and on other present and reasonably foreseeable projects, without accounting for past, present, or reasonably foreseeable mitigation, these projects, including the proposed Mission Village project, could result in potential long-term secondary effects on the grasshopper sparrow, including habitat fragmentation; abandonment of nests from human activity; greater vulnerability to nocturnal predators as a result of nighttime lighting; noise from roadways; nest parasitism by cowbirds; greater vulnerability to predation by pet, stray, and feral cats and dogs and other mesopredators; and loss of prey or secondary poisoning due to the use of pesticides. Although these long-term secondary effects could occur, because the grasshopper sparrow is unlikely to nest or winter in the watershed in large numbers, these effects would not have a significant cumulative impact.

Even though significant cumulative impacts to the grasshopper sparrow and its habitat would not occur as a result of the proposed Mission Village project and mitigation measures are not required, several mitigation measures for other project-level impacts to biological resources would be implemented that would further reduce any potential impacts (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures). These mitigation measures include habitat preservation, restoration, enhancement, and management of the High Country SMA/SEA 20 and Salt Creek area—areas that would form a large, contiguous open space system that includes approximately 660 acres of California annual grassland. Specific measures would also be implemented to reduce potential long-term secondary effects, including controls on human activity, pet, stray, and feral cats and dogs, lighting, and pesticides.

[1210] UCSB, *California Gap Analysis Project.*

Bird—Upland Scrub and Chaparral. The only CSC species in this guild is the loggerhead shrike. This species is commonly observed in the RMDP/SCP project area and has been documented to nest in the area. The species is likely to nest and forage on the Mission Village project site. This species also is likely to be relatively common in scrub and chaparral habitat throughout the SCRW. Although there are no records for this species for the watershed in the CNDDB, this species has been regularly observed by biologists in the watershed.

The loggerhead shrike is considered to be primarily a scrub and chaparral species, but it also frequently forages in grassland, agriculture, and disturbed lands. Based on the California GAP data,[1211] there are approximately 803,000 acres of suitable habitat for the loggerhead shrike. It is not expected that all 803,000 acres are occupied by this species because, although common, shrikes occur in low densities.

Present and reasonably foreseeable projects in the SCRW, including the proposed RMDP/SCP project (encompassing the Mission Village project site), would cause the loss of approximately 36,700 acres of 803,000 acres of suitable habitat for the loggerhead shrike. Without accounting for past, present or reasonably foreseeable mitigation (particularly for upland scrub and chaparral), or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of 36,700 acres of habitat in the SCRW could be a potential significant impact on the habitat for this species. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 5,270 acres of the combined habitats, including approximately 706 acres of permanent and temporary disturbance on the Mission Village project site. This contribution by the Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects, including habitat fragmentation and reduced nest success due to nighttime lighting; noise disturbance; and harassment/disturbance by humans, especially if such disturbances occur during the nesting season; and predation by pet, stray, and feral cats and dogs as well as other mesopredators. The use of pesticides to control invertebrates and small mammals within and adjacent to open foraging areas could result in secondary poisoning and loss of prey for the species. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The required Newhall Ranch Specific Plan Program EIR mitigation measures and additional mitigation measures recommended by this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would result in a large, permanent open space system that would provide suitable habitat to support the loggerhead shrike in the

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1211 UCSB, *California Gap Analysis Project.*

RMDP/SCP project vicinity. Implementation of these mitigation measures would result in protection, restoration and enhancement, and management of approximately 6,100 acres of suitable habitat in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area (**Figure 4.3-31**). This set-aside would also offset long-term secondary impacts, especially habitat fragmentation and vehicle collisions. Several specific mitigation measures would also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. Pesticides would be controlled through an integrated pest management (IPM) plan. Implementation of these measures would allow this species to persist on site after development in the large amount of permanent open space that would be protected and managed.

In addition to these measures reducing impacts to loggerhead shrike at the project level, this species remains relatively common and widespread within suitable habitat within the watershed and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bats. This guild includes pallid bat, pocketed free-tailed bat, Townsend's big-eared bat, western mastiff bat, and western red bat. RMDP/SCP project area surveys using the Anabat II Bat Detector documented the presence of pallid bat (including a maternity roost and a night roost in Potrero Canyon), the pocketed free-tailed bat, and western red bat. The western mastiff bat was audibly detected (its signals are directly detectable by humans). Townsend's big-eared bat was not detected during surveys, but has moderate potential to occur in the area due to the large amount of suitable habitat. The Mission Village project site supports suitable foraging habitat for these species, and they are expected to forage on site. There are no documented roost sites on the Mission Village project site, but these species could also roost on site. Documented occurrences in the CNDDB elsewhere in the SCRW for these species are variable and some are decades old. The pallid bat has been documented in Soledad Canyon, Castaic, Fillmore, and Santa Paula. The western mastiff bat has been documented in Piru Creek north of the lake and at the lake, and southwest of Newhall.

The CNDDB includes no records for the pocketed free-tailed bat, Townsend's big-eared bat, or western red bat. However, because comprehensive surveys for bats have not been conducted throughout the SCRW, and because these species are foraging generalists and use a variety of habitats, it is assumed that these species could occur throughout the SCRW. The main limitation for the occurrence of the species probably is a lack of day roosts sites, such as a caves, crevices, rock outcrops, tunnels, etc.

This cumulative analysis addresses the loss of foraging habitat for these species. As foraging generalists, they use a variety of habitats, but probably concentrate most of their foraging activity in wetland and riparian habitats. Suitable foraging habitat for bats includes coastal scrub, chaparral, grassland, riparian, oak woodland, agriculture, and disturbed land. Based on the California GAP data,[1212] there are approximately 836,000 acres of suitable foraging habitat for bats in the SCRW. It is not expected that all 836,000 acres are used by bats for foraging because this habitat must be within typical flight distances of day roosts. For example, the pallid bat is capable of flying more than 18 miles, but most foraging occurs within about 2 miles of the day roost.[1213]

Present and reasonably foreseeable projects in the SCRW, including the proposed RMDP/SCP project (which encompasses the Mission Village project site), would cause the loss of approximately 38,000 acres of 836,000 acres of suitable foraging habitat for these bats. Without accounting for past, present or reasonably foreseeable mitigation (particularly upland habitats), or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of 38,000 acres of habitat in the SCRW could be a potential significant impact on the habitat for these species. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 5,590 acres of the habitats, including approximately 1,484 acres of permanent and temporary disturbance on the Mission Village project site. This contribution by the Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

In addition to loss of foraging habitat, day roosts, including maternal roosts, may be present in the SCRW and subject to potential impacts as a result of present and reasonably foreseeable projects. One documented maternal day roost and one night roost for pallid bat would be lost as a result of the proposed RMDP/SCP project in Potrero Canyon west of the Mission Village project site, but there is a potential for other roosts sites in the SCRW, including on the Mission Village project site (although not yet documented), to be impacted. Without accounting for past, present or reasonably foreseeable mitigation (particularly upland habitats), or the RMDP/SCP project's individual contribution to mitigation for loss of day roosts, the loss of roost sites could result in a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential significant cumulative impact could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects resulting from increased human activity, noise, and lighting. Use of pesticides for agriculture or in landscaped areas may result in secondary poisoning and reduction of prey. Pallid bats taking prey on the ground are vulnerable to collection by humans and to predation by pet, stray, and feral cats and dogs. At the watershed level these secondary

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1212 UCSB, *California Gap Analysis Project.*

1213 J.W. Hermanson and T.J. O'Shea, "Antrozous pallidus," *Mammalian Species*, 213 (1983), 1–8.

effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The cumulative loss of foraging habitat and day roost sites, and long-term secondary impacts to these bats species would be reduced through several mitigation measures included in the Newhall Ranch Specific Plan EIR and recommended in this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures). These measures include habitat preservation, restoration, enhancement, and management of approximately 6,300 acres in the River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area—areas that would form a large, contiguous open space system providing foraging and potential roosting habitat for bats. It is expected that the species in this guild would continue to forage in these areas after buildout of the RMDP/SCP project area. Alternative roost sites would be created to mitigate for any day roost sites disturbed during construction, including creation of roosts under bridges and in culverts, where practicable, in consultation with CDFG. Species measures to reduce potential long-term secondary impacts include controls on public access, pet, stray, and feral cat dogs, pesticides, and lighting.

In addition to these measures reducing impacts to these species at the project level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Mammal—Low Mobility. This guild includes the San Diego desert woodrat and southern grasshopper mouse.

On the Mission Village project site and within the larger RMDP/SCP project area, the San Diego desert woodrat is common in coastal scrub and chaparral. The only other documented occurrence for desert woodrat in close proximity to the SCRW is in Weldon Canyon just west of the SR-14/I-5 junction. However, this lack of data is probably more a result of few small mammal trapping programs conducted in the watershed and/or under-reporting of the species to the CNDDB. Based on the relative frequency with which it was captured during the Newhall Ranch trapping study,[1214] this species is expected to be common throughout the watershed in suitable habitat (i.e., more xeric expressions of the coastal scrub and chaparral).

The southern grasshopper mouse was not documented RMDP/SCP project area during the small mammal trapping studies or pitfall trapping conducted for reptile and amphibians area and is known only from Mint Canyon. This

[1214] Impact Sciences, Inc., *Draft Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*.

record dates back to 1930 and the observation occurred approximately 15 miles east of the RMDP/SCP project area. The documented geographic range of the grasshopper mouse is east of the RMDP/SCP project area.[1215] The habitat use of the San Diego desert woodrat and grasshopper mouse overlaps, where both may occur in drier, more open coastal scrub and chaparral, but the San Diego desert woodrat also occurs in more densely vegetated shrublands that would be unsuitable for the grasshopper mouse and the grasshopper mouse also occurs in grassland that is not used by the woodrat.

The combined habitat for these two species for the purpose of this cumulative analysis is defined as grassland, coastal scrub, and chaparral. Based on the California GAP data,[1216] there are approximately 747,000 acres of potential habitat in the SCRW, of which approximately 725,000 acres are coastal scrub and chaparral and approximately 22,000 acres are non-native grassland. Even though the San Diego desert woodrat is relatively common, it is not expected to occur in all 725,000 acres of coastal scrub and chaparral in the SCRW because it uses more xeric forms of these habitats, whereas the dusky-footed woodrat tends to occur in more mesic forms. The southern grasshopper mouse, if present in the SCRW, is expected to be even more sparsely distributed in xeric forms of coastal scrub and chaparral and grasslands.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (which encompasses the Mission Village project site), would cause the loss of approximately 34,100 acres of 747,000 acres of potential habitat, including approximately 33,000 acres of coastal scrub and chaparral and approximately 1,100 acres of grassland. Without accounting for past, present or reasonably foreseeable mitigation for these upland habitats, or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of 34,100 acres of habitat in the SCRW could be a potential significant impact on the habitat for both species. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 3,050 acres of the combined habitats, including approximately 773 acres of permanent and temporary disturbance on the Mission Village project site. This contribution by the Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects, including habitat fragmentation and potential isolation of local populations of the San Diego desert woodrat and southern grasshopper mouse, making the species, if present, more vulnerable to local extirpation. In addition, over the long term, the close proximity of urban development to suitable habitat could result in abandonment of dens and burrows; disruption of nocturnal activities; greater vulnerability to predation by nocturnal predators (e.g., owls and

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1215 Zeiner et al., *California's Wildlife: Volume III.*

1216 UCSB, *California Gap Analysis Project.*

coyotes) as a result of nighttime lighting; greater vulnerability to predation by pet, stray, and feral cats and dogs as well as other mesopredators such as raccoons, foxes, skunks, and opossums;[1217] and vulnerability to pesticides, which may reduce insect prey and cause secondary poisoning and rodenticides that may be used to control pest rodents. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The required Newhall Ranch Specific Plan Program EIR mitigation measures and additional mitigation measures recommended by this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would result in a large, permanent open space system that would provide suitable habitat to support the San Diego desert woodrat and southern grasshopper mouse, if present in the RMDP/SCP project vicinity. Implementation of these mitigation measures would result in protection and management of approximately 3,488 acres of suitable habitat for the San Diego desert woodrat and approximately 2,657 acres for the southern grasshopper mouse. This open space would be conserved in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area (**Figure 4.3-31**). This set-aside would also help mitigate long-term secondary effects by providing adequate protected open space away from the edge of development. Several specific mitigation measures would also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. All lighting would be downcast away from open space areas. Rodenticides would be controlled through an integrated pest management (IPM) plan. Implementation of these measures would allow these species to persist on site after development in the large amount of permanent open space that would be protected and managed.

In addition to these measures reducing impacts to these species at the project level, the San Diego desert woodrat has a broad geographic range and is still common in suitable habitat. It is expected to occur relatively commonly in suitable habitat on National Forest system lands and other public lands on the SCRW. The southern grasshopper mouse, if still present in the SCRW, likely occurs in low population densities in very scattered distributions. The probability of a present or reasonably foreseeable project, including the Mission Village project, impacting this species is considered to be low.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

[1217] See Crooks and Soulé, "Mesopredator Release and Avifaunal Extinctions in a Fragmented System," 563–566.

Mammal—Moderate Mobility. This guild includes American badger and San Diego black-tailed jackrabbit. Both species are likely to be present, but uncommon on the Mission Village project site.

The American badger has been documented three times in the larger RMDP/SCP project area through systematic surveys and anecdotal observations of dens and tracks.[1218] The CNDDB includes only one documented occurrence for the American badger outside the RMDP/SCP project area; a location between Bear Creek and Hopper Mountain northeast of Fillmore. However, while this species generally occurs at low abundances, observations of badgers in suitable habitat in Southern California by biologists are not uncommon. It is expected to occur throughout the SCRW in suitable habitat. However, on the Angeles National Forest and other Forest System lands the distribution of American badger is not well documented.[1219] This species is known to occur on portions of the Los Padres National Forest but has not been observed on many portions of the Angeles National Forest in several years.[1220]

The San Diego black-tailed jackrabbit has not been observed on the Mission Village project site and was observed only in the larger RMDP/SCP project area during focused mammal surveys by Impact Sciences.[1221] Negative findings for this species during many other wildlife surveys suggest that it is likely uncommon on the Mission Village project site. The CNDDB includes only one documented occurrence for the San Diego black-tailed jackrabbit outside the RMDP/SCP project area: a location between Castaic Lake and San Francisquito Canyon. While this species appears to be uncommon in the western portion of the watershed, it is expected to be more common in the eastern portion of the watershed because several CNDDB occurrences are from the Palmdale/Lancaster desert region just east of SCRWR. The lack of occurrence records for both the American badger and San Diego black-tailed jackrabbit probably are due to both their relatively uncommon occurrence (at least in the central and western portions of the watershed) and under-reporting to the CNDDB.

For the purpose of this cumulative analysis, suitable habitat for these two species includes agriculture, disturbed land, grassland, and coastal scrub. Based on the California GAP data,[1222] there are approximately 252,000 acres of potential habitat in the SCRW. Because both species are uncommon in the SCRW, not all 252,000 acres are expected to be occupied.

[1218] Impact Sciences, *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area*; P. Behrends, personal observation of badger den by P. Behrends (Dudek and Associates, Inc.) in Potrero Creek during wetland delineation (August 1, 2006); Dudek and Associates, *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*.

[1219] Stephenson and Calcarone, *Southern California Mountains and Foothills Assessment.*

[1220] L. Welch, personal communication between C. Huntley (Aspen) and L. Welch (U.S. Forest Service, Los Angeles River Ranger District) regarding the distribution of American Badger on the Angeles National Forest, May 2008 (2009).

[1221] Impact Sciences, *Assessment and Survey of Mammals within the Newhall Ranch Specific Plan Area.*

[1222] UCSB, *California Gap Analysis Project.*

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (encompassing the Mission Village project site), would cause the loss of approximately 24,300 acres of 251,000 acres of potential habitat for the American badger and San Diego black-tailed jackrabbit. Also, past, present, and reasonably foreseeable future projects within the SCRW tend to be concentrated in the valleys and relatively gentle foothill slopes where these species are known to occur. These patterns apply both to the land use changes addressed here as cumulative effects (i.e., since the 1999 UCSB GAP project) and extensive land conversions to agricultural uses prior to 1999. These cumulative effects cause a disproportionately high loss of individuals and habitat for badgers and black-tailed jackrabbits whose habitats and distributions are primarily on gentle topography, lower foothills and canyons, or valley bottoms. Without accounting for past, present or reasonably foreseeable mitigation for these upland habitats, or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of 24,300 acres of habitat in the SCRW could be a potential significant impact on the habitat for both species. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 4,800 acres of the habitats, including approximately 1,347 acres of permanent and temporary disturbance on the Mission Village project site. This contribution by the Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the Mission Village project, also could result in potential long-term secondary effects including habitat fragmentation; increased risk of vehicle collisions as a result of new roads and increased traffic volumes on existing roads (e.g., SR-126); nighttime illumination; increased human activity and potential harassment by humans and pet, stray, and feral cats (primarily San Diego black-tailed jackrabbit) and dogs; and the use of rodenticides that could result in accidental poisoning of both species and reduction of the rodent prey base for the American badger. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The required Newhall Ranch Specific Plan Program EIR mitigation measures and additional mitigation measures recommended by this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would result in a large, permanent open space system that would provide suitable habitat to support the American badger and San Diego black-tailed jackrabbit in the RMDP/SCP project vicinity. Implementation of these mitigation measures would result in protection and management of approximately 3,540 acres of suitable habitat for the American badger and San Diego black-tailed jackrabbit. This open space would be conserved in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area (**Figure 4.3-31**). This set-aside would also help mitigate long-term secondary effects by providing adequate protected open space away from the edge of development. Several specific mitigation measures would also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral

cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. All lighting would be downcast away from open space areas. Rodenticides would be controlled through an integrated pest management (IPM) plan. Implementation of these measures would allow these species to persist on site after development in the large amount of permanent open space that would be protected and managed.

In addition to these measures reducing impacts to these species at the project level, these species likely occur in low densities on site, but have broad geographic ranges (e.g., badger occurs virtually throughout the state), are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands, although these species are likely to occur in low densities on Forest Service lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

(c) California Special Animals, Watch List Species, Specially Protected Mammal, and CDFG Trust Resource Species

This section addresses cumulative impacts to California Special Animals, Watch List Species, Specially Protected Mammal, and CDFG Trust Resource Species as organized by the different wildlife guilds.

Insect. This guild includes monarch butterfly and San Emigdio blue butterfly. Individual monarch butterflies have been regularly observed during focused butterfly surveys as well as during various other wildlife and plant surveys, but no wintering sites have been observed or documented in the SCRW. Due to the Mission Village project site's distance from the coast, it is unlikely that large numbers of adult monarch butterflies use the project site or the larger RMDP/SCP project area for overwintering.[1223] Monarch butterflies themselves have no special conservation status, but their overwintering sites are considered a sensitive resource.[1224] Because wintering sites do not occur on the Mission Village project site or the larger RMDP/SCP project area, there would be no impacts resulting from the proposed Mission Village project and no cumulative effects of the proposed project on monarch butterfly overwintering habitat.

1223 Compliance Biology, Inc., *Results of Butterfly Surveys on the Newhall Ranch Project Site*.

1224 CDFG, "Special Animals," Biogeographic Data Branch, California Natural Diversity Database (2008), http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPAnimals.pdf.

During the 2004 surveys, San Emigdio blue butterfly was documented within the Specific Plan area in the west-central edge of Potrero Canyon. [1225] One San Emigdio blue butterfly was also observed in the High Country SMA/SEA 20 at the northwestern edge of Salt Creek Canyon during the 2005 surveys. No San Emigdio blue butterflies were observed on the Mission Village project site. The CNDDB reports no known locations within the SCRW but Stephenson and Calcarone[1226] cite two occurrences within the SCRW, at Mint Canyon and Bouquet Canyon near Castaic. The primary location for this species is along the Mojave River near Victorville, with scattered locations in canyons along the north side of the San Gabriel Mountains near the desert's edge, and in arid areas south of Mount Abel near San Emigdio Mesa.[1227]

Although the San Emigdio blue butterfly's geographic range is relatively large and its larval host plants (quail brush and four-winged saltbush) are common, it is a "habitat specialist," meaning that its distribution is much more localized than its host plants. It is known from a few scattered locations range-wide. Quail brush and four-winged saltbush have wide elevational ranges, but the mixed saltbush scrub vegetation where San Emigdio blue butterfly is found generally occurs on bajadas, flats, lower slopes, playas, and valley floors,[1228] where development and other land use conversions tend to be concentrated. The best-known location is outside the SCRW, along the Mojave River at the Interstate 15 crossing, near Victorville. That occurrence has declined due to surrounding urbanization.[1229]

Details of the San Emigdio blue butterfly's population status at SCRW occurrences at Bouquet and Mint canyons are unknown. Due to its occurrence in small, widely scattered locations, its susceptibility to habitat loss, and the lack of known occurrences within the SCRW, ongoing development is the watershed could be a potential significant cumulative impact to the San Emigdio blue butterfly.

Vegetation clearing associated with construction of RMDP facilities and fence construction around the Potrero Preserve Area in accordance with the SCP would result in the removal of quail brush plants associated with the colony that occurs outside the Potrero Preserve Area. The construction of Potrero Canyon Road under Alternative 2, as analyzed in the RMDP/SCP EIS/EIR, would fragment the only known colony on site. Even with replacement, preservation, and management of habitat for this species, as proposed, this impact was determined to be significant and unavoidable in the RMDP/SCP EIS/EIR, absent further mitigation for Alternative 2. Due to the species' rarity

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[1225] Compliance Biology, *Results of Butterfly Surveys on Magic Mountain Entertainment Site, Los Angeles County, California* (2004).

[1226] Stephenson and Calcarone, *Southern California Mountains and Foothills Assessment*.

[1227] T.C. Emmel and J.F. Emmel, *The Butterflies of Southern California* (The Natural History Museum of Los Angeles County Sciences Series 26, 1973); D.D. Murphy, *A Report on the California Butterflies Listed as Candidates for Endangered Status by the U.S. Fish and Wildlife Service* (1990).

[1228] Sawyer and Keeler-Wolf, *Manual of California Vegetation*.

[1229] Stephenson and Calcarone, *Southern California Mountains and Foothills Assessment*.

within the SCRW and throughout its known range, and the other conservation issues described above, a significant impact to even a single occurrence would result in a cumulatively considerable contribution to the species in the watershed. Therefore, the RMDP/SCP project-specific impacts of Alternative 2 would be a significant and unavoidable cumulative impact to San Emigdio blue butterfly. However, the Mission Village project site does not does not include any populations of San Emigdio blue butterfly, or a concentration of its host plant. Therefore, the Mission Village project would not considerably contribute to cumulative secondary impacts to this species.

Mollusk. The only species in this guild is the terrestrial gastropod Trask shoulderband snail. Surveys were conducted for the Trask shoulderband snail from November 2009 to January 2010 throughout the RMDP/SCP project area, including development areas and mitigation lands (River Corridor SMA, High Country SMA, Salt Creek areas), as well as off-site reference areas that supported suitable microhabitats for the species, including woodrat nests, brush and debris piles, rock piles, isolated rocks, leaf litter, logs, trash/debris piles, and other unique features that may provide soil moisture or refugia. The microhabitats generally are found in coastal scrub, riparian, and chaparral. The surveys for the Trask shoulderband snail were negative;[1230] however, the presence of two non-special-status helminthoglyptid taxa (Southern California shoulderband snail and Vasquez rocks shoulderband snail) on site indicate that the special-status Trask shoulderband snail has potential to occur.

The Trask shoulderband snail has been documented in scattered locations in coastal Southern California, ranging from San Luis Obispo County to San Diego County, and south into northwestern Baja California, Mexico. The nearest documented occurrences of Trask shoulderband are in Ventura County: the Oxnard Plain, Tierra Rejada Valley, Santa Clara River Valley at Barsdale near Fillmore, Santa Paula Ridge, and one other record with no location provided.[1231] The CNDDB also has one record for the subspecies from La Jolla Canyon in the Santa Monica Mountains at Point Mugu State Park observed in February 2008 ascending a waterfall.[1232]

Although there are a few documented occurrences of the Trask shoulderband in the SCRW, this species may be more widespread and common in suitable microhabitats in the SCRW and elsewhere within its range in Southern California. The documented occurrences almost certainly do not represent the actual distribution of the species, because terrestrial snails are highly cryptic, and extensive surveys for these groups have not been systematically conducted. Furthermore, with the exception of a few species, such as Trask shoulderband snail, terrestrial snails are not considered sensitive by the CDFG or USFWS, and focused surveys for this group typically are not conducted. Therefore, present and reasonably foreseeable projects in the SCRW, including the proposed Mission Village

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[1230] C. Huntley, "Re: Snail Methods, etc." Email from C. Huntley (Aspen) to P. Behrends (Dudek), A.C. Lynch (Sohagi Law Group), D. Bedford (CDFG), K. Drewe (CDFG), S. White (Aspen), M. Carpenter (Newhall Land), S. Rojas (Newhall Land), and S. Miller (Dudek), March 12, 2010.

[1231] D.L. Magney, "Terrestrial Snails of Los Angeles County" (Ojai, California: David Magney Environmental Consulting. August 20, 2009).

[1232] CDFG, *RareFind*, Version 3.1.0, *California Natural Diversity Database*, accessed March 11, 2010.

project, could cause the loss of potential microhabitats for the Trask shoulderband snail. Without accounting for past, present, or reasonably foreseeable mitigation for these microhabitats, or the RMDP/SCP project's individual contribution to mitigation for loss of these microhabitats, the loss of potential microhabitats for the Trask shoulderband snail in the SCRW could be a significant impact on the microhabitat for this species. The contribution of the RMDP/SCP project, including Mission Village, to this potential significant cumulative impact could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects, including habitat fragmentation and isolation of some local populations of these species, making them more vulnerable to extirpation. In addition, over the long term, the close proximity of urban development to suitable habitat could result in disruption of essential behavioral activities (*e.g.*, foraging, reproduction) and greater vulnerability to several potential secondary impacts, including altered wildfires; human-caused habitat degradation (*e.g.*, trampling of vegetation and damage to soil structure, introduction of invasive species, such as Argentine ants and decollate snails (used as a control for garden brown snail) and off-road vehicles); habitat degradation by pet, stray, and feral cats and dogs; and use of chemical pesticides, which may cause poisoning. At the watershed level, these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project, to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The required Newhall Ranch Specific Plan Program EIR mitigation measures, in conjunction with the additional mitigation measures recommended by this Draft EIR (~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures), will result in a large, permanent open space system that will provide suitable microhabitats to support Trask shoulderband snail in the RMDP/SCP project vicinity. Implementation of these mitigation measures will result in protection and management of lands containing good quality microhabitats in three main interconnected areas: the River Corridor SMA, the High Country SMA, and the Salt Creek area. These areas contain a suite of topographical features, including rocky outcrops, canyons, and drainages; all features where shoulderband snail species have been documented in the literature. In addition, these areas support a variety of vegetation communities and provide large areas of open space that would allow for gene flow between watersheds or populations. This set-aside will also help mitigate long-term secondary effects by providing adequate protected open space away from the edge of development. Several specific mitigation measures will also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. Pest management activities will be controlled through an integrated pest management (IPM) plan and Argentine ant monitoring and controls will be implemented. Implementation of these measures will allow Trask shoulderband snail to persist on site after development in the large amount of permanent open space that will be protected and managed.

In addition to these measures reducing impacts to this species at the project level, this species appears to have a broad geographic range, is likely to occur in suitable microhabitats within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable microhabitats; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Reptile—Low Mobility. This guild includes coastal western whiptail, rosy boa, and San Bernardino ringneck snake. The coastal western whiptail was observed in the High Country SMA/SEA 20,[1233] but was not observed in pitfall trapping elsewhere in the RMDP/SCP project area, including the Mission Village project site.[1234] There is only one other documented occurrence for the SCRW in the CNDDB south of Soledad Canyon Road. However, this species has been tracked in the CNDDB only in recent years, with the oldest occurrence in Ventura and Los Angeles counties dating back to 1993. This species is commonly observed by biologists in suitable habitat in Southern California and it is expected to be relatively common in suitable habitat in the SCRW, on the Mission Village project site, and within the larger RMDP/SCP project area.

The San Bernardino ringneck snake and rosy boa have not been observed on the Mission Village site or within the larger RMDP/SCP project area and there are no documented occurrences in the CNDDB for these species. While not commonly observed by biologists because of their low detectability during typical walkover surveys, both species are still relatively widespread and common in suitable habitat.[1235] There is substantial suitable habitat for these species in the RMDP/SCP project area and elsewhere in the SCRW and both are expected to occur throughout the SCRW.

These three species overlap in their habitat use, but also may occur in habitats that are not typically used by the other species. For example, rosy boa primarily uses coastal scrub and chaparral, while the coastal western whiptail lizard and San Bernardino ringneck snake both use annual grassland and oak woodlands. Unlike the other two species, the ringneck snake also uses riparian habitats. For the purposes of this cumulative analysis for these species, the collective habitat types include riparian, grassland, coastal scrub, chaparral, and oak woodland. Based on the

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1233 Dudek and Associates, *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek*, and off site in Castaic Mesa; Compliance Biology, *Results of the Focused Western Spadefoot Toad Surveys on the Castaic Mesa Project Site*.

1234 Impact Sciences, Inc., *2004 and 2006 Reptile Survey Results, Newhall Ranch Specific Plan Area*.

1235 Zeiner, Laudenslayer Jr., and Mayer, *California's Wildlife: Volume I*.

California GAP data,[1236] there are approximately 777,000 acres of potential habitat in the SCRW. Because all three species probably are patchily distributed in the SCRW in association with suitable microhabitats within these broader habitat areas, not all 777,000 acres are expected to be occupied.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (which encompasses the Mission Village project site), would cause the loss of approximately 35,000 acres of 777,000 acres of potential habitat for the coastal western whiptail, rosy boa, and San Bernardino ringneck snake. Without accounting for past, present or reasonably foreseeable mitigation for these habitats (particularly grassland, coastal sage scrub, and chaparral), or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of 35,000 acres of habitat in the SCRW could be a potential significant impact on the habitat for these species. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 3,380 acres of the habitats, including approximately 871 acres of permanent and temporary disturbance on the Mission Village project site. This contribution by the Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects, including habitat fragmentation and isolation of some local populations of these species, making them more vulnerable to extirpation. In addition, over the long term, the close proximity of urban development to suitable habitat could result in disruption of essential behavioral activities (e.g., foraging, reproduction) and greater vulnerability to several potential secondary impacts, including human-caused habitat degradation (e.g., trampling of vegetation, introduction of invasive species, such as Argentine ants and off-road vehicles); harassment and collection; predation by pet, stray, and feral cats and dogs; increased incidence of roadkill; and use of pesticides, which may reduce their prey or cause secondary poisoning. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The required Newhall Ranch Specific Plan Program EIR mitigation measures and additional mitigation measures recommended by this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would result in a large, permanent open space system that would provide suitable habitat to support coastal western whiptail, rosy boa, and San Bernardino ringneck snake in the RMDP/SCP project vicinity. Implementation of these mitigation measures would result in protection and management of substantial suitable habitat for these species (approximately 5,687 acres for coastal western whiptail, 3,724 acres for rosy boa, and 6,047 acres for San Bernardino ringneck snake) in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt

[1236] UCSB, *California Gap Analysis Project.*

Creek area (**Figure 4.3-31**). This set-aside would also help mitigate long-term secondary effects by providing adequate protected open space away from the edge of development. Several specific mitigation measures would also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. All lighting would be downcast away from open space areas. Rodenticides would be controlled through an integrated pest management (IPM) plan. Implementation of these measures would allow these species to persist on site after development in the large amount of permanent open space that would be protected and managed.

In addition to these measures reducing impacts to these species at the project level, these species have broad geographic ranges and are relatively common, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird—Raptor. This guild includes Cooper's hawk, ferruginous hawk, merlin, prairie falcon, sharp-shinned hawk, and turkey vulture. The Cooper's hawk is the only species in this guild that has been documented to nest in the RMDP/SCP area. The others forage in the RMDP/SCP only during the winter or during migration (ferruginous hawk, merlin, and sharp-shinned hawk) or otherwise are likely to nest off site and use the site only for foraging (prairie falcon and turkey vulture). These species are expected to nest (Cooper's hawk, prairie falcon, and turkey vulture) and/or forage throughout suitable habitat in the watershed.

As a group these species may forage in virtually all the habitats on the Mission Village project site and immediate vicinity, including agriculture, disturbed land, grassland, coastal scrub, chaparral, riparian, and woodland. However, each of the species typically uses some subset of these habitats. For example, ferruginous hawk typically forages over open lands, such as grassland and agriculture, while Cooper's hawk primarily forages in riparian and woodland habitat and adjacent coastal scrub. Wintering or migrant sharp-shinned hawks may forage in all of the habitats listed above. For the purpose of this analysis, therefore, all of these habitats are considered to be suitable for the Bird–Raptor guild.

Based on the California GAP data,[1237] there are approximately 836,000 acres of suitable foraging habitat for these species in the SCRW. It is not expected that all 836,000 acres are used by all members of this guild because of the different foraging habitat preferences of the different species.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (encompassing the Mission Village project site), would cause the loss of approximately 38,000 acres of 836,000 acres of suitable foraging habitat for species in the Bird—Raptor guild. Without accounting for past, present or reasonably foreseeable mitigation for these habitats (particularly upland habitats), or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of 38,000 acres of habitat in the SCRW could be a potential significant impact on the habitat for these species. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 5,590 acres of the habitats, including approximately 1,484 acres of permanent and temporary disturbance on the Mission Village project site. This contribution by the Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects, including increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. The larger species such as turkey vulture would have increased potential for entanglement with power lines poles, resulting in physical injury or death from electrocution. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIR **~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would establish a large, managed open space system that includes substantial foraging habitat for these species, including 1,609 acres for Cooper's hawk (includes potential breeding habitat), 2,996 acres for ferruginous hawk, 3,086 acres for merlin, 1,409 acres for prairie falcon, 6,574 acres for sharp-shinned hawk, and 4,267 acres for turkey vulture. This habitat would be set aside in three main interconnected areas: the River Corridor SMA/SEA 23, the High Country SMA/SEA 20, and the Salt Creek area (**Figure 4.3-31**). This set-aside would also help mitigate long-term secondary effects by providing adequate protected open space away from the edge of development. Several specific mitigation measures would also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs would be leashed or otherwise controlled in or adjacent to open space areas. All lighting would be downcast away from open space areas. Rodenticides would be controlled

[1237] UCSB, *California Gap Analysis Project.*

through an integrated pest management (IPM) plan. Installation of new or relocation of existing power lines in the High Country SMA/SEA 20 and Salt Creek area would be coordinated with CDFG and structures would be designed in accordance with Avian Power Line Interaction Committee[1238] guidelines and operated with anti-perching devices to help reduce collisions and electrocutions.

In addition to these measures reducing impacts to these species at the project level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird—Riparian. This guild includes black-crowned night-heron and Nuttall's woodpecker.

The designated sensitive resource for the black-crowned night-heron is roosts or rookery sites, none of which have been documented in the RMDP/SCP project area (which encompasses the Mission Village project site) during the numerous avian surveys conducted in riparian habitats. Because roosts or rookery sites do not occur on the Mission Village project site, there would be no impacts resulting from the proposed project and no cumulative effects of the proposed Mission Village project on roosts or rookery sites for this species. Therefore, this species is not addressed further in this analysis.

Nuttall's woodpecker was observed nearly every year in the RMDP/SCP project area during riparian bird spring surveys and is considered to be common in riparian and woodland habitats in the area. It is likely to use riparian and woodland habitats on and adjacent to the Mission Village project site. It is also commonly observed in riparian and woodland habitats elsewhere in Southern California during biological surveys. For the purpose of this analysis, Nuttall's woodpecker is considered to be common in suitable habitat throughout the watershed.

Based on the California GAP data,[1239] there are approximately 30,000 acres of suitable habitat for Nuttall's woodpecker in the SCRW. It is not expected that all 30,000 acres are used by this species, but because it is relatively common species in suitable habitat, it is likely to have a broad distribution in the watershed.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (which encompasses the Mission Village project site), would cause the loss of approximately 1,100 acres of 30,000 acres of suitable

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[1238] APLIC, *Avian Protection on Power Lines*.
[1239] UCSB, *California Gap Analysis Project*.

habitat for Nuttall's woodpecker. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 320 acres of the habitats, including approximately 98 acres of permanent and temporary disturbance on the Mission Village project site. This contribution by the Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects including noise; lighting; invasive species, such as giant reed, tamarisk, and Argentine ants; increased human activity; increased predation; and use of pesticides which could reduce prey and cause secondary poisoning. These secondary impacts would not be cumulatively significant because of this species' common occurrence in suitable habitat and widespread distribution.

Although impacts to habitat and secondary effects on Nuttall's woodpecker would not be cumulatively significant, the mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIR for other special-status riparian birds (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would protect riparian habitat and establish a large, managed open space system, all of which would reduce impacts to this species. This mitigation would result in the preservation and management of approximately 1,629 acres of suitable habitat for Nuttall's woodpecker. This set-aside of lands would also reduce long-term secondary effects. In addition, lighting restrictions along the perimeter of natural areas would help avoid predation of nest sites by nocturnal predators and avoid physiological stress. Limited recreational usage and access restrictions within the River Corridor SMA/SEA 23 and High Country SMA/SEA 20; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas would help protect this species by allowing it to nest and forage without disturbance. Controls on pesticides would reduce the chance of secondary poisoning and loss of prey. Controls on Argentine ants would help reduce impacts on young in nests.

Bird—Upland Scrub and Chaparral. This guild includes Allen's hummingbird, Bell's sage sparrow, black-chinned sparrow, Costa's hummingbird, rufous hummingbird, and Southern California rufous-crowned sparrow.

The rufous-crowned sparrow is a relatively common breeding resident in the RMDP/SCP project area and is expected to nest in the coastal scrub on the Mission Village project site.

The Bell's sage sparrow has not been observed in the RMDP/SCP project area, but two individuals were observed on the adjacent Legacy project site and the species has the potential to nest in small numbers on the Mission Village project site.

The Allen's and Costa's hummingbirds are regularly observed in the RMDP/SCP project area and have high potential to nest on the Mission Village project site.

The rufous hummingbird is regularly observed in the early spring in the RMDP/SCP project area and is assumed to use the Mission Village project site during migration but not for breeding.

The black-chinned sparrow has not been observed in the RMDP/SCP project area and is considered to have a low potential to nest on the Mission Village project site. There are no occurrence records in the CNDDB for the SCRW for any of these species, but because most are still relatively common and are often observed by biologists where they occur, the lack of occurrences is probably due to under-reporting. It is assumed for this analysis that their occurrence in the larger watershed is comparable to their occurrence in the RMDP/SCP project area, including the Mission Village project site.

As a group, these species forage and nest (if a breeding resident) in coastal scrub and/or chaparral throughout their ranges. However, on site, and possibly in the region, the Bell's sage sparrow is expected to occur only in chaparral.[1240] In addition, the Allen's hummingbird, Costa's hummingbird, and rufous hummingbird also commonly forage, and Allen's hummingbird may nest, in riparian and woodland habitats. Therefore, for these three species the riparian and woodland habitats are included in this analysis.

Based on the California GAP data,[1241] there are approximately 725,000 acres of suitable coastal scrub and chaparral habitat for black-chinned sparrow and Bell's sage sparrow and 755,000 acres of suitable coastal scrub, chaparral, riparian, and woodland habitat for Allen's hummingbird, Costa's hummingbird, and rufous hummingbird in the SCRW. It is not expected that all of these acreages are used by all of these species. Based on the RMDP/SCP project area occurrences, the Southern California rufous-crowned sparrow and the hummingbirds may be fairly common elsewhere in the SCRW, but the black-chinned sparrow and Bell's sage sparrow probably are much less common.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, would cause the loss of approximately 33,000 acres of 725,000 acres of coastal scrub and chaparral for black-chinned sparrow and Bell's sage sparrow and approximately 34,000 acres of 755,000 acres of coastal scrub, chaparral, riparian, and woodland habitat Allen's hummingbird, Costa's hummingbird, and rufous hummingbird. Without accounting for past, present or reasonably foreseeable mitigation (particularly for upland scrub and chaparral), or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of this habitat in the SCRW could be a potential significant impact on the habitat for these species. The contribution of the RMDP/SCP project to the impact on coastal scrub and chaparral is 1,980 acres, including approximately 706 acres of permanent and temporary

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[1240] Garrett and Dunn, *The Birds of Southern California*.

[1241] UCSB, *California Gap Analysis Project*.

disturbance on the Mission Village project site. The contribution of the RMDP/SCP project to the impact on coastal scrub, chaparral, riparian, and woodland habitat is 2,300 acres, including approximately 804 acres of permanent and temporary disturbance on the Mission Village project site. These contributions by the Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects including noise; lighting; invasive plant species and Argentine ants (increasing mortality of young of breeding residents); increased human activity; increased predation; and use of pesticides which could reduce prey and cause secondary poisoning. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) would protect suitable habitat for these species and establish a large, managed open space system. The open space system would include approximately 3,487 acres of coastal scrub and chaparral for the black-chinned sparrow, 1,488 acres of chaparral for Bell's sage sparrow, and approximately 3,860 acres of coastal scrub, chaparral, riparian, and woodland habitat for the hummingbirds. This set-aside of lands would also reduce long-term secondary effects. In addition, for breeding residents lighting restrictions along the perimeter of natural areas would help to reduce predation of nest sites by nocturnal predators and reduce physiological stress. Limited recreational usage and access restrictions within the River Corridor SMA/SEA 23 and High Country SMA/SEA 20; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas would help protect these species by allowing them to nest and forage without disturbance. Controls on pesticides would reduce the chance of secondary poisoning and loss of prey. Controls on Argentine ants would help reduce impacts on young in nests.

In addition to these measures reducing impacts to these species at the project level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird—Upland Grassland. This guild includes only California horned lark. This species is commonly observed in the RMDP/SCP area within the Santa Clara River and adjacent agricultural fields. Although this species has not been documented to nest in the RMDP/SCP project area (which encompasses the Mission Village project site), suitable nesting habitat exists in the area. Therefore, it is assumed that California horned lark could nest on the Mission Village project site. Based in frequent observations of this species in the RMDP/SCP project area and because it is commonly observed by biologists elsewhere in Southern California, it is assumed that the California horned lark commonly occurs in suitable habitat in the SCRW, including annual and native grassland, agriculture, and disturbed land.

Based on the California GAP data,[1242] there are approximately 78,000 acres of suitable in the SCRW for California horned lark. It is not expected that all 78,000 acres are used by this species, but it is common enough and has broad enough habitat preferences, that it could occur almost anywhere in these habitats where there is available insect prey, such as freshly disced fields.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project and the Mission Village project, would cause the loss of approximately 3,790 acres of 78,000 acres of suitable habitat for the California horned lark, The contribution of the RMDP/SCP project to this cumulative impact is 3,380 acres of the habitats, including approximately 871 acres of permanent and temporary disturbance on the Mission Village project site. The contribution of the RMDP/SCP project, including the proposed Mission Village project, is considered an adverse but not significant cumulative impact to this species because it is still common and widespread within its range and uses a variety of habitats.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, could result in potential long-term secondary effects, including habitat fragmentation; abandonment of nests from human activity; greater vulnerability to nocturnal predators as a result of nighttime lighting; noise from roadways; nest parasitism by cowbirds; greater vulnerability to predation by pet, stray, and feral cats and dogs and other mesopredators; and loss of prey or secondary poisoning due to the use of pesticides. Although these effects could occur, substantial relatively undisturbed winter foraging habitat would remain in the SCRW, which would allow the California horned lark to avoid many of these effects. Secondary effects to wintering birds would be adverse but not significant. Also, this species has not been documented to nest on the Mission Village project area or in the larger RMDP/SCP project area, and if it did, the nesting population probably would be small. Therefore, cumulative secondary impacts to nesting birds, such as cowbird parasitism, would be adverse but not significant.

[1242] UCSB, *California Gap Analysis Project.*

Even though impacts to the California horned lark and its habitat would not be cumulatively significant and mitigation measures are not required, the mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) for other project-level impacts to biological resources will be implemented that will further reduce any potential impacts. These mitigation measures also include habitat preservation, restoration, enhancement, and management of the High Country SMA/SEA 20 and Salt Creek area—areas that will form a large, contiguous open space system that includes 995 acres of California annual grassland, agriculture, and disturbed land. This set-aside of lands will also reduce potential long-term secondary effects. In addition, for breeding residents lighting restrictions along the perimeter of natural areas will help to reduce predation of nest sites by nocturnal predators and reduce physiological stress. Limited recreational usage and access restrictions within the River Corridor SMA/SEA 23 and High Country SMA/SEA 20; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas will help protect this species by allowing it to nest and forage without disturbance.

B**ird—Upland Woodland.** This guild includes chipping sparrow, Lawrence's goldfinch, hermit warbler, and oak titmouse. All of these species have been observed in the RMDP/SCP project area and the chipping sparrow, Lawrence's goldfinch, and oak titmouse are considered to be breeding residents. The hermit warbler is considered to be a winter migrant. These species have potential to occur on the Mission Village project site. All of these species are fairly common to abundant in suitable habitat and are commonly observed by biologists during surveys in Southern California. Although the primary habitat for these species is upland woodland, they also forage and nest in riparian habitats. Therefore, for the purpose of the cumulative analysis suitable habitat for these species is defined as woodland and riparian.

Based on the California GAP data,[1243] there are approximately 30,000 acres of suitable woodland and riparian habitat in the SCRW for these species. It is not expected that all 30,000 acres are used by these species, but because they are still common to abundant within their ranges, and based on regular observations of these species in the RMDP/SCP project area, these species area assumed to be fairly common in suitable habitat in the SCRW.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project (encompassing the Mission Village project site), would cause the loss of approximately 1,100 acres of 30,000 acres of suitable habitat for these. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 320 acres of the habitats, including approximately 98 acres of permanent and temporary disturbance on the Mission Village project site. The contribution of the RMDP/SCP project, including the proposed Mission Village project, is considered an adverse but not significant cumulative impact to this species because they are still common and

[1243] UCSB, *California Gap Analysis Project.*

widespread within their range and uses a variety of habitats, including substantial riparian and oak woodland vegetation communities within the RMDP/SCP project area, National Forest system lands, and other designated open space within the watershed.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects, including habitat fragmentation; abandonment of nests from human activity; greater vulnerability to nocturnal predators as a result of nighttime lighting; noise from roadways; nest parasitism by cowbirds; greater vulnerability to predation by pet, stray, and feral cats and dogs and other mesopredators; and loss of prey or secondary poisoning due to the use of pesticides. Although these effects could occur, substantial undisturbed habitat would remain in the SCRW, which would allow these species to avoid many of these effects. Therefore, cumulative secondary impacts to migrant (hermit warbler) and nesting birds would be adverse but not significant.

Even though impacts to these species and their habitat would not be cumulatively significant and mitigation measures are not required, the mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) for other project-level impacts to biological resources would be implemented and would further reduce any potential impacts. These mitigation measures include habitat preservation, restoration, enhancement, and management of the High Country SMA/SEA 20 and Salt Creek area—areas that would form a large, contiguous open space system that includes 1,560 acres of riparian and woodland habitat. This set-aside of lands would also reduce potential long-term secondary effects. In addition, for breeding residents lighting restrictions along the perimeter of natural areas would help to reduce predation of nest sites by nocturnal predators and reduce physiological stress. Limited recreational usage and access restrictions within the River Corridor SMA/SEA 23 and High Country SMA/SEA 20; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas would help protect these species by allowing them to nest and forage without disturbance.

Bats. This guild includes fringed myotis, long-legged myotis, western small-footed myotis, and Yuma myotis. The presence of the fringed myotis and Yuma myotis was confirmed in the RMDP/SCP project area through acoustic detection (fringed myotis) and capture (Yuma myotis). The presence of long-legged myotis and western small-footed myotis was not confirmed, but bats with acoustic signatures in the 40 kHz range, which is the range for these two species, were detected on site in 2004 and 2006. Therefore, long-legged myotis and western small-footed myotis potentially occur in the RMDP/SCP project area. Suitable habitat for these species is present on the Mission Village project site, so they may occur on the site. There are no CNDDB records of these species elsewhere in the SCRW. However, comprehensive surveys for these species have not been conducted throughout the SCRW. Because species are foraging generalists and use a variety of habitats (although the Yuma myotis primarily uses riparian and wetland habitats), it is assumed that these species could occur throughout the SCRW at least in low numbers. The main

limitation for the occurrence of these species probably is a lack of day roosts sites, such as a caves, crevices, rock outcrops, tunnels, etc.

This cumulative analysis addresses the loss of foraging habitat for these species. As foraging generalists, they use a variety of habitats, but probably concentrate most of their foraging activity in wetland and riparian habitats. Suitable foraging habitat for bats includes coastal scrub, chaparral, grassland, riparian, oak woodland, agriculture, and disturbed land. Based on the California GAP data,[1244] there are approximately 836,000 acres of suitable foraging habitat for bats in the SCRW. It is not expected that all 836,000 acres are used by these bats for foraging because this habitat must be within typical flight distances of day roosts.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, would cause the loss of approximately 38,000 acres of 836,000 acres of suitable foraging habitat for these bats. Without accounting for past, present or reasonably foreseeable mitigation, or the RMDP/SCP project's individual contribution to mitigation for loss of habitat, the loss of this habitat in the SCRW could be a potential significant impact on the habitat for these species. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 5,590 acres of the habitats, including approximately 1,484 acres of permanent and temporary disturbance on the Mission Village project site. This contribution by the Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

In addition to loss of foraging habitat, day roosts, including maternal roosts, may be present in the SCRW and subject to potential impacts as a result of present and reasonably foreseeable projects. Although no day roosts for these species were detected in the RMDP/SCP project area, there is a potential for day roosts sites to be established in the RMDP/SCP project area, including the Mission Village project site, and to occur elsewhere in the SCRW. Without accounting for past, present or reasonably foreseeable mitigation (particularly upland habitats), or the RMDP/SCP project's individual contribution to mitigation for loss of day roosts, the loss of roost sites could result in a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential significant cumulative impact, if a day roost were impacted by construction activities, could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects resulting from increased human activity, noise, and lighting. Use of pesticides for agriculture or in landscaped areas may result in secondary poisoning and reduction of prey. At the watershed level these secondary effects could be a

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[1244] UCSB, *California Gap Analysis Project.*

potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The cumulative loss of foraging habitat and day roost sites, and long-term secondary impacts to these bats species would be reduced through several mitigation measures required by the Newhall Ranch Specific Plan EIR and recommended in this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures). These measures include habitat preservation, restoration, enhancement, and management of approximately 6,300 acres in the River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area—areas that would form a large, contiguous open space system providing foraging and potential roosting habitat for bats. It is expected that the species in this guild would continue to forage in these areas after buildout of the RMDP/SCP project area. Alternative roost sites would be created to mitigate for any day roost sites disturbed during construction, including creation of roosts under bridges and in culverts, where practicable, in consultation with CDFG. Species measures to reduce potential long-term secondary impacts include controls on public access and lighting.

In addition to these measures reducing impacts to these species at the project level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Mammal—High Mobility. This guild includes American black bear, mountain lion, and mule deer. The mountain lion and mule deer are both present in the RMDP/SCP project area. The RMDP/SCP project area supports about 14,300 acres (22 square miles), which is probably not large enough to encompass the entire home range of a mountain lion individual (e.g., mountain home ranges in the Santa Ana Mountains range from about 32 to 86 square miles, with a mean of 43 square miles[1245]), but assuming some range overlap of individuals, the RMDP/SCP project area could be included in the home ranges of two or three individuals. Female home ranges are generally much smaller than male ranges and may be as small as 20 square miles or as large as 60 square miles.[1246] Note also that the size of an individual's home range can vary from season to season and year to year, and is probably

[1245] W.D. Padley, *Mountain Lion Ecology in the Southern Santa Ana Mountains, California* (1989); W.D. Padley, "Female Mountain Lion (*Felis concolor*) Home Ranges in the Southern Santa Ana Mountains, California," abstract in *Fifth Mountain Lion Workshop* (San Diego, California: California Department of Fish and Game and the Southern California Chapter of the Wildlife Society, 1996).

[1246] Stephenson and Calcarone, *Southern California Mountains and Foothills Assessment*.

dependent on prey density and available stalking cover.[1247] In areas where habitat is limited, population densities can reach 10 adults per 100 square miles.[1248] Also, the RMDP/SCP project area supports habitat for mountain lions dispersing through the region, and the species is expected to occasionally occur on the Mission Village project site. Mule deer are common in the RMDP/SCP project area and currently use much of the area; this species likely occurs on the Mission Village project site with some frequency. American black bear has been documented to use the High Country SMA/SEA 20 and there may be some suitable denning habitat in the High Country SMA/SEA 20 and Salt Creek area. This species also may very occasionally use the Mission Village project site when moving between the Santa Susana Mountains and Santa Monica Mountains to the south and the Los Padres National Forest and Angeles National Forest in the Sierra Madre Mountains to the north; however, most movement by black bear is likely to occur west of the Mission Village project site. All three species are considered to be relatively common to common in suitable habitat in the SCRW, but primarily use the more remote areas of the watershed north and south of the RMDP/SCP project area.

These species use a variety of habitats, and probably are limited in their habitat use only by the amount of vegetation cover available. Of the various habitats in the SCRW, these species will use all of them except large areas of annual grassland, agriculture, and disturbed lands that lack cover, although mule deer often forage in grassland at the edges of shrubland, riparian, and woodland habitats. For the purpose of this analysis, suitable habitat for these species is defined as coastal scrub, chaparral, riparian, and oak woodland.

Based on the California GAP data,[1249] there are approximately 755,000 acres of suitable habitat for these species the SCRW. It is not expected that all 755,000 acres are used by all of these species. Based on the RMDP/SCP project area occurrences, the mule deer may be relatively common in these habitats, but the mountain lion and black bear are expected to be much less common.

Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, would cause the loss of approximately 34,000 acres of these habitats. This loss of habitat could be a potential significant impact on these species in the watershed. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 2,300 acres of the habitats, including approximately 804 acres of permanent and temporary disturbance on the Mission Village project site. This contribution by the Mission Village project to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Mission Village project, also could result in potential long-term secondary effects,

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[1247] P. Currier, "*Felis concolor*," *Mammalian Species* 200 (1983), 1–7.

[1248] Stephenson and Calcarone, *Southern California Mountains and Foothills Assessment*.

[1249] UCSB, *California Gap Analysis Project*.

including nighttime illumination of areas adjacent to open space, which could disrupt foraging and movement behavior; increased vehicle collisions at new and expanded roadways; increased encounters with humans and pet, stray, and feral dogs; and the use of rodenticides to control small mammals (e.g., ground squirrels and rabbits, which are prey for mountain lion), which may reduce prey populations and possibly cause secondary poisoning of predators. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the proposed Mission Village project to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

Several mitigation measures would be implemented to reduce cumulative impacts to habitat and long-term secondary effects associated with development. The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIR (**~~subsection~~Subsection 4.3.10**, Project Mitigation Measures) include habitat preservation, restoration, enhancement, and management of upland and riparian habitat areas in the River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area that would form a large, contiguous open space system of about 6,300 acres that supports these species. It is expected that these species would continue to use these areas as resident and movement habitat after buildout of the RMDP/SCP project area. The set-aside of lands also would reduce long-term secondary effects, such as increased noise, lighting, and increased human activity because individuals would have access to substantial habitat in undisturbed open space that would support their life history needs, including foraging, reproduction, movement, and dispersal. Long-term secondary effects, such as increased human activity; pet, stray, and feral dogs; lighting; and rodenticides would also be mitigated through a variety of measures associated with management of open space.

As discussed in detail in **~~subsection~~Subsection 4.3.9.b.1.e**, Wildlife Habitat Linkages, the RMDP/SCP project (encompassing the Mission Village project site) may affect regional habitat connectivity and movement by these species. The combined High Country SMA/SEA 20 and Salt Creek area provide the most direct connections between the River corridor habitat and large upland habitat areas south of the River, and are those identified by Penrod et al.[1250] as important components of regional habitat connectivity. The River Corridor SMA/SEA 23 also is an important east-west habitat linkage and intersects the north-south linkage provided by the High Country SMA/SEA 20 and Salt Creek area. These habitat linkages would remain intact and functional after implementation of the RMDP and SCP and buildout of the Specific Plan (including the Mission Village project site), VCC, and Entrada planning areas. The impact of the RMDP/SCP project on regional habitat connectivity, therefore, was determined to be adverse but not significant. Other present and reasonably foreseeable projects considered in this analysis would not affect these regional habitat linkages.

[1250] Penrod et al., *South Coast Missing Linkages Project*.

In addition to these measures reducing impacts to these species at the project level, these species have broad geographic ranges, are known to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands that provide primary habitat for these species in the SCRW.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects; or (4) a cumulatively considerable contribution to a potential significant impacts to regional wildlife habitat linkages.

(d) Listed Plant Species

San Fernando Valley Spineflower (CE). The San Fernando Valley spineflower occurs at two known locations: on Newhall Land property in Los Angeles County and on the Upper Las Virgenes Canyon Open Space Preserve (formerly Ahmanson Ranch) in Ventura County. The Upper Las Virgenes Canyon Open Space Preserve occurrence lies outside the SCRW boundary; however, it is included in this cumulative impacts analysis as it is the only other known occurrence of this species. The total cumulative area occupied by San Fernando Valley spineflower, including the RMDP/SCP project site and the Ventura County site, is 30.84 acres. Of that total, 20.24 acres are on Newhall Land property and 10.60 acres are at Upper Las Virgenes Canyon Open Space Preserve. The Preserve land is owned by the State of California and is managed by the Mountains Recreation and Conservation Authority, and is preserved in perpetuity.

Due to San Fernando Valley spineflower's very limited known distribution, occurring on 30.84 acres of known occupied habitat, almost any habitat loss would be potentially significant, on both a project-specific and cumulative basis.

The Mission Village project would result in the loss of, 3.29 acres of known occupied spineflower habitat. Mission Village's contribution to cumulative impact on all known occupied spineflower habitat (30.84 acres) would be significant, absent mitigation. However, the implementation of the Spineflower Conservation Plan, including the preservation and management of the other four proposed preserves within the RMDP/SCP planning area, would mitigate its specific and cumulative impacts to spineflower to less than significant. Therefore, Mission Village's cumulative contribution to the impact would be less than significant.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, also could result in potential long-term secondary effects, including hydrologic alterations and water quality impacts; accidental clearing, trampling, and grading; runoff, sedimentation, erosion and chemical and toxic compound pollution; exposure to fugitive dust; the introduction of non-native,

invasive plant and animal species; increased human activity and trampling and soil compaction; and increased risk of fire. At the watershed level these secondary effects could be a potential significant cumulative impact. The contribution of the RMDP/SCP project**,** including the proposed Mission Village project, to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation. However, given the preservation and protection measures outlined in the SCP (see **Mitigation Measures MV 4.3-58** through **Mitigation Measures MV 4.3-74**), implementation of Specific Plan RMP Measures **SP 4.6-53, SP 4.6-59,** and **SP 4.6-65** through **4.6-80**, and the expansion of the spineflower preserve within Mission Village, all of which are consistent with the Spineflower Overlay and Mitigation Program, and because 10.60 acres are conserved at Upper Las Virgenes Canyon Open Space Preserve and managed by the Mountains Recreation and Conservation Authority, secondary impacts to San Fernando Valley spineflower would be reduced to below a level of significance.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; or (2) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

(e) California Native Plant Society (CNPS) and Locally Regulated Plant Species

Undescribed everlasting.[1251] This undescribed species does not have a CNPS listing status, but is assumed to meet the criteria for designation to CNPS List 1B for purposes of this analysis. The undescribed everlasting was observed on sandy, alluvial benches along the Santa Clara River and within Hasley Canyon. This undescribed everlasting occurs from San Luis Obispo south to San Diego counties, west of the Peninsular and Transverse Ranges. Because this species is associated with sandy alluvial benches along river floodplains, it was not possible to model suitable habitat within the RMDP/SCP project area, nor within the SCRW, based on the California GAP vegetation database,[1252] which was compiled at a broad scale and necessarily lower precision. Therefore, cumulative impacts to this species are analyzed based on the loss of individuals of this species.

Of the 900 (approximately) individual undescribed everlastings counted in 2004, the RMDP/SCP project, which includes the Mission Village project, would cause 357 to be lost. This species' distribution on site is expected to be limited to the floodplain of the Santa Clara River and the lower portions of major tributaries. It is anticipated that other present and reasonably foreseeable proposed development within the SCRW would impact occurrences of this species, although it is likely that there would be some level of avoidance of these riparian areas. This could be a potential significant cumulative impact for this species within the watershed. The contribution of the proposed Mission Village project to the loss of individuals could be a significant cumulative impact, absent mitigation.

1251 Some experts identify this species as white-headed cudweed (*Gnaphalium leucocephalum*), which is a CNPS List 2.2 species (S3.2).

1252 UCSB, *California Gap Analysis Project.*

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and hydrologic alterations and water quality impacts. This could be a potential significant cumulative impact for this species within the watershed. The contribution of the proposed Mission Village project to these secondary impacts could be cumulatively considerable, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIR includes avoidance and minimization measures, including salvage of seeds and/or transplantation (see ~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures). As required by **MV 4.3-75** and **MV 4.3-76**, focused surveys to be conducted prior to the commencement of grading/construction activities within suitable habitat for the undescribed everlasting would ensure that individual plants are detected. Avoidance measures, and, if necessary, the salvage of seeds and/or transplantation of individuals identified within the disturbance area to an appropriate receptor site within the River Corridor SMA/SEA 23 where long-term preservation is provided, shall be implemented as outlined within the undescribed everlasting mitigation and monitoring plan. In addition, mitigation measures designed to provide for the long-term maintenance of the River Corridor SMA/SEA 23 in a natural state by restricting access and prohibiting grazing, agriculture, and recreation within the River Corridor SMA/SEA 23, as well as providing for the restoration and enhancement of habitat within the River Corridor SMA/SEA 23, would mitigate the loss of undescribed everlasting.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; or (2) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Newhall sunflower. This species is a CNPS List 1B.1 plant but has no federal status. This species is only known to occur in the Middle Canyon drainage in the RMDP/SCP project area. Therefore, there would be no other known impacts to this species by other projects in Los Angeles and Ventura counties and, therefore, there would be no cumulative impacts.

Island mountain-mahogany. This CNPS List 4.3 species is known to occur on site within chaparral within the Specific Plan and Entrada planning areas of the RMDP/SCP project area. Island mountain-mahogany was observed nearly every year in the RMDP/SCP project area and is considered to be common in chaparral vegetation communities on site. This species has been documented in chaparral throughout Los Angeles and Ventura counties,

including the Channel Islands (except San Clemente Island).[1253] Island mountain-mahogany is fairly common in suitable habitat throughout the watershed.

As described in **Table 4.3-26**, Summary of Cumulative Impacts to CNPS and Locally-Regulated Plant Species in the Santa Clara River Watershed, based on the California GAP data,[1254] there are approximately 550,000 acres of chaparral in the SCRW, although island mountain mahogany are not expected to occur in all 550,000 acres. For example, within the RMDP/SCP project area, island mountain-mahogany was found primarily in chaparral at the base of north-facing slopes. Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, would cause the loss of approximately 12,500 acres of 550,000 acres of chaparral. This could be a potential significant cumulative impact for this species within the watershed. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 460 acres. This loss of habitat would not be a cumulatively considerable contribution to a potential significant cumulative impact because of this species' widespread distribution within its range.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. These secondary impacts would not be a significant cumulatively impact because of this species' widespread distribution within its range, and the configuration of large tracts of chaparral within the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

Late-flowered mariposa lily. Within the RMDP/SCP project area**,** this CNPS List 1B.2 species is only known to occur in the High Country SMA/SEA 20. Implementation of the RMDP and SCP and buildout of the Specific Plan, VCC, and Entrada planning areas would not result in any direct or indirect impacts to late-flowered mariposa lily. Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, could, however, result in potential long-term secondary effects, including the introduction of non-native, invasive plant species and increased human activity, trampling, and plant collecting. This could be a potential significant cumulative impact for this species within the watershed. RMDP/SCP project implementation could result in such secondary impacts by recreational visitors in the High Country SMA/SEA 20, but these secondary impacts would be minimal because even if flowers were picked or a plant trampled, the underground bulb would remain. The RMDP/SCP project would not considerably contribute to a potential significant cumulative secondary impact in the watershed.

[1253] CNPS, *Inventory of Rare and Endangered Plants (2009),* http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi; Hickman, *The Jepson Manual*.

[1254] UCSB, *California Gap Analysis Project.*

Mainland cherry. This species does not have a CNPS listing status but is designated as special-status by the County of Los Angeles. Mainland cherry (*Prunus ilicifolia* ssp. *ilicifolia*, a subspecies of holly-leaf cherry) was observed nearly every survey year (2002 through 2007) within chaparral and big sagebrush scrub within the Specific Plan, VCC, and Entrada planning areas within the RMDP/SCP project area. Mainland cherry is an occasional component of chaparral and big sagebrush scrub vegetation communities on site. This species ranges throughout the central and southern Coast Ranges and from Napa County southward to Baja California.[1255] Mainland cherry is an occasional component in suitable habitat throughout the watershed.

Based on the California GAP data,[1256] there are approximately 556,000 acres of chaparral and big sagebrush scrub in the SCRW, although mainland cherry is not expected to occupy all 556,000 acres (see **Table 4.3-26**). For example, within the RMDP/SCP project area, mainland cherry was found primarily in chaparral and big sagebrush scrub in association with ephemeral and/or intermittent stream channels (river wash). Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, would cause the loss of approximately 12,000 acres of 556,000 acres of chaparral and big sagebrush scrub. This could be a potential significant cumulative impact for this species within the watershed. The contribution of the proposed Mission Village project to this potential significant cumulative impact is 460 acres. This contribution would not be cumulatively considerable because this species is relatively common and widespread throughout the SCRW.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. This would not be a significant cumulative impact for this species within the watershed because this species is relatively common and widespread throughout the SCRW. In addition, the configuration of large tracts of preserved chaparral and big sagebrush scrub within the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

Oak Trees. Oak trees are designated as special-status by the County of Los Angeles. Oak trees were observed every year within the Specific Plan, VCC, and Entrada planning areas within the RMDP/SCP project area. Oak trees are the dominant species in oak woodland and oak/grass vegetation communities on site, as well as occasional components of other vegetation communities on site. The oak species observed on site (coast live oak, Valley oak,

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[1255] Hickman, *The Jepson Manual;* N.E. McMurray, "*Prunus ilicifolia*," Fire Effects Information System, U.S. Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory, http://www.fs.fed.us/database/feis/. 2007.

[1256] UCSB, *California Gap Analysis Project.*

scrub oak, Alvord oak, and interior live oak) have been documented throughout much of California and (for coast live oak) southward to Baja California.[1257]

The combined direct and indirect permanent loss of individual oak trees resulting from implementation of the RMDP and the SCP and buildout of the Specific Plan, VCC, and Entrada planning areas would total 1,370 individuals (5.9 percent of the oak trees in the RMDP/SCP project area). It is anticipated that present and reasonably foreseeable projects in the SCRW would impact other occurrences of these species. Due to the coarse scale of mapping, oak woodlands were not mapped for any of the projects listed as past, present, or reasonably foreseeable in the California GAP database.[1258] Nonetheless, the fact that oaks occur in the RMDP/SCP project area (despite not occurring in the GAP data) suggests that oaks probably occur at least in small numbers on other project sites. This could be a potential significant cumulative impact for these species within the watershed. The contribution of the RMDP/SCP project to the cumulative loss of individual oak trees could be cumulatively considerable, absent mitigation.

Past, present, and reasonably foreseeable projects, including the RMDP/SCP project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; hydrologic alterations and water quality impacts; increased human activity that may result in littering, vandalism, and increased susceptibility to diseases, and trampling and soil compaction; and an increased risk of fire. The RMDP/SCP project's contribution to these impacts in the watershed would not be a significant cumulative impact because the configuration of large tracts of oak woodland vegetation communities within the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIR includes avoidance and minimization measures (see ~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures). The applicant would implement several mitigation measures to avoid, minimize, and mitigate impacts to individual oak trees and their associated habitat. The proposed mitigation encompasses a three-part strategy that incorporates (1) planting replacement trees, per the requirements of CLAOTO and previously incorporated measure SP-4.6-48; (2) additional replacement ratios recommended in this EIR for impacts to oak trees and oak woodlands where they occur within stream channels falling under CDFG and Corps jurisdiction, per 1600 and 404 (~~**BIO-2**~~**MV 4.3-31**); and (3) additional measures recommended in this EIR for tree replacement or woodland restoration/enhancement to mitigate for oak trees and woodland occurring in uplands outside CDFG and Corps jurisdiction (**MV 4.3-28**). General procedures to avoid and minimize impacts to oak trees during construction would be implemented and a

[1257] Hickman, *The Jepson Manual;* McMurray, "*Prunus ilicifolia*."
[1258] UCSB, *California Gap Analysis Project.*

qualified biologist would be present during construction in order to avoid inadvertent impacts to biological resources outside of the grading area, further reducing impacts to the species.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; or (2) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Oak-leaved nemophila. This CNPS List 4.3 species was known to occur from Tuolumne County south through Kern County.[1259] Occurrences on the RMDP/SCP project site are the southernmost recorded occurrences of the species. Oak-leaved nemophila was found in several locations within oak woodland within the Specific Plan area. Oak-leaved nemophila is assumed to occur as an occasional component of oak woodlands within the Specific Plan area. For the purpose of this analysis, oak-leaved nemophila is considered to be an occasional component of oak woodlands throughout the watershed. It is anticipated that present and reasonably foreseeable projects in the SCRW would impact occasional occurrences of this species.

Based on the California GAP data,[1260] there are approximately 5,170 acres of oak woodland vegetation communities in the SCRW (see **Table 4.3-26**). Based on the project-level mapping, 95 acres (out of 1,168 acres) of oak woodland vegetation communities on site would be impacted by the RMDP/SCP project. Given the presence of oak woodland vegetation communities within the RMDP/SCP project area, National Forest system lands and other designated open space within the watershed,[1261] the impact to occasional individuals would not be a significant cumulative impact.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. These secondary effects would not be a significant cumulative impact because the configuration of large tracts of oak woodland vegetation communities conserved within the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

Ojai navarretia. Within the RMDP/SCP project area, this CNPS List 1B.1 species is only known to occur in the Salt Creek area. Implementation of the RMDP and SCP and buildout of the Specific Plan, VCC, and Entrada planning areas would not result in any direct or indirect impacts to Ojai navarretia, Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP

[1259] CNPS, *Inventory of Rare and Endangered Plants.*
[1260] UCSB, *California Gap Analysis Project.*
[1261] UCSB, *California Gap Analysis Project.*

project, could, however, result in potential long-term secondary effects, including the introduction of non-native, invasive plant species and increased human activity, and trampling. This could be a potential significant cumulative impact for this species within the watershed. RMDP/SCP project implementation could result in such secondary impacts by recreational visitors in the Salt Creek area, but these secondary impacts would be minimal. The RMDP/SCP project would not considerably contribute to a potential significant cumulative secondary impact in the watershed.

Parish's sagebrush. This species does not have a CNPS listing status but is designated as special-status by the County of Los Angeles. Parish's sagebrush occurs within big sagebrush scrub within the Specific Plan and Entrada planning areas of the RMDP/SCP project area. Parish's sagebrush occurs along coastal ranges in Baja California and Southern California, extending inland to regions south of the Great Basin.[1262] It is considered regionally rare by local botanists.[1263] When observed in the RMDP/SCP project area, Parish's sagebrush was found primarily intermixed with common big sagebrush within big sagebrush scrub. For the purpose of this analysis, Parish's sagebrush is considered to be a minor component of big sagebrush scrub throughout the watershed.

Based on the California GAP data,[1264] there are approximately 5,000 acres of big sagebrush scrub in the SCRW (see **Table 4.3-26**). Based on the GAP data, present and reasonably foreseeable projects in the SCRW would cause the loss of approximately 19 acres of 5,000 acres of big sagebrush scrub. This is likely a significant underestimate, however, due to the coarse mapping scale of the GAP data. The California GAP database does not include big sagebrush scrub within the RMDP/SCP project area, but the project-level mapping indicates that 91.3 acres of big sagebrush scrub are present on site. The RMDP/SCP project would impact 70 acres of the big sagebrush scrub on site. It is anticipated that occasional individuals of this species would be impacted by other present and reasonably foreseeable projects. Given the presence of big sagebrush scrub within the National Forest system lands and other designated open space within the watershed, the impact to occasional individuals of Parish's sagebrush would not be a significant cumulative impact.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. Cumulative impacts due to secondary effects would not be significant because of the limited amount of big sagebrush scrub within the SCRW.

[1262] Shultz, "*Artemisia tridentata* spp. *Parishii*," 517; Shultz, "*Artemisia tridentata* spp. *Tridentata*," , 516.

[1263] M. Meyer, Assessment of Parish's sagebrush regional distribution by local botanists, personal communication from M. Meyer (CDFG) (October 2007).

[1264] UCSB, *California Gap Analysis Project*.

Peirson's morning-glory. This CNPS List 4.2 species is known to occur on site within chaparral, coastal scrub, and grassland vegetation communities within the Specific Plan, VCC, and Entrada planning areas of the RMDP/SCP project area. Peirson's morning-glory was observed nearly every year in the RMDP/SCP project area and is common in chaparral, coastal scrub, and grassland vegetation communities on site. This species has been documented in Los Angeles County in the northern San Gabriel Mountains and adjacent Mojave Desert (Antelope Valley).[1265] In the Liebre Mountains northeast of the RMDP/SCP project Area and largely within the SCRW, it is "widespread and locally common" in grasslands, open shrublands, and woodlands.[1266]

Based on the California GAP data,[1267] there are approximately 747,000 acres of chaparral, coastal scrub, and grassland vegetation communities in the SCRW (see **Table 4.3-26**). Present and reasonably foreseeable projects in the SCRW, including the RMDP/SCP project, would cause the loss of approximately 34,000 acres of 747,000 acres of chaparral, coastal scrub, and grassland. This could be a potential significant cumulative impact. The contribution of the RMDP/SCP project to this significant cumulative impact is 3,050 acres. This contribution would not be a significant cumulative impact because of this species' widespread distribution within its range.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. Cumulative impacts due to secondary impacts would not be significant because of this species' widespread distribution within its range. In addition, the configuration of large tracts of chaparral, coastal scrub, and grassland vegetation communities within the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

1265 CNPS, *Inventory of Rare and Endangered Plants;* Hickman, *The Jepson Manual.*

1266 S. Boyd, "Vascular Flora of the Liebre Mountains, Western Transverse Ranges, California," *Aliso* 18(2) (1999), 93–129.

1267 UCSB, *California Gap Analysis Project.*

Table 4.3-26
Summary of Cumulative Impacts to CNPS and Locally-Regulated Plant Species in the Santa Clara River Watershed[1]

Species	Habitat Relationships2	Total Acres of Habitat in Watershed	Permanent Direct and Indirect Impact Acres of RMDP/SCP project	Total Impact Acres in Watershed From Present and Reasonably Foreseeable Projects (Not Including RMDP/SCP project)	Estimated Cumulative Impact Acres in Watershed after Accounting for RMDP/SCP project Plus Present and Reasonably Foreseeable Projects
island mountain-mahogany	Chaparral	550,300	460 (<0.1%)	12,000 (2.1%)	12,460 (2.3%)
mainland cherry	Big sagebrush scrub Chaparral	556,000	460 (<0.1%)	12,000 (2.1%)	12,460 (2.3%)
oaks	Oak woodland	5,170	95 (1.8%)	0 (0.0%)	95 (1.8%)
oak-leaved nemophila	Oak woodland	5,170	95 (1.8%)	0 (0.0%)	95 (1.8%)
Parish's sagebrush	Big sagebrush scrub	5,000	0 (0.0%)	19 (0.4%)	19 (0.4%)
Peirson's morning-glory	Coastal scrub Chaparral Non-native grassland	747,000	3,050 (0.4%)	31,000 (4.1%)	34,050 (4.5%)
Southern California black walnut	California walnut woodland	3,627	0 (0.0%)	0 (0.0%)	0 (0.0%)
southwestern spiny rush	Permanently flooded lacustrine habitat	5,000	0 (0.0%)	0 (0.0%)	0 (0.0%)

Notes:
[1] *Acreages were not quantified for the Newhall sunflower because impacts are site-specific. Acreages were not quantified for undescribed everlasting, late-flowered mariposa lily, Ojai navarretia, Plummer's mariposa lily, and slender mariposa lily because the project-level analysis was based on impacts to individuals rather than habitat.*
[2] *Acreages based on California GAP Vegetation Communities (UCSB,California Gap Analysis Project) and project-level mapping within RMDP/SCP project boundaries.*

Plummer's mariposa lily. Within the RMDP/SCP project area, this CNPS List 1B.2 species is only known to occur in the High Country SMA/SEA 20. Therefore, implementation of the RMDP and SCP and buildout of the Specific Plan, VCC, and Entrada planning areas would not result in any direct or indirect impacts to Plummer's mariposa lily and would not contribute to any cumulative impacts in the watershed. Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, could, however, result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and plant collecting; and wildfire. This could be a potential significant cumulative impact for this species within the watershed. At the project-level, because this species only occurs in the High Country SMA/SEA 20 and away from trails, human-related effects such trampling and collecting are unlikely to occur. RMDP/SCP project implementation could cause secondary impacts to the species from a more frequent fire regime, but these impacts likely would be limited because this species also has a positive response to wildfire (e.g., bulbs tend to flower in higher numbers following wildfire, which introduces large quantities of mineral nutrients (as ash) into the soil). The RMDP/SCP project, therefore, would not considerably contribute to potential significant cumulative secondary impacts in the watershed.

Slender mariposa lily. This CNPS List 1B.2 species is known to occur on site within grassland and coastal scrub within the Specific Plan and Entrada planning areas of the RMDP and SCP RMDP/SCP project area. Slender mariposa lily was observed nearly every year in the RMDP/SCP project area and is locally abundant in some parts of the RMDP/SCP project area. This species has been documented in the southern San Gabriel Mountains and Liebre Mountains of eastern Los Angeles County and the Santa Susana Mountains in western Los Angeles and Ventura counties.[754]

The combined direct and indirect permanent loss of slender mariposa lily cumulative occupied area and individuals resulting from implementation of the RMDP and the SCP and buildout of the Specific Plan, VCC, and Entrada planning areas would total 72 acres (35.0 percent of cumulative mapped occupied habitat) and 30,645 individuals (46.4 percent of plants censused on site). It is anticipated that present and reasonably foreseeable projects in the SCRW would impact other occurrences of this species, though these impacts have not been documented or quantified due to a lack of specific information. This could be a significant cumulative impact to this species within the watershed. The contribution of the RMDP/SCP project to this potential significant cumulative impact is 72 acres and 30,645 individuals, which could be a significant cumulative impact, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased risk of fire; and increased human activity, collecting,

[754] CNPS, *Inventory of Rare and Endangered Plants*; Boyd, "Vascular Flora of the Liebre Mountains," 93–129.

trampling, and soil compaction. These secondary impacts could be a significant cumulative impact, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIR includes avoidance and minimization measures (see ~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures). The applicant would implement several mitigation measures to avoid, minimize, and mitigate impacts to individuals. The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan[755] describes how the applicant would successfully restore/enhance slender mariposa lily habitat and re-establish slender mariposa lily locations at appropriate receptor sites within the High Country SMA/SEA 20, Salt Creek area, and San Martinez Grande area where opportunities for long-term preservation are provided. While implementation of the RMDP/SCP project would result in impacts to a maximum of 72 acres of cumulative occupied area are within the development footprint, the mitigation and monitoring program mitigates impacts to slender mariposa lily cumulative occupied area at a ratio of 1:1 through successfully restoring/enhancing slender mariposa lily habitat and re-establishing slender mariposa lily locations in the High Country SMA/SEA 20, Salt Creek area, and other sites as appropriate. In addition, a minimum of 133 acres of slender mariposa lily cumulative occupied area would be conserved in the RMDP/SCP project boundaries. These conserved acres include 73 acres of occupied habitat in the Salt Creek area, 30 acres in the High Country SMA/SEA 20, and at least 28 acres in the San Martinez Grade area.

Long-term secondary impacts to slender mariposa lily include: introduction of non-native, invasive plant species; hydrologic alterations and water quality impacts; increased human activity, trampling, and soil compaction; and increased risk of fire. These impacts would be minimized by restricting access to, grazing within, and recreational usage of the High Country SMA/SEA 20; providing for transition areas along the High Country SMA/SEA 20; providing drainage guidelines; requiring conformance with NPDES and RWQCB permit provisions; requiring the implementation of a wildfire fuel modification plan; placing restrictions on domestic animals in proximity to open space areas; by providing trail signage and homeowner education; and placing restrictions on plant palettes proposed for use on landscaped slopes.

For the reasons set forth above, the proposed Mission Village project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; or (2) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Southern California black walnut. This CNPS List 4.2 species is known to occur on site as the dominant species of California walnut woodland, which, within the RMDP/SCP project area, is only known to occur only in the High Country SMA/SEA 20 and Salt Creek area within the RMDP/SCP project area. Southern California black walnut

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[755] Dudek, *Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan* (Valencia, California: Dudek, 2007).

has also been observed as an uncommon component within other vegetation communities within the RMDP/SCP project area, including oak woodlands, coastal scrub, and chaparral. Implementation of the RMDP/SCP and buildout of the Specific Plan, VCC, and Entrada planning areas would not result in direct or indirect impacts to the 27 acres of California walnut woodland on site. Individual Southern California black walnut trees are uncommon in other vegetation communities, but implementation of the RMDP/SCP and buildout of the Specific Plan, VCC, and Entrada planning areas is expected to result in the removal of occasional individual Southern California black walnut trees that exist in vegetation communities other than California walnut woodland.

Based on the California GAP data,[756] there are approximately 3,600 acres of California walnut woodland in the SCRW. Although the California GAP database does not include California walnut woodland within the RMDP/SCP project site, the project-level mapping indicates 27 acres of California walnut woodland are present on site. The RMDP/SCP project would not impact California walnut woodland on site. However, it is anticipated that present and reasonably foreseeable projects, including the RMDP/SCP project, in the SCRW would result in the removal of occasional individual Southern California black walnut trees that exist in vegetation communities other than California walnut woodland. For example, Boyd observed this species as occasionally occurring in scrub and woodland within lower Bouquet Canyon, and scarcely occurring at other sites in lower elevations to the west and south.[757] Given the presence of California walnut woodland within the National Forest system lands and other designated open space within the watershed, the impact to occasional individuals of Southern California black walnut would not be a significant cumulative impact.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. Cumulative impacts due to secondary effects would not be significant because of this species' widespread distribution within its range. In addition, the configuration of California walnut woodland in the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

Southwestern spiny rush. This CNPS List 4.2 species was observed on site along secondary channels and low terraces along the Santa Clara River within the Specific Plan area of the RMDP/SCP project area. Southwestern spiny rush occurs in San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, and San Diego counties, and southward into Baja California; the distribution of this species possibly extends east into Imperial County and

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[756] UCSB, *California Gap Analysis Project.*

[757] Boyd, "Vascular Flora of the Liebre Mountains," 93–129.

Arizona as well.[758] This species is considered locally and regionally rare by local botanists and has been documented from 10 vouchered collections from Los Angeles County, half of which are on Santa Catalina Island.[759] This species was observed in 2006 in Violin Canyon adjacent to the Angeles National Forest and Interstate-5 (I-5), south of Templin Highway and Paradise Ranch, 8 miles north of Castaic, in Los Angeles County. Southwestern spiny rush was observed in 2007 near the western bank of Castaic Creek above the Castaic power plant. The species was also observed in 2005 and 2006 in Piru Creek (below Frenchman's flat) and Oso Creek,[760] and Castaic Creek upstream of the confluence of Castaic Creek and Fish Creek, and this species is locally common in Grasshopper Canyon.[761] Based on these observations, southwestern spiny rush is considered to be an occasional component in suitable habitat throughout the watershed.

This species is associated with perennially wet areas (perennial streams, seeps, marshes, etc.) within riparian habitat. The California GAP data[762] includes approximately 25,000 acres of mapped riparian habitat but does not identify the very small subset of perennially wet habitat where southwestern spiny rush may occur. It is anticipated that present and reasonably foreseeable projects in the SCRW would result in the removal of occasional individual southwestern spiny rush that exist in perennially wet habitat within the watershed. However, this plant is known to occur within National Forest system lands that would not be subject to the same level of impact associated with present and reasonably foreseeable projects on private lands in the SCRW. Impacts to this species would not be cumulatively significant because of this species' widespread distribution within the watershed and its range.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the RMDP/SCP project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; hydrologic alterations and water quality impacts; and increased human activity, trampling, and soil compaction. Impacts to this species would not be cumulatively significant because of this species' widespread distribution within its watershed and its range.

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758 CNPS, *Inventory of Rare and Endangered Plants.*

759 D.L. Magney and S. Hoskinson, "Landmark Village Draft EIR (SP 00-198/VTTM No. 53108/RCUP 200500112/OTP 00196/CUP 00-196)," letter from D.L. Magney and S. Hoskinson (David Magney Environmental Consulting) to D. Fierros (Los Angeles County Department of Regional Planning) (January 30 2007).

760 C. Huntley, "Re: Rare plant locations for *Juncus* and ringtail."

761 Boyd, "Vascular Flora of the Liebre Mountains," 93–129.

762 UCSB, *California Gap Analysis Project.*

c. Summary of Cumulative Impacts to Biological Resources

Based on the preceding discussion, the cumulative impact analysis for biological resources resulted in ~~four~~three different cumulative impact determinations:

1. The contribution of the proposed Mission Village project to a potential cumulative impact in the watershed resulting from present and reasonably foreseeable projects, including the RMDP/SCP project, ~~would~~could be cumulatively considerable~~ and unavoidable, even after considering,~~ absent mitigation. Implementation of the mitigation measures required by both the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended in this EIR ~~No feasible additional mitigation measures applicable to Alternative 2 can be identified that~~ would reduce the ~~considerable~~ contribution ~~to a potential significant impact~~ of the proposed Mission Village project to cumulative impacts to a level less than cumulatively considerable. ~~under this alternative. Reasons for these significant unavoidable impacts include:~~

   ~~(a) extensive loss and fragmentation of the resource within the Santa Clara River watershed; and~~

   ~~(b) substantial on-site habitat loss and fragmentation of a resource with a very limited distribution on-site and/or geographic range.~~

~~2. The contribution of the proposed Mission Village project to a potential cumulative impact in the watershed resulting from present and reasonably foreseeable projects, including the RMDP/SCP project, could be cumulatively considerable, absent mitigation. Implementation of the mitigation measures required by both the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended in this EIR would reduce the contribution of the proposed Mission Village project to cumulative impacts to a level less than cumulatively considerable.~~

~~3~~2. The contribution of the proposed Mission Village project to a potential cumulative impact in the watershed resulting from present and foreseeable projects, including the RMDP/SCP project, would not be cumulatively considerable. This determination was made where the resource affected by the RMDP/SCP project comprises a very small proportion of the resource impacts in the watershed.

~~4~~3. Past, present, and reasonably foreseeable projects, including the RMDP/SCP project, including the proposed Mission Village project, do not result in potential significant watershed-level impacts. This determination was made when the resource is still common to abundance it its geographic range and/or substantial habitat for the species would remain in the watershed.

~~There were two significant, cumulatively considerable, and unavoidable impacts for the Mission Village project: (1) impacts to coastal scrub communities, and (2) impacts to San Fernando Valley spineflower individuals.~~

~~**Table 4.3-27** provides a summary of the Mission Village project's contribution to cumulative impacts determinations for biological resources.~~

~~**Table 4.3-27**~~
~~**Summary of Cumulative Impact Determinations for Biological Resources**~~

~~**Cumulative Impact Determination**~~	~~**Biological Resource**~~	~~**Project's Contribution Cumulatively Considerable After Mitigation**~~
~~Contribution of Mission Village, to potential cumulative impact would be cumulatively considerable, significant, and unavoidable~~	~~**Vegetation Communities**~~ ~~coastal scrub communities -- extensive loss and fragmentation in the Santa Clara River watershed~~	~~Yes~~
~~Contribution of Mission Village, to potential cumulative impact would be cumulatively considerable, significant, and unavoidable~~	~~**San Fernando Valley Spineflower**~~ ~~preservation and management of 13.89 occupied acres and associated spineflower preserves would not mitigate project-related impacts to less than significant~~	~~Yes~~

Impacts would be cumulatively considerable, absent mitigation, for a majority of ~~other~~the biological resources, including vegetation communities; common wildlife as a whole; most of the federally- and state-listed threatened and endangered and all California Fully Protected species; wildlife habitat linkages, corridors, and crossings; most California Species of Special Concern; many California Special Animals, Watch List species, Specially Protected Mammals, and CDFG Trust Resources; and ~~three~~four special-status plants. The mitigation measures required by both the Newhall Ranch Specific Plan Program EIR and mitigation measures recommended by this EIR (~~**subsection**~~**Subsection 4.3.10**, Project Mitigation Measures) would reduce impacts to these resources to a level less than cumulatively considerable. To offset loss vegetation communities and habitat for species, these mitigation measures generally include the dedication and maintenance of existing natural lands in the Open Area, River Corridor SMA/SEA 23, High Country SMA/SEA 20, and Salt Creek area, totaling approximately 9,753 acres. For riparian resources, these measures include replacing the functions and services of riparian communities that may be lost through construction. For both wildlife and plant species, mitigation includes measures to control for long-term secondary effects, including controls on public access to dedicated open space areas; controls on pet, stray, and feral cats and dogs; termination of grazing activities (except for the purpose of resource management); controls on invasive plant and animal species (including Argentine ants, brown-headed cowbirds, bullfrogs, African clawed frogs, and crayfish); controls on pesticides (including rodenticides); controls on hydrological alterations and water quality; and controls on nighttime lighting; fencing and signage; and homeowner education about sensitive resources.

It was determined that the contribution of the proposed Mission Village project to potential significant cumulative impacts at the watershed level would not be cumulatively considerable for most special-status biological resources,

including southern steelhead and several special-status plants. In addition, it was determined that significant cumulative impacts to a majority of wildlife and plant species at the watershed level would not occur. Although the contribution of the proposed Mission Village project would not be cumulatively considerable in these cases, the mitigation measures described above would reduce on site impacts to these resources.

In summary, although the RMDP/SCP, including the proposed Mission Village project, would include significant impacts to biological resources absent mitigation, the mitigation measures required by both the Newhall Ranch Specific Plan Program EIR and recommended by this EIR would substantially reduce these impacts to below a level of significance. ~~However, the proposed Mission Village project, in combination with other past, present and reasonably foreseeable projects within the SCRW, would result in significant cumulative impacts to two biological resources: coastal scrub and San Fernando Valley spineflower. Despite mitigation, the proposed Mission Village project would result in a cumulatively considerable contribution to these significant unavoidable impacts.~~

12. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Impacts

The proposed project would not result in significant unavoidable impacts.

b. Cumulative Impacts

The proposed Mission Village project would contribute toward the cumulative impacts to biological resources. ~~**Most of these**~~ These impacts, however, can be reduced to less than significant levels through mitigation.~~ Nevertheless, the project's contribution toward the cumulative impacts to coastal scrub and the San Fernando Valley spineflower would remain significant even after mitigation measures are implemented.~~

~~Even with implementation of the following mitigation measures, the proposed project's contribution to cumulative impacts to coastal scrub would remain significant.~~

~~**Mitigation Measures SP 4.6-37** through **SP 4.6-42** (which would protect 1,311 acres of coastal scrub in the High Country SMA/SEA 20);~~

~~**Mitigation Measure MV 4.3-24** (preservation of 616.3 acres of coastal scrub off-site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village); and~~

~~Protection of the Salt Creek Area (which contains 631 acres of this habitat type).~~

~~In the case of coastal scrub, no feasible additional mitigation measures applicable to Mission Village could be identified that would reduce the significant impact to a less than cumulatively considerable level. These unavoidable impacts to coastal scrub would occur due to extensive loss and fragmentation in Southern California.~~

~~With implementation of the following mitigation measures, the project's contribution to cumulative impacts to San Fernando Valley spineflower would remain significant.~~

~~Applicable mitigation measures include the following:~~

~~**Mitigation Measures SP 4.6-53** and **SP 4.6-59** (requires current, updated, site-specific surveys for special-status species in consultation with CDFG),~~

~~**Mitigation Measure SP 4.6-65** (requiring subdivision maps responsive to spineflower characteristics),~~

~~**Mitigation Measure SP 4.6-66** (guidelines for the design, establishment, and management of spineflower preserves),~~

~~**Mitigation Measure SP 4.6-67** (open space connections and setbacks for spineflower preserves; prohibition of disturbance within spineflower preserves or buffers; revegetation requirements),~~

~~**Mitigation Measure SP 4.6-68** (temporary fencing and signage around the spineflower preserve(s), open space connections, and buffer areas; permanent fencing and signage along the spineflower preserve boundary),~~

~~**Mitigation Measure SP 4.6-69** (storm drain system requirements for spineflower preserve areas),~~

~~**Mitigation Measure SP 4.6-70** (road construction requirements to reduce or avoid impacts to spineflowers),~~

~~**Mitigation Measure SP 4.6-71** (engineering, design, and grading modifications around spineflower preserves),~~

~~**Mitigation Measure SP 4.6-72** (fire management plan to avoid and minimize impacts to the spineflower),~~

~~**Mitigation Measure SP 4.6-73** (minimization of changes in surface water flows to spineflower preserves),~~

~~**Mitigation Measure SP 4.6-74** (biweekly biological monitoring of grading and fence/utility installation activities; submission of monthly monitoring reports),~~

~~**Mitigation Measure SP 4.6-75** (water control and stormwater flow redirection during construction activities)~~

~~**Mitigation Measure SP 4.6-76** (reassessment of impacts to spineflower populations)~~

~~**Mitigation Measure SP 4.6-77** (spineflower monitoring and management plan),~~

~~**Mitigation Measure SP 4.6-78** (spineflower translocation and reintroduction program),~~

~~**Mitigation Measure SP 4.6-79** (consultation with the County and CDFG regarding ongoing agricultural operations), and~~

~~**Mitigation Measure SP 4.6-80** (San Martinez Grande spineflower preserve area).~~

~~This impact would also be reduced through the implementation of the following:~~

~~**Mitigation Measures MV 4.3-58** and **MV 4.3-59** (spineflower preserve establishment and management),~~

~~**Mitigation Measures MV 4.3-60, MV 4.3-61, MV 4.3-62, MV 4.3-64**, and **MV 4.3-66** (spineflower preserve temporary fencing requirements and education of construction workers),~~

~~**Mitigation Measures MV 4.3-60, MV 4.3-62, MV 4.3-65,** and **MV 4.3-66** (control of construction-related dust, erosion, and water quality within spineflower preserve),~~

~~**Mitigation Measures MV 4.3-68** through **MV 4.3-70** (restricting access to spineflower preserves through fencing and signage),~~

~~**Mitigation Measures MV 4.3-71** and **MV 4.3-72** (restrictions on storm drains within spineflower preserves),~~

~~**Mitigation Measure MV 4.3-63** (pre-construction review of construction plans and specifications),~~

~~**Mitigation Measure MV 4.3-67** (review of plant palettes used within 200 feet of spineflower preserves and inspection of all container plants within 200 feet for disease and pests),~~

~~**Mitigation Measure MV 4.3-73** (guidelines for restoration and enhancement of degraded and/or damaged spineflower habitat), and~~

~~**Mitigation Measure MV 4.3-74** (emergency fire response plan and response strategies for wildfire or mass movement (*e.g.*, landslides, slope sloughing, or other geologic events) within the spineflower preserves).~~

~~In the case of San Fernando Valley spineflower, no feasible additional mitigation measures applicable to Mission Village under Alternative 2 could be identified that would reduce the considerable contribution to a potential significant impact to a level less than cumulatively considerable. These unavoidable impacts to San Fernando Valley spineflower would occur because preservation and management of 13.89 occupied acres and associated spineflower preserves would not mitigate project-related impacts to less than significant.~~

4.5 TRAFFIC/ACCESS

1. *SUMMARY*

This section presents an analysis of the impacts of the proposed project relative to traffic/access. The analysis presented here is based upon the traffic technical report prepared for the proposed Mission Village project by Austin-Foust Associates, Inc., (AFA) dated October 1, 2010, as supplemented by the following technical memoranda: Mission Village Traffic Impact Analysis - Supplemental Freeway Analysis, AFA (November 16, 2010); Long-Range Buildout Conditions Without Potrero Canyon Road Bridge, AFA (February 22, 2011); Mission Village Traffic Impact Analysis - Existing Plus Project Scenario, AFA (March 1, 2011); Mission Village (Newhall Ranch) I-5 Share Calculations, AFA (March 8, 2011); Mission Village Revised Project Trip Generation Estimates, AFA (March 8, 2011); and Mission Village - Responses to Comments Analysis, AFA (April 29, 2011). A copy of the AFA Traffic Impact Analysis is included in ***Appendix 4.5*** *of the~~is~~ Draft EIR. A copy of each of the supplemental AFA technical memoranda is included in Final EIR,* ***Appendix F4.5****. ~~which is included in its entirety in Appendix 4.5 of this EIR.~~*

a. Construction Impacts

During construction of the Mission Village project, trucks to deliver construction equipment and building supplies and to haul away demolition debris potentially would disrupt traffic on local roadways resulting in a short-term impact that could adversely affect regional or local roadway operations. With implementation of traffic management controls for construction vehicles where necessary, no significant traffic impacts associated with construction of the project would occur.

b. Operational Impacts

At project buildout, which is anticipated in Year 2021, Mission Village would generate approximately 58,000 average daily vehicle trips. Consistent with County of Los Angeles, City of Santa Clarita, and Caltrans traffic impact analysis guidelines, the impacts of the proposed project relative to the capacity of the surrounding roadways were analyzed under ~~three~~ four different scenarios: (1) existing plus ambient plus project conditions, (2) 2021 project buildout cumulative conditions, ~~and~~ (3) long-range (2035) cumulative conditions; and (4) existing plus project conditions.

Under existing plus ambient plus project conditions, the project plus ambient traffic would result in significant impacts at the Commerce Center Drive and State Route (SR) 126, and The Old Road and McBean Parkway intersections. Mitigation is proposed that would reduce the identified impacts to a level below significant.

Under 2021 project buildout cumulative conditions, the project, in combination with cumulative traffic, would result in significant impacts at the following intersections (the applicable jurisdiction is listed in parenthetical):

- *Interstate (I) 5 SB Ramps & Henry Mayo Drive (SR-126) (Caltrans/County)*
- *I-5 SB Ramps & Valencia Boulevard (Caltrans/County)*
- *The Old Road & Rye Canyon Road (County)*
- *The Old Road & McBean Parkway (County)*
- *McBean Parkway & Magic Mountain Parkway (City)*
- *McBean Parkway & Newhall Ranch Road (City)*
- *Orchard Village Road & McBean Parkway (City)*
- *Bouquet Canyon Road & Newhall Ranch Road (City)*
- *Commerce Center Drive & SR-126 (County)*

Mitigation in the form of roadway capacity improvements is proposed that would reduce the identified impacts to a level below significant.

Lastly, under long-range (2035) cumulative conditions, the project would contribute to significant long-term cumulative impacts at the following intersections:

- *I-5 SB Ramps & SR-126 (Caltrans/County)*
- *The Old Road & I-5 SB Ramps (Caltrans/County)*
- *I-5 SB Ramps & Magic Mountain Parkway (Caltrans/County)*
- *I-5 NB Ramps & Magic Mountain Parkway (Caltrans/City)*
- *I-5 SB Ramps & Valencia Boulevard (Caltrans/County)*
- *I-5 SB Ramps & McBean Parkway (Caltrans/County)*
- *I-5 SB Ramps/Marriott Way & Pico Canyon Road (Caltrans/County)*
- *I-5 NB On/Off & Lyons Avenue (Caltrans/City)*
- *The Old Road & Rye Canyon Road (County)*
- *The Old Road & Magic Mountain Parkway (County)*
- *The Old Road & McBean Parkway (County)*
- *Tourney Road & Magic Mountain Parkway (City)*

- *McBean Parkway & Magic Mountain Parkway (City)*
- *McBean Parkway & Newhall Ranch Road (City)*
- *Wiley Canyon Road & Lyons Avenue (City)*
- *Orchard Village Road & Wiley Canyon (City)*
- *Orchard Village Road & McBean (City)*
- *Valencia Boulevard & Magic Mountain Parkway (City)*
- *Bouquet Canyon Road & Newhall Ranch Road (City)*
- *Commerce Center Drive & SR-126 (County/Caltrans)*

Mitigation in the form of capacity improvements is proposed that would reduce the project's contribution to the identified impacts to a level below significant.

No significant impacts would occur to Congestion Management Program (CMP) intersections or CMP freeway segments, or to the I-5 mainline. With respect to transit, the project potentially would increase demand for transit ridership beyond the capacity of existing services, thereby resulting in a potentially significant impact. Mitigation is proposed that would reduce the identified impacts to a level below significant.

Under existing plus project conditions, which is a hypothetical scenario that assumes immediate full project buildout and does not account for cumulative traffic growth and future roadway improvements and, therefore, is presented for information purposes only, the project would result in significant impacts at the following intersections and freeway segments:

- *The Old Road & Rye Canyon Road (County [impacts mitigated by EIR mitigation])*
- *McBean Parkway & Magic Mountain Parkway (City [impacts mitigated by EIR mitigation])*
- *McBean Parkway & Newhall Ranch Road (City [impacts mitigated by EIR mitigation])*
- *Bouquet Canyon Road & Newhall Ranch Road (City [impacts mitigated by EIR mitigation])*
- *Commerce Center Drive & SR-126 (Caltrans/County [impacts mitigated by EIR mitigation])*
- *Southbound I-5 between Calgrove & SR-14 (Caltrans [impacts mitigated by I-5 Improvement Project])*
- *I-5 South of SR-14 between SR-14 and I-210 (Caltrans [impacts mitigated by completion of I-5/SR-14 Direct HOV Connector project])*

As noted, the impacts identified under this scenario would be mitigated to a level below significant with implementation of EIR mitigation improvements, or improvements presently being constructed or programmed for construction.

2. BACKGROUND

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

Section 4.8 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with Traffic/Access for the entire Newhall Ranch Specific Plan. The County, in its findings and in a revised Mitigation Monitoring Plan, adopted the Newhall Ranch mitigation program for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts, but that the identified mitigation measures would reduce the impacts to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, adopted May 2003, the County of Los Angeles General Plan, and the Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.5** assesses, at the project level, the existing conditions for the Mission Village site, the project's potential environmental impacts on transportation and access, and the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, as well as additional mitigation measures recommended by this EIR specific to the Mission Village project impacts.

b. References

The traffic impacts analysis presented in this section is based on the *Mission Village Traffic Impact Analysis*, October 1, 2010, (Traffic Impact Analysis) prepared by AFA, *as supplemented by the following technical memoranda: Mission Village Traffic Impact Analysis - Supplemental Freeway Analysis, AFA (November 16, 2010); Long-Range Buildout Conditions Without Potrero Canyon Road Bridge, AFA (February 22, 2011); Mission Village Traffic Impact Analysis - Existing Plus Project Scenario, AFA (March 1, 2011); Mission Village (Newhall Ranch) I-5 Share Calculations, AFA (March 8, 2011); Mission Village Revised Project Trip Generation Estimates, AFA (March 8, 2011); and Mission Village - Responses to Comments Analysis, AFA (April 29, 2011).* A copy of the AFA Traffic Impact Analysis is included in **Appendix 4.5** of the~~is~~ Draft EIR. A copy of each of the supplemental AFA technical memoranda is included in Final EIR, **Appendix F4.5**. Source documents relied upon by AFA in preparation of the traffic study include the *Westside Santa Clarita Valley Roadway Phasing Analysis*, AFA, November 2006, and the *Westside Santa Clarita Valley Phasing Analysis for the City of Santa Clarita*, AFA July 2006.

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

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

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

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

A number of mitigation measures were identified to address the significant impacts. For example, each subdivision filed within the Specific Plan must undergo a transportation performance evaluation that identifies the specific improvements for all on-site roadways, which are necessary to provide adequate roadway and intersection capacity as well as adequate right-of-way for the subdivision and other expected traffic. Based on the Newhall Ranch Specific Plan Program EIR and the entire record, the County's Board of Supervisors found that the identified significant impacts on traffic/access were mitigated to below a level of significance by adoption of specified mitigation.[1]

4. METHODOLOGY

The following provides an overview of the methodology utilized by the traffic engineers to conduct the impacts analysis presented in this section.

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

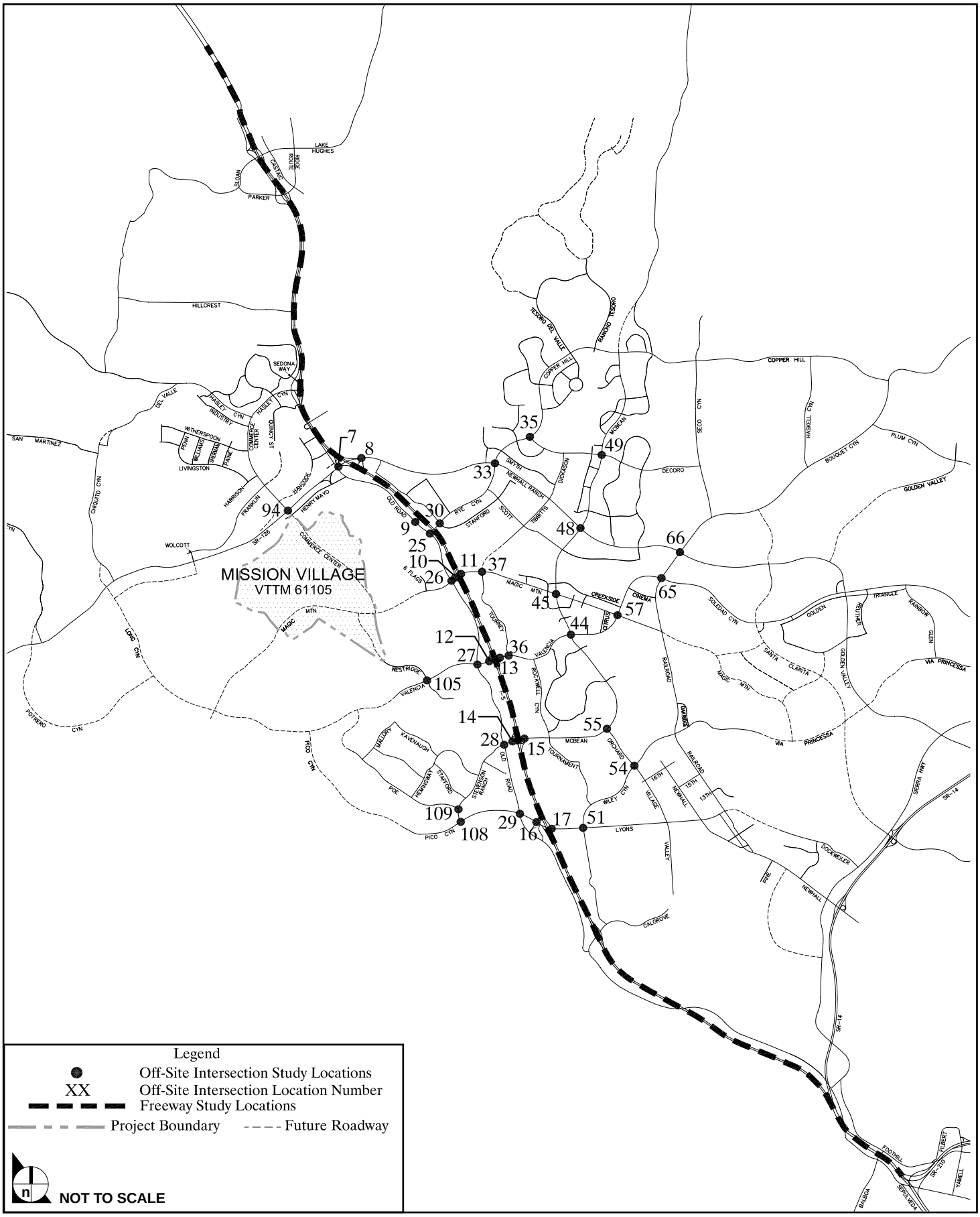
a. Definitions

The following definitions are provided for certain terms used throughout this section to clarify their intended meaning:

ADT	Average Daily Traffic. Generally used to measure the total two-directional traffic volumes passing a given point on a roadway.
CMP	Congestion Management Program. A state-mandated program administered by the Los Angeles County Metropolitan Transportation Authority (Metro) that provides a mechanism for coordinating land use and development decisions.
ICU	Intersection Capacity Utilization. A measure of the volume to capacity ratio for an intersection. Typically used to determine the peak hour level of service for a given set of intersection volumes.
LOS	Level of Service. A scale used to evaluate circulation system performance based on intersection ICU values or volume/capacity ratios of arterial and freeway segments.
Peak Hour	This refers to the hour during the AM peak period (typically 7:00 AM–9:00 AM) or the PM peak period (typically 3:00 PM–6:00 PM) in which the greatest number of vehicle trips are generated by a given land use or are traveling on a given roadway.
Tripend	A trip generation measure which represents the total trips entering and leaving a location; each trip has two tripends.
V/C	Volume to Capacity Ratio. This is typically used to describe the percentage of capacity utilized by existing or projected traffic on a segment of an arterial or intersection.
VPH	Vehicles Per Hour. Used for roadway volumes (counts or forecasts) and trip generation estimates. Measures the number of vehicles in a 1-hour period, typically the AM or PM peak hour.
VPHPL	Vehicles Per Hour Per Lane. Similar to VPH but with the roadway volume averaged to the total number of roadway lanes.

b. Project Study Area

The project study area, illustrated in **Figure 4.5-1, Project Study Area**, includes the roadways and intersections within and near the project site where project-generated traffic could cause a significant impact. As shown on **Figure 4.5-1**, the project study area generally extends to Chiquito Canyon Road/Long Canyon Road to the west, SR-126 to the north, Bouquet Canyon Road to the east, and Pico Canyon/Lyons Road to the south. The study area intersections are numbered based on the Santa Clarita Valley Consolidated Traffic Model (SCVCTM), the traffic planning computer model used in the preparation of this analysis. See **subsection 4.d.**, below. The I-5 study area extends from Lake Hughes in the north to south of SR-14 in the south, and the SR-126 study area from I-5 in the east to west of Commerce Center.



SOURCE: Austin-Foust Associates, Inc. – August 2010

FIGURE **4.5-1**

Project Study Area

32-99A•08/10

The study area includes a number of future new arterial roadways, and roadways for which improvements are currently programmed or planned. For the purpose of determining project impacts to the arterial roadways under the existing plus ambient plus 2021 project buildout scenario, only those roadways and improvements that will be constructed as part of the project (i.e., the extensions of Magic Mountain Parkway, Westridge Parkway, and Commerce Center Drive) are included in the background conditions. For the evaluation of long-range (2035) cumulative conditions, future roadways to be constructed by cumulative projects are included as part of the cumulative analysis.

c. Impacts Analysis Scenarios

The traffic impacts of the proposed project are evaluated based on multiple project buildout scenarios, consistent with the established guidelines of the respective jurisdictions. For roadways within the County of Los Angeles, impacts are assessed utilizing the guidelines of the Los Angeles County Department of Public Works;[2] for locations within the City of Santa Clarita, the analysis follows the City's established guidelines for analysis.[3] For impacts to state highway facilities, impacts were assessed consistent with the Caltrans guidelines for the preparation of traffic studies.[4]

Based on these guidelines, traffic impacts were assessed under the following three scenarios:

1. Existing Conditions plus Ambient Growth, and Existing Conditions plus Ambient Growth plus Project
2. Year 2021 Cumulative Conditions without and with Project
3. Year 2035 Cumulative Buildout Conditions without and with Project
4. Existing Conditions plus Project

The County's traffic study guidelines specify the analysis of Scenario 1, Existing Conditions plus Ambient Growth plus Project. The County's requirement for an evaluation of Existing Conditions plus Ambient Growth plus Project plus Related Projects (i.e., cumulative projects) is addressed by Scenarios 2 and 3. The City of Santa Clarita's traffic study guidelines specify the analysis of Scenario 2 for the determination of project impacts. As such, Scenario 1 is not considered for intersections under the jurisdiction of the City of Santa Clarita, as they represent a hypothetical scenario that is considered exclusively by the County. Similarly, Scenario 4 represents a hypothetical scenario as it assumes immediate full project buildout and does not account for cumulative traffic growth and future roadway improvements and, therefore, is provided for information purposes only.

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2 County of Los Angeles Department of Public Works, *Traffic Impact Analysis Report Guidelines*, January 1997.

3 City of Santa Clarita, *Preliminary Traffic Impact Report Guidelines*, August 1990.

4 *Guide for the Preparation of Traffic Impact Studies*, Caltrans, December 2002.

d. Ambient Growth and Cumulative Conditions

In assessing impacts under the Existing plus Ambient plus Project scenario, horizon year conditions are derived using actual traffic volumes based on existing traffic counts collected in 2009 and 2010, plus a growth factor of 2.0 percent per year to account for background growth in ambient traffic calculated through project buildout year 2021.

In assessing impacts under the 2021 and 2035 cumulative scenarios, since the Santa Clarita Valley is a rapidly growing area with numerous proposed, approved and pending projects, the Cumulative Conditions with Project Scenarios are based on forecasts derived using the SCVCTM. The SCVCTM is a traffic planning computer model and the principal tool for transportation planning in the Santa Clarita Valley. The model was developed jointly by the City of Santa Clarita and the County of Los Angeles Public Works Department to provide traffic forecasts for transportation planning in the valley. The model analyzes expected or possible projects based on actual development applications and general plan provisions, and predicts traffic impacts based on various assumptions for different periods as the valley builds out.

The SCVCTM is updated regularly as specific development projects are proposed. Pending, recorded, and approved projects are incorporated into the Long-range Buildout/Cumulative database. A partial listing of these known cumulative projects that are in the vicinity of the project site is provided in **Table 4.5-1, Defined Projects Included in the Cumulative Database**. Where future development will occur but specific projects have not been designated, the SCVCTM Long-range Buildout/Cumulative database includes land use projects based on the allowable uses shown in the proposed County Area Plan and City General Plan update, One Valley One Vision.

Table 4.5-1
Defined Projects Included in the Cumulative Database

No.	Name and/or Location	Description
1	Landmark Village/Tract 53108 – South of SR-126 at Wolcott & Chiquito Cyn Road (Part of Approved Newhall Ranch Specific Plan)	1,444 du Residential (308 Single Family, 1,136 Multi-Family) 1,033 tsf Commercial
2	Legacy Village/Tract 61996 – West of I-5, North of Pico Canyon, South of Six Flags Magic Mtn.	3,455 du Residential (536 Single Family, 1,574 Condominium/Townhome, 1,345 Senior Active) 186 tsf Commercial Retail 316 tsf Commercial Office 337 tsf Congregate Care Facility
3	Entrada/Tract 53295 – West of The Old Road, North of Valencia Boulevard, East of the proposed Legacy Village/Mission Village development	1,640 du Residential (408 Single Family, 1,232 Condominium) 290 tsf Commercial Retail 436 tsf Commercial Office Elementary School

No.	Name and/or Location	Description
4	Homestead/Tract 60678 – West of the proposed Mission Village development, west and south of the proposed Landmark development, as well as south of the existing Val Verde community (via extensions of Valencia Boulevard and Magic Mountain Parkway, as well as intersections with State Route-126) (Part of Approved Newhall Ranch Specific Plan)	5,777 du Residential (965 Single Family, 4,812 Condominium/Townhome) 1,310,000 tsf Commercial
5	PM 18108 – West of The Old Road, north of SR-126 (Part of Approved Valencia Commerce Center CUP 87-360)	3,500 tsf (including existing) Industrial/Business park at Buildout
6	Tract 60030 – West of Commerce Center Drive (via extension of Witherspoon Pkwy	1,221.36 tsf Industrial Park
7	Tract 60257 – East of Del Valle Road	233 du 30 tsf Commercial Retail
8	Tract 60665 – East of Del Valle Road	7 du
9	Tract 52475 – North of Hasley Canyon Road, west of Del Valle Road	46 du
10	Tract 53725 – North of Hasley Canyon Road, west of Sloan Cyn Road	42 du
11	PM 18654 – West of The Old Road, north of Magic Mtn. Parkway	200 tsf Office Building (under construction)
12	Northlake Phase 1/Tract 51852 – North of Lake Hughes Road, east of Ridge Route Road	1,696 du Middle School
13	Castaic High School – North of Lake Hughes Road, east of Ridge Route Road	3,000 Students
14	Riverpark/Tract 53425 – North and south of Santa Clara River, terminus of Newhall Ranch Road, south of Bouquet Cyn Road and north of Soledad Cyn Road	439 SF du 650 MF du 16 Thousand Square Feet (tsf) of Commercial Uses (under construction)
15	Heritage Hills/Tract 65806 – Northwest and southwest corner of Dockweiler and Sierra Highway	190 SF du
16	UCLA Film Archives – North of McBean Pkwy and west of Rockwell Cyn Road	250 tsf Commercial Office (under construction)
No.	Name and/or Location	Description
17	College of the Canyons Expansion – South of Valencia Blvd and west of Rockwell Cyn Road	28 tsf Commercial Office 6,500 Students (additional)
18	Gate-King Industrial Park – South of San Fernando Road, west of Sierra Hwy	4,200 tsf Industrial Park
19	Milestone/Tract 61811 – North side of Golden Valley Road at Robert C. Lee Pkwy	167 SF du (33 total acres) (under construction)
20	Porta Bella/Whittaker-Bermite (partial) – South side of Soledad Cyn Road and east of Circle J Ranch area	1,244 SF du 1,667 MF du 2,911 tsf of Commercial Uses 448.7 Acres of Open Space (approximately 50% of total project shown above is included in the interim year horizon)
21	Lyons Ranch/Tract 53653 – West of I-5 and south of Calgrove Blvd	95 SF du 95 Senior Housing

No.	Name and/or Location	Description
22	Tract 62595 – South of Friendly Valley, north of Golden Valley Rd and terminus of Avenue of the Oaks	33 MF du
23	Northwest corner of Golden Valley Road and McKeon Drive	105 tsf of Commercial Uses
24	Tract 53419 – North of Golden Valley Road and northwest of Sierra Highway	111 MF du
25	Downtown Newhall Specific Plan area	712 net new du (1,402 total du) 297.1 net new tsf (1,107.4 total tsf)
26	North Newhall Specific Plan area	628 du–673 du 585 tsf–840 tsf Non-Residential 1 Elementary School (673 du, 632.5 tsf, 1 Hotel and 1 Elem. School included in the interim year horizon)
27	Golden Valley Ranch/Tract 52414 – South of SR-14, north of Placerita Cyn Road and west of Sand Cyn Road	498 SF du 618.8 tsf of Commercial Uses 1 Elementary School (under construction)
28	Bridgeport Market Place – Northeast corner of McBean Pkwy and Newhall Ranch Road	130 tsf of Commercial Uses 30 tsf Church 5 Acre Park (under construction)
29	The Keystone – Northeast portion of the future intersection of Newhall Ranch Road and Golden Valley Road	319 SF du 180 MF du
30	Soledad Circle Estates – South of Soledad Cyn Road at Penlon Court	147 SF du
31	Soledad Village – South of Santa Clara River, north of Soledad Cyn Road at Gladding Way	407 Condo du (incl. 22 live/work units) 8 tsf of Commercial Uses
32	Henry Mayo Newhall Memorial Hospital Master Plan	127.4 net new tsf of Hospital 200.0 net new tsf of Medical Office
33	Town Center Mall Expansion	490 tsf of Commercial Uses
34	The Masters College Expansion	600 Students 54 Condominium du

Sources:
Westside Santa Clarita Valley Roadway Phasing Analysis
Sterling Industrial – VTPM 060030 Traffic Impact Analysis
Northlake Phase 1 Traffic Impact Analysis
City of Santa Clarita Planning Division
Downtown Newhall Specific Plan
Draft North Newhall Specific Plan Land Use Matrix
Henry Mayo Newhall Memorial Hospital Master Plan Traffic Impact Analysis
Town Center Mall Expansion Traffic Impact Analysis
Masters College Master Plan Traffic Impact Analysis
Note: The buildout/2035 setting also includes planned future development in accordance with the land uses defined in the proposed One Valley One Vision County Area Plan/City General Plan update.

Because the SCVCTM is developed from regional models prepared by the Southern California Association of Governments (SCAG), it also forecasts traffic in a regional context. This means that not only are trips to and from the Santa Clarita Valley included in the forecasts, but trips that pass through the valley also are included. As part of the development of this traffic impact analysis, an update to the traffic model was prepared which involved a review of current related project information from both the City and County. The SCVCTM land use database was then updated where necessary in order to include the most current information.

e. Westside Roadway Phasing Analysis

In conjunction with the development of this traffic impact analysis, a special comprehensive phasing study, the *Westside Roadway Phasing Analysis*, was prepared to address the cumulative development of all planned projects west of the I-5 freeway.[5] The phasing analysis identifies the specific roadway and intersection improvements needed to mitigate the cumulative impacts of the Westside projects, and was approved by the County in May 2007 for use as a supporting document for traffic studies such as the AFA Traffic Impact Analysis. The subject area of the phasing analysis, referred to here as the Westside of the Santa Clarita Valley, evaluates the phased development of Mission Village, the entirety of the Newhall Ranch Specific Plan area, the Entrada project, the Legacy Village project, as well as buildout of the Valencia Commerce Center business/industrial park area, as these areas build out over the next 25 years. All together, these projects represent the development of over 27,000 residential dwelling units and over 11 million square feet of commercial uses. Along with the phased development of the Westside projects, the phasing analysis incorporates the other anticipated developments outside of the Westside area, as well as the buildout of the remaining portions of the Santa Clarita Valley as allowed by the City and County's General Plans.

The *Westside Roadway Phasing Analysis* is the most comprehensive roadway planning effort prepared to date for the Santa Clarita Valley and, as such, is referenced by this analysis as the source of cumulative traffic data forecasts, and the identification and timing of roadway improvements. Periodic updates of the phasing study will be prepared, the purpose of which is to ensure that the roadway improvements occur when needed and based on the actual development activity as it changes over time. The development timeline of the Westside area will evolve based on several factors such as economic conditions and consumer driven requirements, and periodic updates of the phasing study will allow the timing of the roadway improvements to be prioritized based on the actual land development activity as it occurs.

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5 Austin-Foust Associates, Inc. (AFA), *Westside Santa Clarita Valley Roadway Phasing Analysis*, November 2006; and AFA, *Westside Santa Clarita Valley Phasing Analysis for the City of Santa Clarita*, July 2006, are collectively referred to as the *Westside Roadway Phasing Analysis*.

f. Levels of Service Descriptions

Level of service (LOS) is a concept developed to quantify the degree of comfort afforded to drivers as they travel on a given roadway. The degree of comfort includes such elements as travel time, number of stops, total amount of stopped delay, etc. As defined in the Transportation Research Board, National Research Council's *Highway Capacity Manual* (HCM 2000), six grades are used to denote the various LOS and are denoted as A through F. **Table 4.5-2, Level of Service of Arterial Roads**, and **Table 4.5-3, Level of Service Descriptions – Freeway Segments**, describes the six grades of LOS for these respective facilities. Please refer to **subsection 8a, Significance Threshold Criteria**, for the specific methods of calculating the LOS for arterial roads and freeways in the project study area.

Table 4.5-2
Level of Service of Arterial Roads[1]

LOS	Description
A	LOS A describes primarily free-flow operations at average travel speeds, usually about 90 percent of the free-flow speed for the given street class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal.
B	LOS B describes reasonably unimpeded operations at average travel speeds, usually about 70 percent of the free-flow speed for the street class. The ability to maneuver within the traffic stream is only slightly restricted, and control delays at signalized intersections are not significant.
C	LOS C describes stable operations; however, ability to maneuver and change lanes in midblock locations may be more restricted than at LOS B, and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50 percent of the free-flow speed for the street class.
D	LOS D borders on a range in which small increases in flow may cause substantial increases in delay and decreases in travel speed. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors. Average travel speeds are about 40 percent of free-flow speed.
E	LOS E is characterized by significant delays and average travel speeds of 33 percent or less of the free-flow speed. Such operations are caused by a combination of adverse signal progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.
F	LOS F is characterized by urban street flow at extremely low speeds, typically one-third to one-fourth of the free-flow speed. Intersection congestion is likely at critical signalized locations, with high delays, high volumes, and extensive queuing.

Source: Highway Capacity Manual 2000, Transportation Research Board, National Research Council.

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

Table 4.5-3
Level of Service Descriptions – Freeway Segments

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

Source: Highway Capacity Manual 2000, Transportation Research Board, National Research Council
LOS = Level of Service

g. Trip Generation

Trip generation for a project is based upon the amount and type of future land use proposed in an area and requires that future land uses be broken down into specific units, such as square feet of floor area, number of dwelling units, etc. Vehicle trip generation estimates for the project in this case were calculated using the SCVCTM and the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 8th Edition,

which is one of the most widely accepted trip generation rate sources. The results of the trip generation are calculated as "tripends," which are defined as the total trips entering and leaving a given location. Due to the complementary mix of land uses planned for the site, many of the trips generated by the project will remain internal to the project site. To derive the amount of trips internal to the project site, a mixed-use development (MXD) trip generation estimate has been prepared for the project by Fehr & Peers based on a quantitative model developed in cooperation with the U.S. Environmental Protection Agency (U.S. EPA) and ITE. The MXD trip generation estimate is addressed in further detail below.

h. Trip Distribution

The geographic distribution of vehicle trips generated by the Mission Village project was determined using the updated SCVCTM. As noted above, the SCVCTM is a computerized travel demand model that utilizes a sophisticated trip distribution function to derive the distribution of vehicle trips and has been calibrated to the existing conditions for the Santa Clarita Valley. Production and attraction trip data is generated by the model based on five separate trip purposes, and trip distribution patterns are then derived by the model. As a final step, the model assigns the trips to the roadway network based on the derived distribution patterns. The process by which the project trips are distributed on the area roadways is discussed in further detail below.

i. Planned Roadway Improvements

The Los Angeles County Highway Plan (formerly known as the Master Plan of Highways), which depicts the general location of planned highway routes throughout the County, and the Newhall Ranch Specific Plan include future roadways near and within the project site. These plans designate the extension of Magic Mountain Parkway within the project site as a six lane Major Highway for the segment east of Westridge Parkway and a four lane Secondary Highway for the segment west of Westridge Parkway. Additionally, an extension of Commerce Center Drive currently is designated within the project as a six lane Major Highway. Finally, the extension of Westridge Parkway within the project site has been planned as a four lane collector roadway.

The I-5 Freeway currently is built to eight lanes, and Caltrans and the Metropolitan Transportation Authority (Metro) have approved a project to expand the freeway to include high-occupancy vehicle (HOV) and truck lanes. In September 2009, Caltrans approved a Final Environmental Impact Report/Environmental Assessment for the I-5 HOV/Truck Lanes Project SR-14 to Parker Road. The project will add (1) one HOV lane in each direction on I-5 from the SR-14 interchange north to Parker Road, (2) truck climbing lanes in each direction from the SR-14 interchange to Calgrove Boulevard (northbound) and Pico Canyon Road/Lyons Avenue (southbound), and (3) full auxiliary lanes within portions of the

Project study area. Caltrans expects construction of the improvement project will be completed in 2016. Relevant excerpts of the Caltrans EIR/EIS are included in this EIR, **Appendix 4.5**.

5. REGULATORY SETTING

a. Congestion Management Program

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

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

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

Metro is the CMP agency for Los Angeles County. Metro has the responsibility to review compliance with the CMP by agencies under its jurisdiction. For any agency out of compliance, after receiving notice and after a correction period, a portion of State gas tax funds may be withheld if compliance is not achieved. In addition, compliance with the CMP is necessary to preserve eligibility for state and federal funding of transportation projects.

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

- I-5 Freeway
- SR-14 Freeway

- Sierra Highway from Newhall Avenue (formerly San Fernando Road) to SR-14 at Red Rover Mine Road
- Magic Mountain Parkway from I-5 to Railroad Avenue (formerly San Fernando Road)
- Railroad Avenue/Newhall Avenue (formerly San Fernando Road) from Magic Mountain Parkway to SR-14
- SR-126 west of the I-5 freeway

Various strategies are available to local jurisdictions to mitigate CMP traffic impacts, including constructing new roadway improvements, managing traffic flow through signal improvements and trip reduction measures, and land use strategies such as locating higher density uses in proximity to public transit.

b. Bicycle Plans

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

The County of Los Angeles is in the process of updating the County's adopted Plan of Bikeways (1975), a sub-element to the County General Plan. The bike plan seeks to encourage the use of bicycles as a general means of transportation, ensure the safety of bicycle users, and provide guidelines for the development, expansion, and implementation of the County's bicycle infrastructure. The plan covers bicycling issues in all unincorporated areas within the County of Los Angeles, and it also will study the potential for new and improved bike paths along flood control facilities (e.g., rivers, creeks, etc.).

c. Bridge and Thoroughfare Districts

Within the Santa Clarita Valley, Los Angeles County and the City of Santa Clarita have established Bridge & Thoroughfare (B&T) Districts to manage and fund the roadway improvements planned to occur within the Valley. Under the B&T District mechanism, the adoption of a specific area of benefit permits the county and city to levy a fee against future development located within the area of benefit for the

improvement of arterial highways. This funding method assesses developments, which create the need for additional improvements, for the additional costs associated with constructing the necessary roadway improvements. The charge is levied in proportion to the estimated number of trips generated by the development.

Existing B&T Districts located in the project study area include the Valencia and Via Princessa B&T Districts. Each of these districts is a full mitigation district, which means that the collected B&T fees, combined with other funding sources (e.g., state and federal funds, gas and sales taxes, etc.), have been calculated to cover the full cost of all improvements necessary to construct the arterial roadway network as described in the respective county and city general plan transportation elements. The site of the proposed project is not located within an established B&T District, although a new district, i.e., the Westside B&T District, is in the process of being formed, which would include the proposed project and other Westside development.

d. Traffic Guidelines

As noted above, the traffic impacts of the proposed project are evaluated based on multiple project buildout scenarios, consistent with the established guidelines of the respective jurisdictions. For roadways within the County of Los Angeles, impacts are assessed utilizing the guidelines of the Los Angeles County Department of Public Works;[6] for locations within the City of Santa Clarita, the analysis follows the City's established guidelines for analysis.[7] For impacts to state highway facilities, impacts were assessed consistent with the Caltrans guidelines for the preparation of traffic studies.[8]

6. EXISTING CONDITIONS

a. Existing Roadway System

The existing roadway network in the project study area is illustrated in **Figure 4.5-2, Existing Roadway System**, in the form of mid-block lanes. Existing intersection lane configurations are illustrated in **Figure 4.5-3, Existing Intersection Lane Configurations – County Intersections**, for locations under County jurisdiction and in **Figure 4.5-4, Existing Intersection Lane Configurations – City Intersections**, for locations under the jurisdiction of the City of Santa Clarita.

Regional access to the site in the north/south direction is provided via I-5, located approximately 1 mile to the east. Regional access to the site also is provided via SR-126, which is located to the north of the project

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6 County of Los Angeles Department of Public Works, *Traffic Impact Analysis Report Guidelines*, January 1997.

7 City of Santa Clarita, *Preliminary Traffic Impact Report Guidelines*, August 1990.

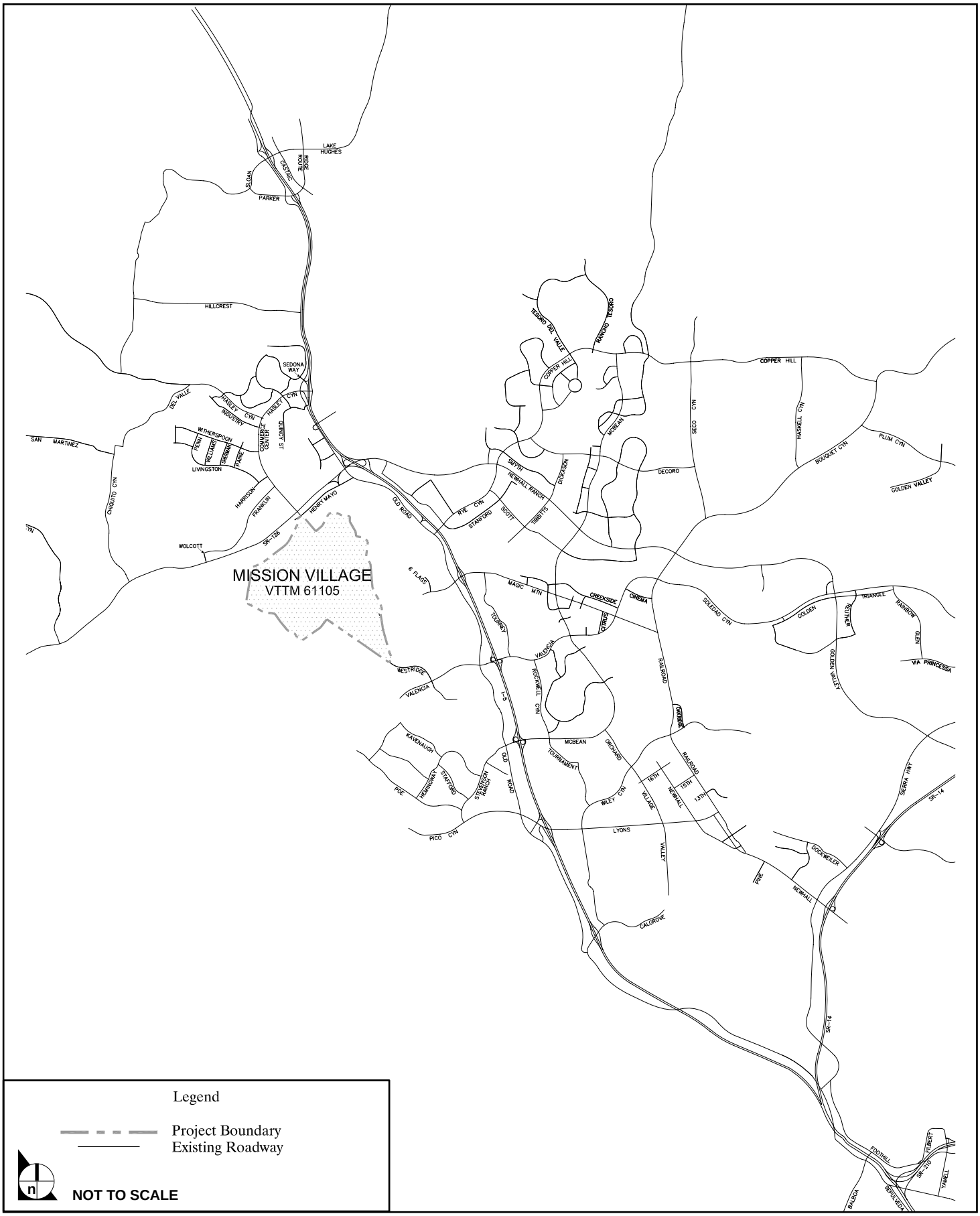
8 *Guide for the Preparation of Traffic Impact Studies*, Caltrans, December 2002.

site and runs in an east/west direction. Other primary roads in the area include Magic Mountain Parkway, which terminates just east of the project site in the vicinity of the entrance to Magic Mountain Theme Park, Commerce Center Drive, which terminates north of the project site at SR-126, and Westridge Parkway, which extends north from Valencia Boulevard, and presently terminates just to the southeast of the project boundary.

b. Existing Traffic Volumes and Levels of Service

Illustrations of peak hour turning movement volumes for each study area intersection can be found in **Figure 4.5-5, AM Peak Hour Turning Movement Volumes – Existing Conditions (County Intersections),** and **Figure 4.5-6, PM Peak Hour Turning Movement Volumes – Existing Conditions (County Intersections),** for County intersections. Illustrations of peak hour turning movement volumes for City area intersections can be found in **Figure 4.5-7, AM Peak Hour Turning Movement Volumes – Existing Conditions (City Intersections),** and **Figure 4.5-8, PM Peak Hour Turning Movement Volumes – Existing Conditions (City Intersections)**, for City. Traffic count data was collected during the critical AM and PM peak hours in late 2009 and early 2010 for each of the study area intersections. Printouts of the traffic count data sheets can be found in Appendix D of the Traffic Impact Analysis in **Appendix 4.5** of the EIR.

Intersection capacity utilization (ICU) and LOS analyses for the study area intersections are provided **in Table 4.5-4, ICU and LOS Summary – Existing Conditions**, which summarizes the existing ICU and LOS traffic count data for the County and City intersections and Caltrans interchanges. **Table 4.5-4** shows that all intersections in the study area currently operate at LOS D or better, with the exception of The Old Road and I-5 southbound ramps, which is currently deficient in the PM peak hour (LOS E) under County performance standards. No intersections currently operate at LOS F.

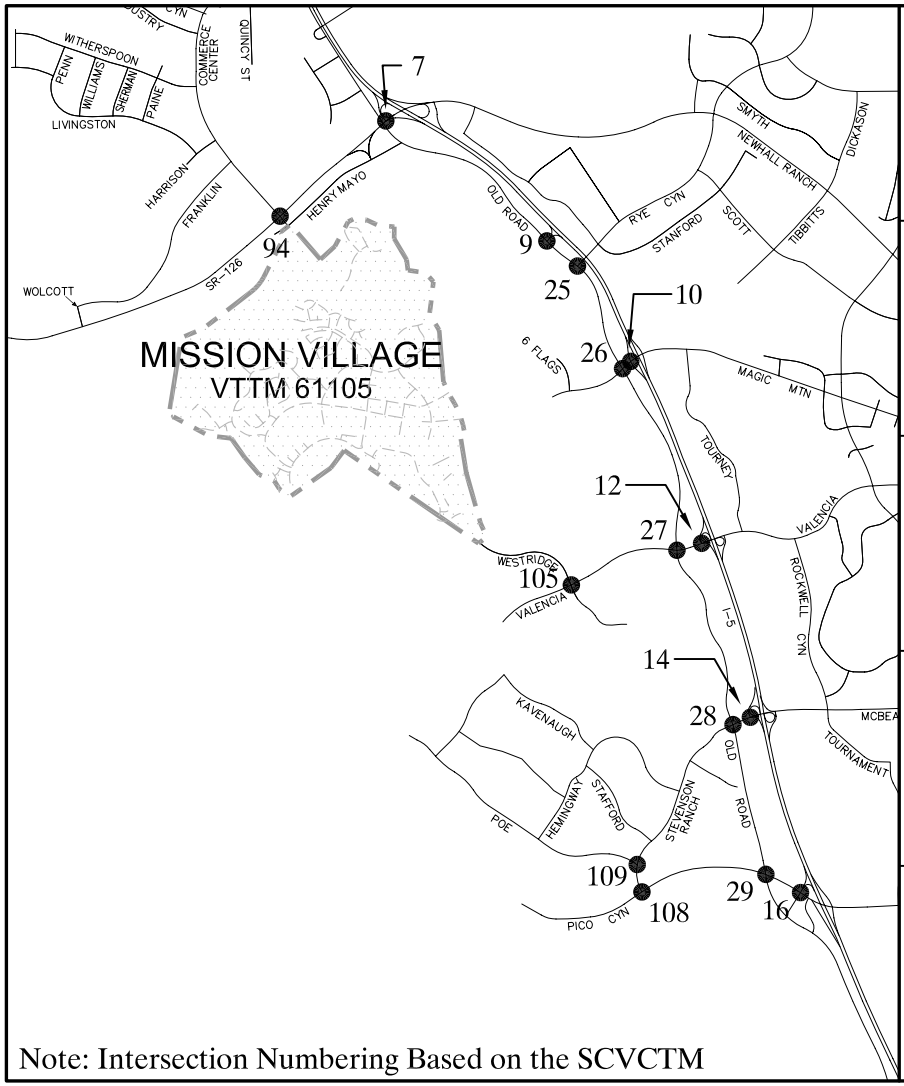


SOURCE: Austin Foust Associates, Inc. – August 2010

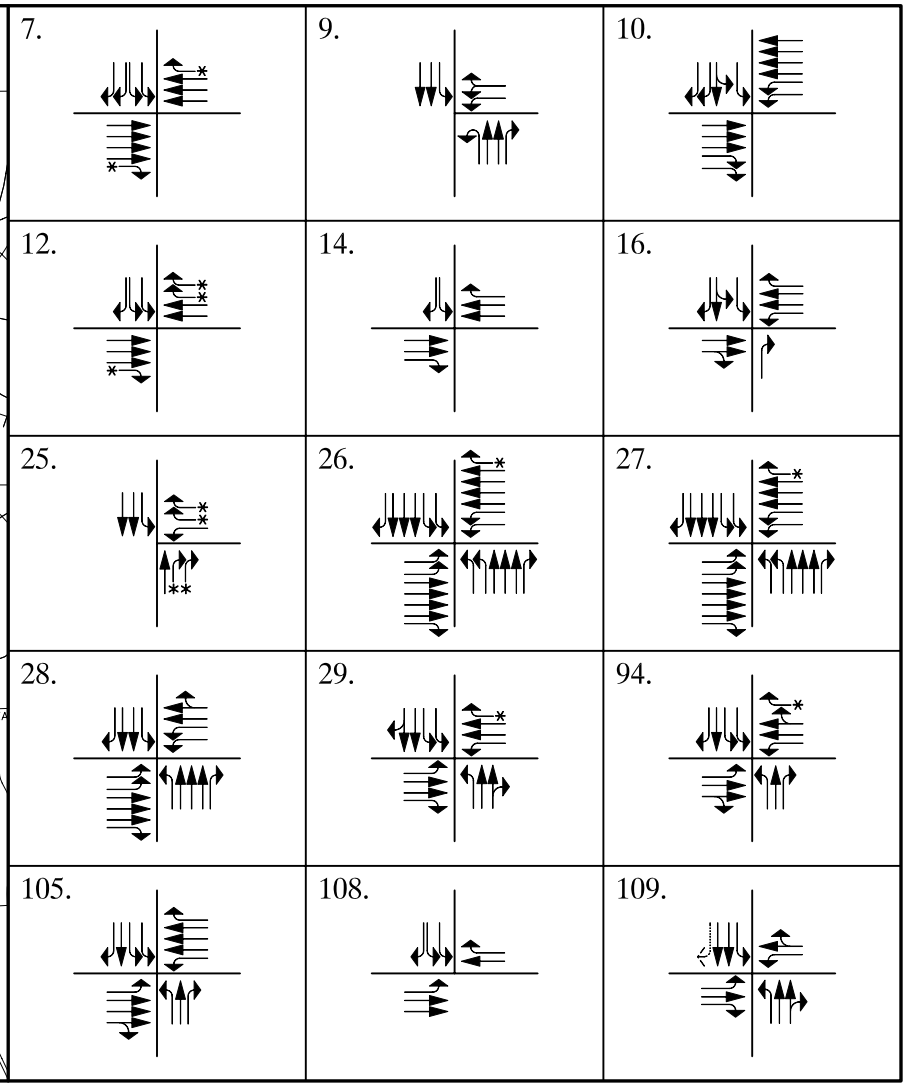
FIGURE **4.5-2**

Existing Roadway System

32-223•08/10



Note: Intersection Numbering Based on the SCVCTM



Legend

- Intersection Lane Geometry
- Free-Flow Right-Turn Lane
- De-Facto Right-Turn Lane

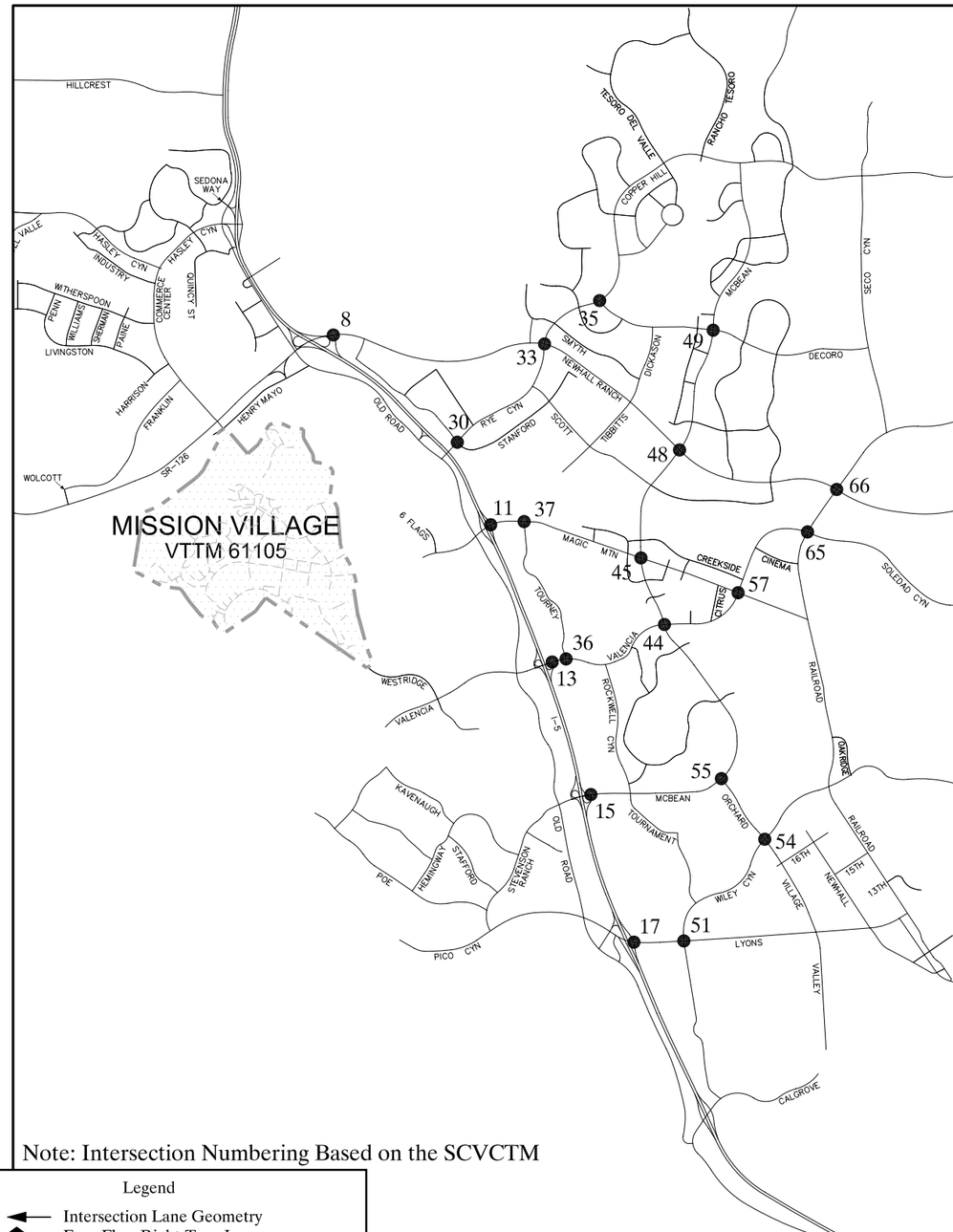
NOT TO SCALE

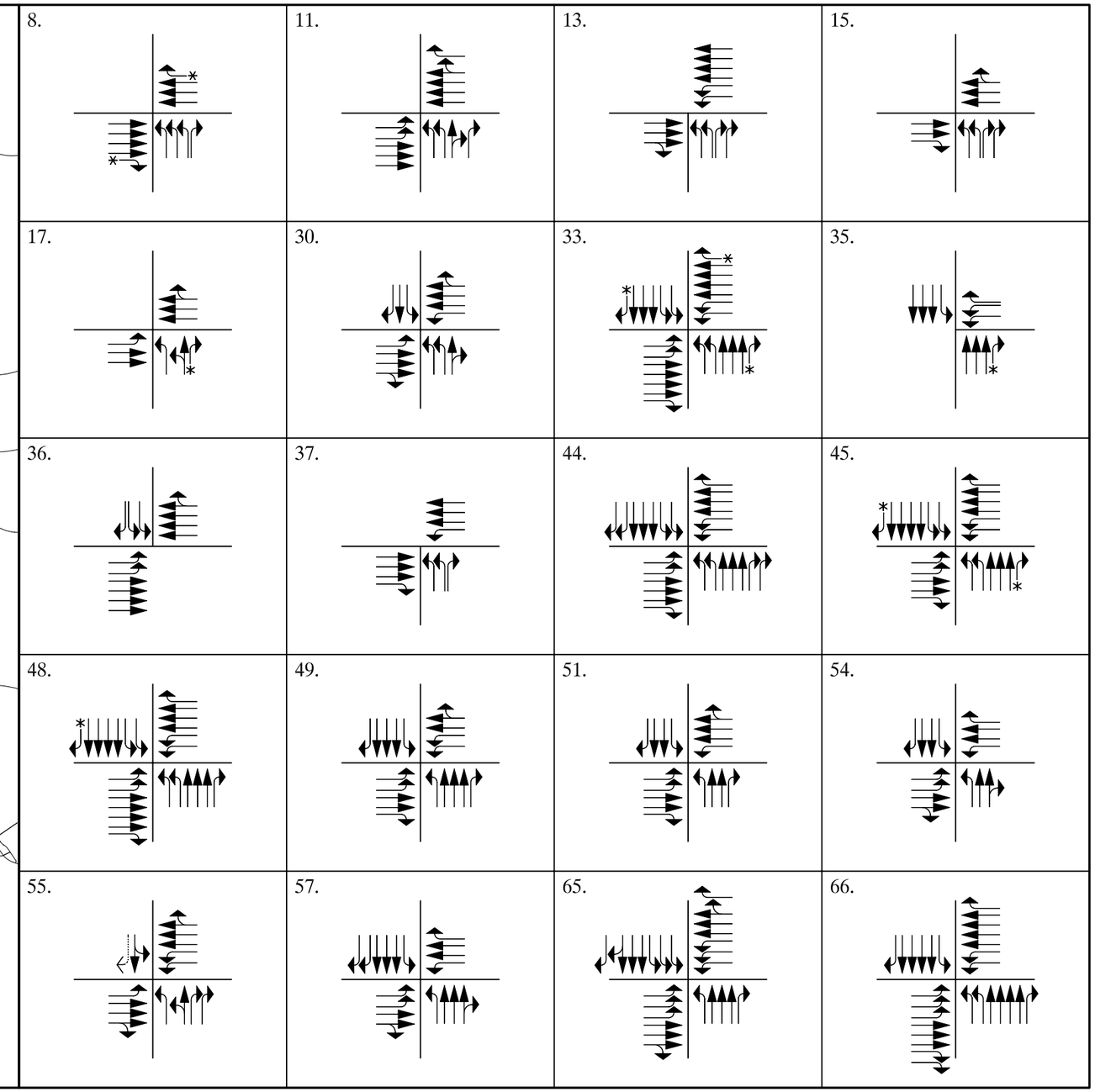
SOURCE: Austin Foust Associates, Inc. – August 2010

FIGURE **4.5-3**

Existing Intersection Lane Configurations – County Intersections

032-99A•08/10





Note: Intersection Numbering Based on the SCVCTM

Legend

Intersection Lane Geometry

Free-Flow Right-Turn Lane

De-Facto Right-Turn Lane

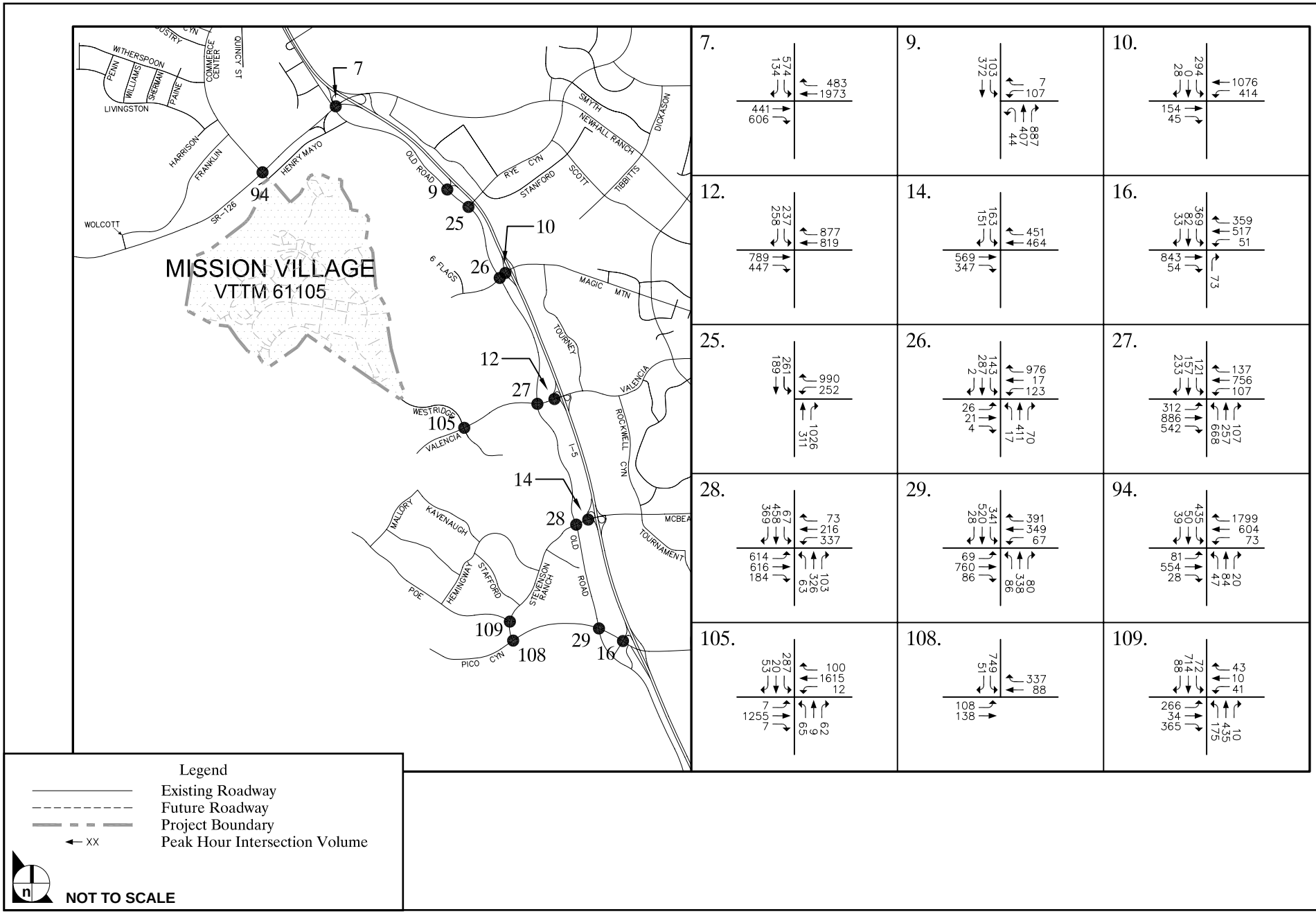
NOT TO SCALE

SOURCE: Austin Foust Associates, Inc. – August 2010

FIGURE **4.5-4**

Existing Intersection Lane Configurations – City Intersections

032-99A•08/10



Legend

Existing Roadway

Future Roadway

Project Boundary

XX Peak Hour Intersection Volume

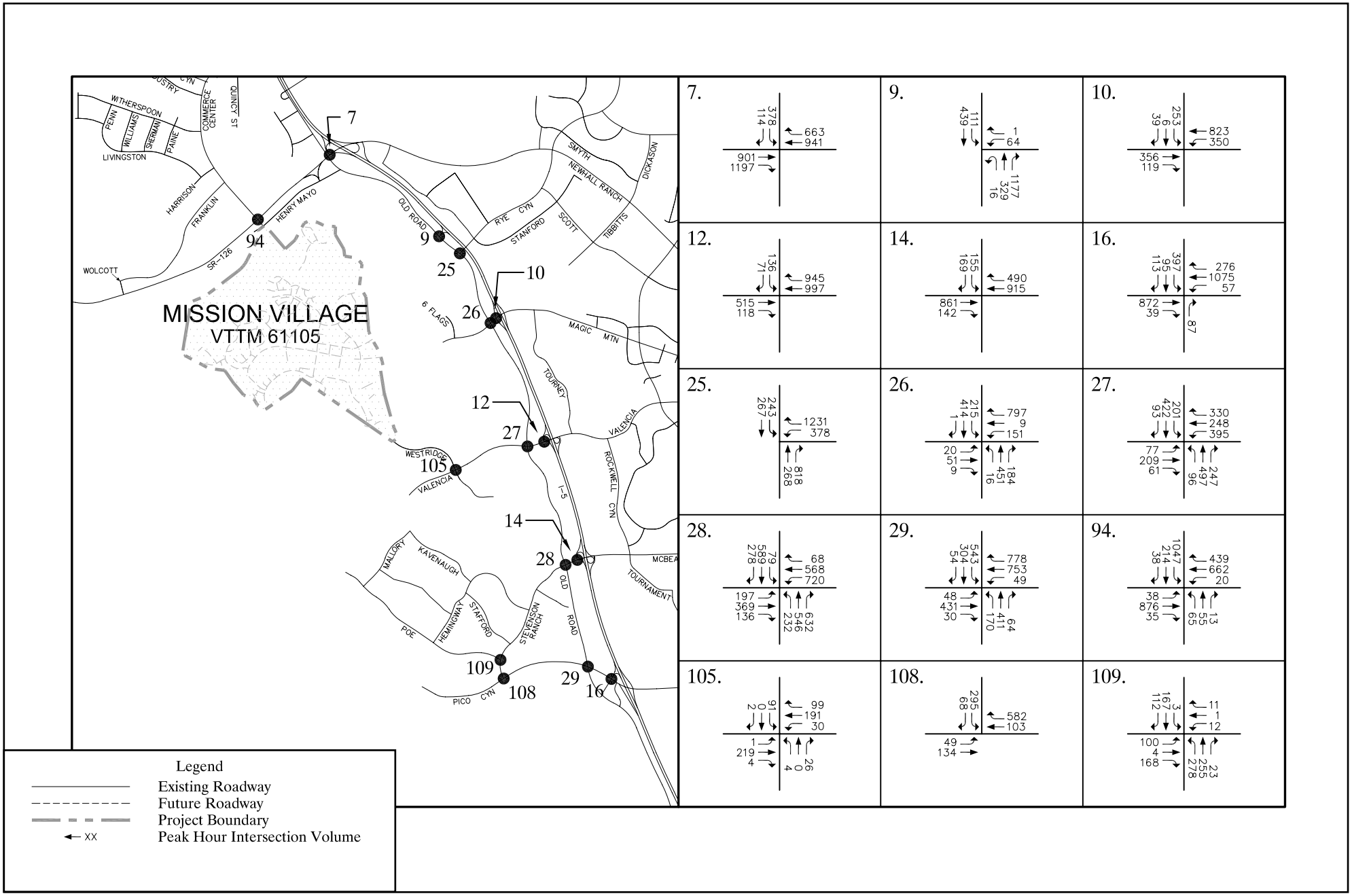
NOT TO SCALE

SOURCE: Austin Foust Associates, Inc. – August 2010

FIGURE **4.5-5**

AM Peak Hour Turning Movement Volumes – Existing Conditions (County Intersections)

032-99A•07/10

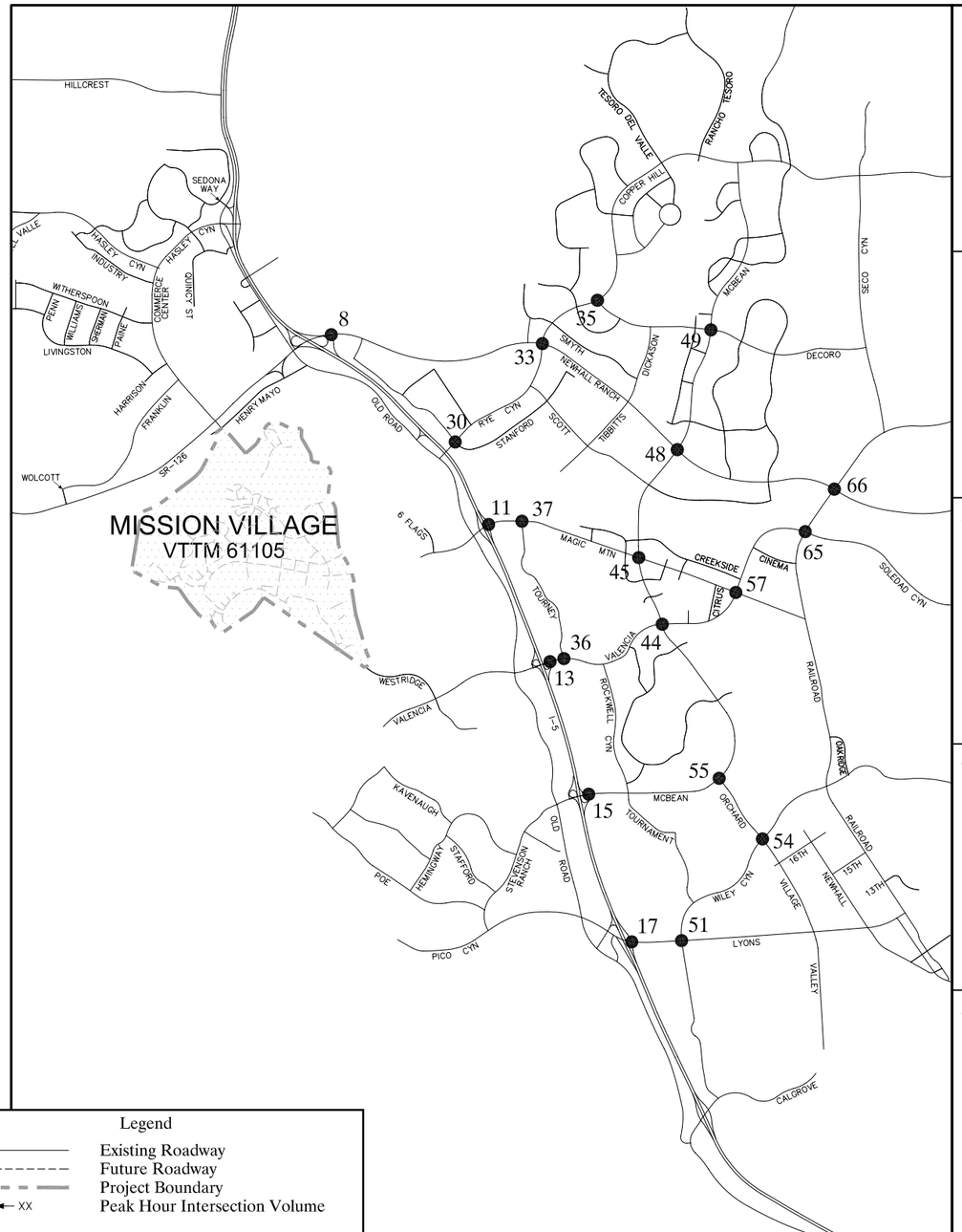


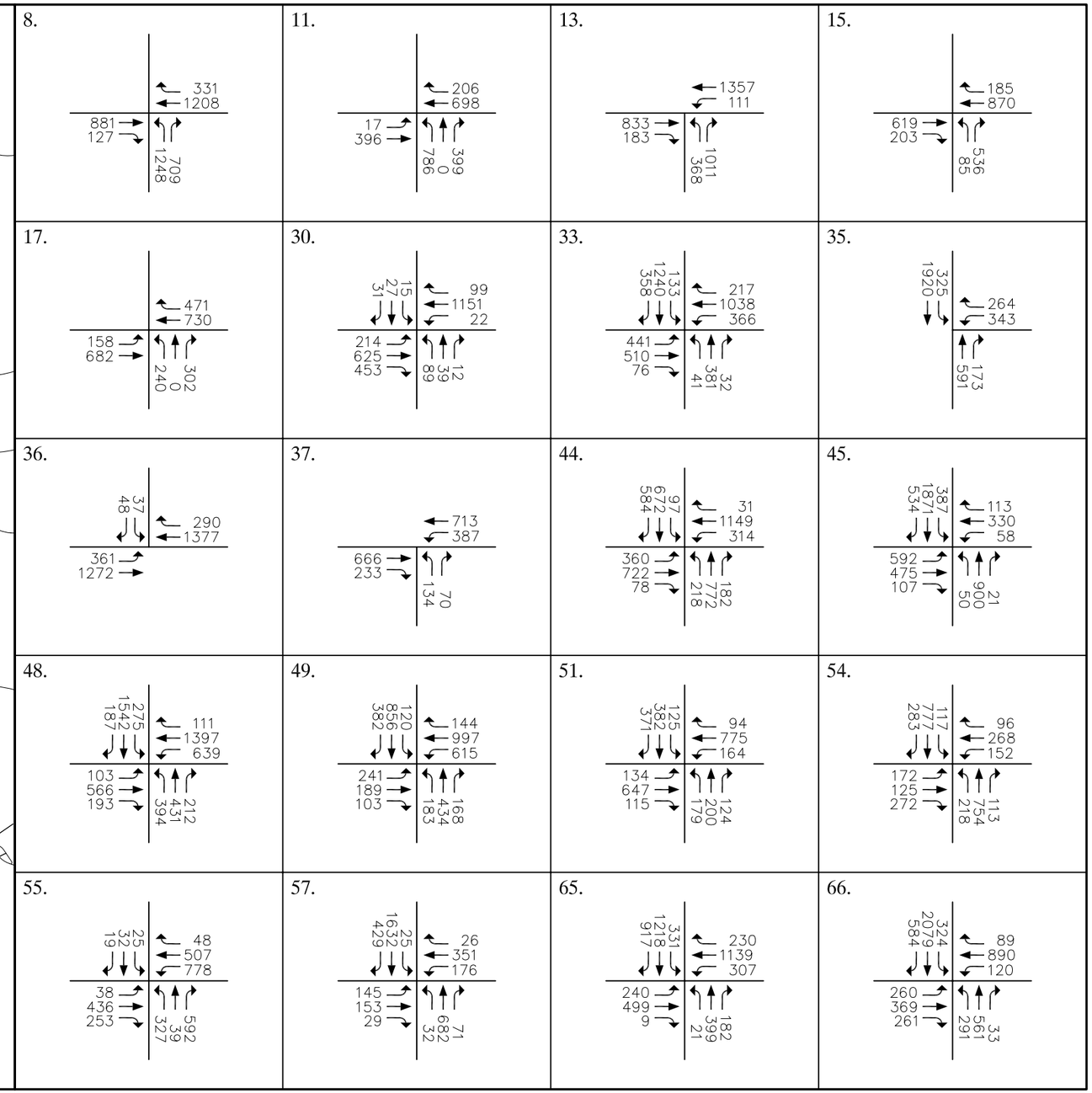
SOURCE: Austin Foust Associates, Inc. – August 2010

FIGURE **4.5-6**

PM Peak Hour Turning Movement Volumes – Existing Conditions (County Intersections)

032-99A•08/10





Legend

- Existing Roadway
- Future Roadway
- Project Boundary
- ← XX Peak Hour Intersection Volume

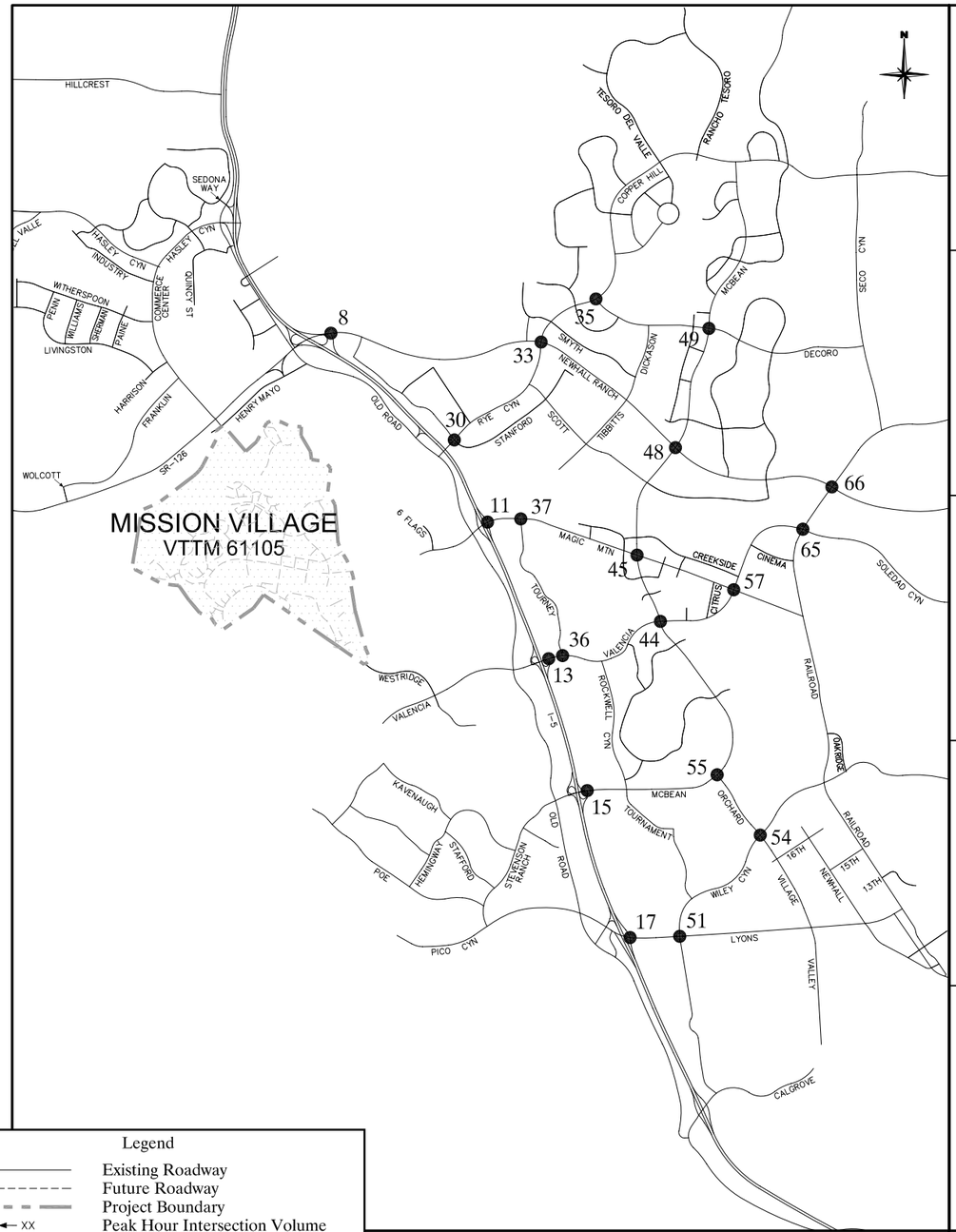
NOT TO SCALE

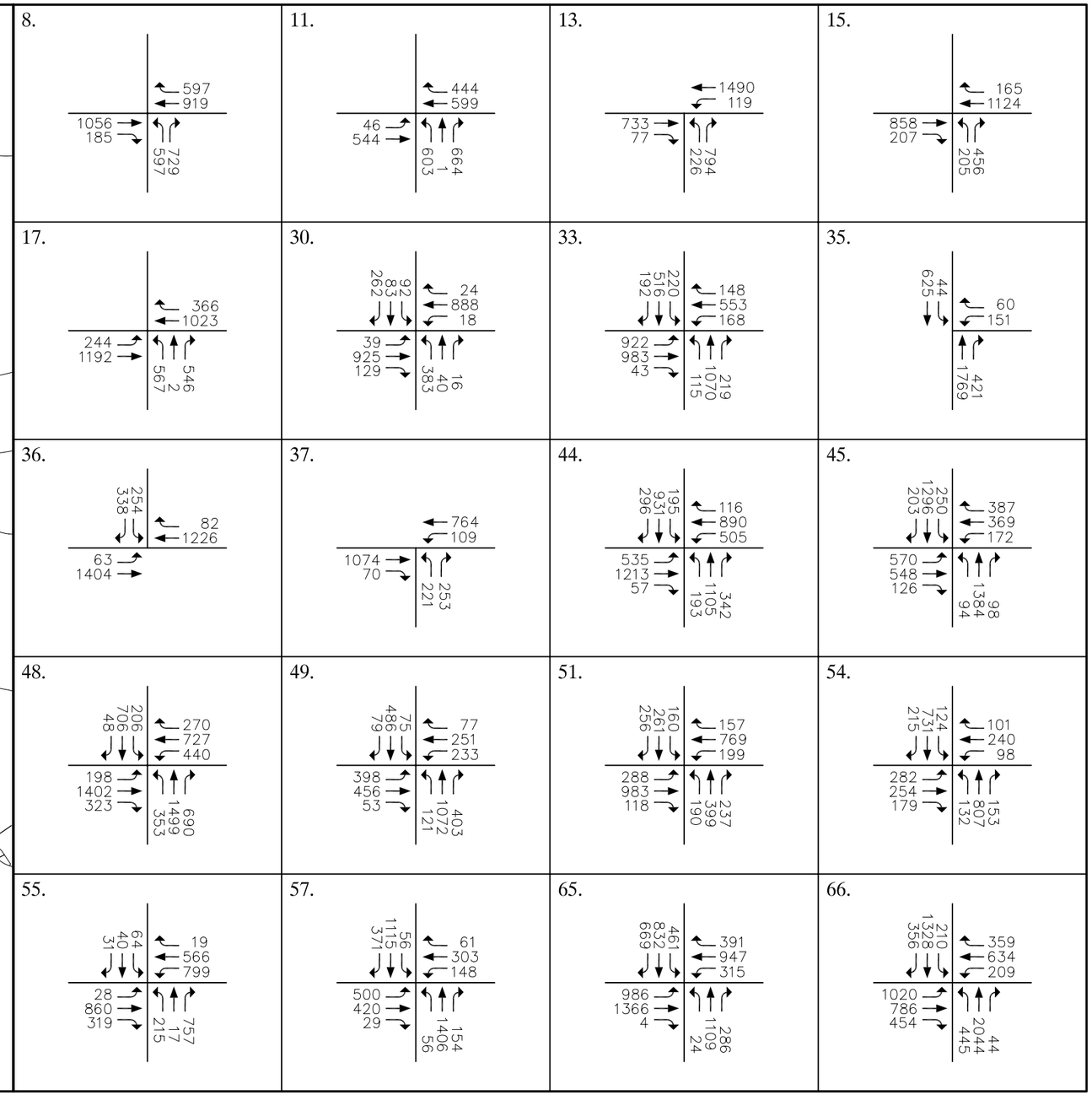
SOURCE: Austin Foust Associates, Inc. –August 2010

FIGURE **4.5-7**

AM Peak Hour Turning Movement Volumes – Existing Conditions (City Intersections)

032-99A•08/10





Legend

- Existing Roadway
- Future Roadway
- Project Boundary
- XX Peak Hour Intersection Volume

NOT TO SCALE

SOURCE: Austin Foust Associates, Inc. – August 2010

FIGURE **4.5-8**

PM Peak Hour Turning Movement Volumes – Existing Conditions (City Intersections)

032-99A•08/10

Table 4.5-4
ICU and LOS Summary – Existing Conditions

Intersection	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
County Intersections				
25. The Old Rd/Rye Canyon Rd	0.61	B	0.66	B
26. The Old Rd/Magic Mtn Pkwy	0.28	A	0.32	A
27. The Old Rd/Valencia Blvd	0.67	B	0.44	A
28. The Old Road/McBean Parkway	0.58	A	0.76	C
29. The Old Road/Pico Canyon Rd	0.63	B	0.71	C
105. Westridge Parkway/Valencia Blvd	0.55	A	0.20	A
108. Stevenson Ranch Parkway/Pico Canyon Rd	0.49	A	0.51	A
109. Stevenson Ranch Parkway/Poe Parkway/Chase	0.63	B	0.39	A
City Intersections				
30. Ave Stanford/Rye Canyon Rd	0.51	A	0.54	A
33. Copper Hill Dr/Newhall Ranch Rd	0.63	B	0.70	B
35. Copper Hill Dr/Decoro Dr	0.57	A	0.51	A
36. Tourney Rd/Valencia Blvd	0.45	A	0.48	A
37. Tourney Rd/Magic Mtn Pkwy	0.49	A	0.45	A
44. McBean Pkwy/Valencia Blvd	0.61	B	0.74	C
45. McBean Pkwy/Magic Mtn Pkwy	0.61	B	0.76	C
48. McBean Pkwy/Newhall Ranch Rd	0.73	C	0.78	C
49. McBean Pkwy/Decoro Dr	0.77	C	0.54	A
51. Wiley Canyon Rd/Lyons Ave	0.60	B	0.69	B
54. Orchard Village Rd/Wiley Canyon Rd	0.60	A	0.62	B
55. Orchard Village Rd/McBean Pkwy	0.57	A	0.68	B
57. Valencia Blvd/Magic Mtn Pkwy	0.58	A	0.66	B
65. Bouquet Cyn Rd/Soledad Cyn Rd	0.68	B	0.77	C
66. Bouquet Cyn Rd/Newhall Ranch Rd	0.66	B	0.82	B
Caltrans/County Interchanges				
7. I-5 SB Ramps/SR-126	0.71	C	0.43	A
8. I-5 NB Ramps/SR-126	0.66	B	.68	B
9. The Old Rd/I-5 SB Ramps	0.72	C	0.91	E
10. I-5 SB Ramps/Magic Mtn Pkwy	0.36	A	0.37	A
11. I-5 NB Ramps/Magic Mtn Pkwy	0.42	A	0.42	A
12. I-5 SB Ramps/Valencia Blvd	0.52	A	0.46	A
13. I-5 NB Ramps/Valencia Blvd	0.59	A	0.49	A

Intersection	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
14. I-5 SB Ramps/McBean Parkway	0.38	A	0.50	A
15. I-5 NB Ramps/McBean Parkway	0.43	A	0.48	A
16. I-5 SB/Marriott & Pico Canyon Road/Lyons Ave	0.58	A	0.59	A
17. I-5 NB On/Off & Lyons Ave	0.53	A	0.66	B
94. Commerce Center Dr/SR-126	0.54	A	0.78	C

*Source: Austin-Foust Associates, Inc., Mission Village Traffic Impact Analysis, October 2010 (**Appendix 4.5**).*
Level of service ranges: 0.00–0.60 = A 0.61–0.70 = B 0.71–0.80 = C 0.81–0.90 = D 0.91–1.00 = E Above 1.00 = F

With respect to the I-5 freeway, as noted above, the I-5 mainline is currently built to eight lanes, although Caltrans presently is implementing a project to expand the freeway to HOV and truck lanes. A summary of the existing traffic volumes on the I-5 freeway is provided in **Table 4.5-5, Freeway Volumes and V/C Ratios – Existing (2010) Conditions**, along with the resulting V/C calculations. These volumes were derived using data obtained from the Caltrans Performance Measurement System (PeMS) along with traffic counts collected at the ramps. As shown on **Table 4.5-5,** most of the freeway segments currently operate within the capacity of the freeway, with the exception of the following two mainline segments:

411. Southbound I-5 between Calgrove & SR-14 (V/C = 1.08/LOS F, AM; V/C = 1.02/LOS, PM)

412. Southbound I-5 south of SR-14 (V/C = 1.04/LOS F, AM).

c. Existing Transit Service

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

Santa Clarita Transit currently operates two fixed-route transit lines (Routes 3 and 7) in the project vicinity providing bus service to the Six Flags Magic Mountain Theme Park. Route 3 provides service between the Saugus community and Six Flags; and Route 7 provides service between the Tesoro Del Valle area and Six Flags. Major destinations for Route 3 are Seco Canyon, Civic Center, and The Old Road/Westridge Center. Major destinations for Route 7 are the Northpark and the Northbridge areas. Both routes serve the Tamarack loop, the Valencia Town Center area, Kaiser Medical Center/Borax, and Six Flags Magic Mountain Theme Park.[9] Also near to the project site are Routes 1 and 2, which serve the McBean Regional Transit Center, Industrial Center, Commerce Center, Newhall Metrolink, City Hall,

9 City of Santa Clarita. "Santa Clarita Transit." [Online] 26 April 2010. http://www.santa-clarita.com/cityhall/field/transit/routes&schedules.asp.

Valencia Town Center, River Oaks Shopping Center, Canyon High School, Sierra Vista Jr. High School, and Plum Canyon. Additional routes, accessible from these routes, provide service to the greater Santa Clarita Valley Area.

It is anticipated that, over time, the local bus service will expand as additional development occurs within the valley. Typically, bus route plans are evaluated on an annual basis, and routes are added and/or modified as appropriate and as funding permits; therefore, as Mission Village develops, service to the project area could be added as determined at the discretion of SCT. Meanwhile, the current transit arrangement is anticipated to continue to serve local residents of the area, connecting residential areas with employment and commercial centers. See **subsection 7.f.(2), Project Transit Impacts**, for additional information regarding future transit services.

SCT also operates commuter buses, which provide regional service to downtown Los Angeles, the San Fernando Valley and the Antelope Valley. Specifically, commuter bus service is provided to the following locations: McBean Regional Transfer Center – North Hollywood Station (Route 757), Chatsworth Metrolink/Amtrak Station – Warner Center (Route 791 and 796), UCLA/Westwood – Century City (Routes 792 and 797), Van Nuys – Sherman Oaks (Routes 793 and 798), Los Angeles Union Station/Gateway Transit Center (Route 794), Vincent Grade/Acton Metrolink Station and Lancaster Metrolink Station (Route 795), and downtown Los Angeles – Santa Clarita Metrolink (Route 799).

As to Metrolink, the Mission Village site is located west of the Santa Clarita Metrolink Rail Station on Soledad Canyon Road and the Jan Heidt Metrolink Station in Newhall. Metrolink provides commuter rail service between the Antelope Valley and Downtown Los Angeles, thereby supplying additional regional transit to the site. Metrolink also links Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties with convenient transfer service between the bus and rail systems. The Metro oversees transit planning in the Los Angeles County area. An eventual Metrolink extension along the SR-126 corridor to Ventura County is part of the long-range transit plans prepared by Ventura County, the City of Santa Clarita, and the Southern California Association of Governments, although no specific plans have been developed as of this time.

Table 4.5-5
Freeway Volumes and V/C Ratios – Existing (2010) Conditions

Segment	Lanes	Capacity	AM Peak Hour				PM Peak Hour			
			Northbound		Southbound		Northbound		Southbound	
			Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C
401. North of Lake Hughes	4M	8,000	1,300	0.16	1,400	0.18	2,200	0.28	1,800	0.23
402. Between Lake Hughes & Parker	4M	8,000	1,400	0.18	1,700	0.21	2,500	0.31	2,000	0.25
403. Between Parker & Hasley Canyon	4M	8,000	1,700	0.21	2,200	0.28	3,100	0.39	2,400	0.30
404. Between Hasley Canyon & SR-126	4M	8,000	2,300	0.29	3,100	0.39	4,100	0.51	3,000	0.38
405. Between SR-126 & Rye Canyon	4M	8,000	3,200	0.40	3,500	0.44	4,400	0.55	4,200	0.53
406. Between Rye Canyon & Magic Mtn	4M	8,000	3,200	0.40	4,400	0.55	4,400	0.55	5,400	0.68
407. Between Magic Mtn & Valencia	4M	8,000	4,100	0.51	4,600	0.58	5,200	0.65	5,600	0.70
408. Between Valencia & McBean	4M	8,000	5,200	0.65	5,600	0.70	6,000	0.75	6,400	0.80
409. Between McBean & Pico/Lyons	4M	8,000	5,200	0.65	6,200	0.78	6,300	0.79	6,700	0.84
410. Between Pico/Lyons & Calgrove	4M	8,000	5,100	0.64	6,700	0.84	6,800	0.85	6,500	0.81
411. Between Calgrove & SR-14	4M (NB) 4M* (SB)	8,000 6,400	5,100	0.64	6,900	1.08	6,800	0.85	6,500	1.02
412. South of SR-14	6M + 2T (NB) 5M + 2T (SB)	14,400 12,400	6,700	0.47	13,900	1.12	13,500	0.94	9,300	0.75

M = Mixed-Flow/General Purpose Lane (Capacity = 2,000 vehicles per hour)
M = Mixed-Flow Lane on an Extended Uphill Grade, Without a Truck Lane (Capacity = 1,600 vehicles per hour)*
T = Truck Lane (Capacity = 1,200 vehicles per hour)
Capacities derived from PeMS data and through discussions with Caltrans staff.

7. PROPOSED PROJECT IMPROVEMENTS

a. Site Access and Proposed Improvements

Under the proposed project, Magic Mountain Parkway would be extended westward from its current terminus just west of the entrance of Magic Mountain Theme Park. Concurrently, Westridge Parkway would be extended northerly where it would terminate at the Magic Mountain Parkway extension on the project site. Subsequent to these improvements, Commerce Center Drive would be extended southward through the site from SR-126 until it intersects with Magic Mountain Parkway. See **Figure 4.5-9, Roadway Classifications – On-Site**.

The proposed on-site circulation system comprises an inter-related set of local roadways that would serve the adjacent land uses and provide accessibility between those uses and the arterial system. These local roadways would be designed as two-lane streets with flaring at intersections where necessary. The on-site circulation system is shown on **Figure 4.5-9**.

The Mission Village project-level circulation system is consistent with, and implements, the mobility objectives of the Specific Plan's approved Master Circulation Plan. The Newhall Ranch Specific Plan designates the extension of Magic Mountain Parkway as a six-lane Major Highway for the segment east of Westridge Parkway and a four-lane Secondary Highway for the segment west of Westridge Parkway. The extension of Commerce Center Drive is currently designated as a six-lane Major Highway. The extension of Westridge Parkway within the project site has been planned as a four-lane collector roadway.

Figure 4.5-10, Intersection Lane Configurations – On-Site, illustrates the number of midblock lanes and the intersection geometry for all the major on-site intersections. In addition to the on-site roadway improvements that would be constructed as part of the project, the proposed project also includes a bus transfer station that would facilitate the use of transit for those who live or work at the project site.

8. PROJECT IMPACTS

The analysis of potential traffic/access impacts associated with operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

Significance threshold criteria for traffic/access are specified in Appendix G of the *California Environmental Quality Act* (*CEQA) Guidelines*. Under these guidelines, a project would have a potentially significant impact on traffic/access if it would:

- conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but

not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

- conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;[10]
- substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);[11]
- result in inadequate emergency access; or[12]
- conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.[13]

With respect to the first criterion, circulation system performance criteria are based on two primary measures. The first is "capacity," which establishes the vehicle carrying ability of a roadway, and the second is "volume." The volume measure is either a traffic count (in the case of existing volumes) or a forecast for a future point in time. The ratio between the volume and the capacity gives a V/C ratio and based on that V/C ratio, a corresponding LOS is defined.

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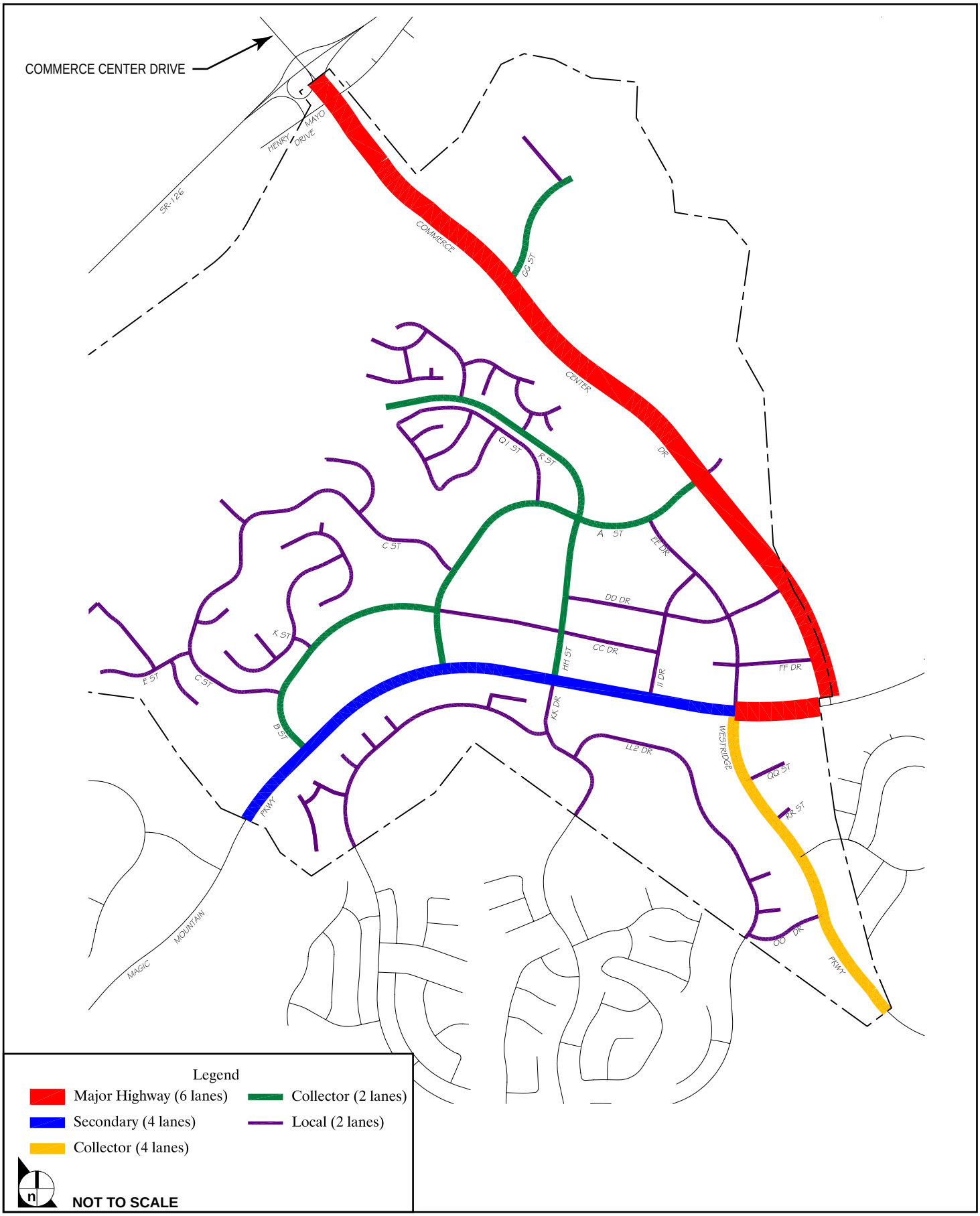
10 The proposed project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. Additionally, the *Mission Village Initial Study* determined that the proposed project would not result in potential impacts relating to safety hazards associated with airport uses. (See *Mission Village Initial Study*, Appendix ES, p. 22.) Therefore, no impact to air traffic patterns would occur as a result of the proposed project and no further analysis is necessary.

11 The on-site circulation system to be built as part of the proposed project will provide vehicular access onto and within the project site that complies with all applicable County codes and regulations, as well as the *Newhall Ranch Specific Plan*. Therefore, the proposed project will not substantially increase hazards due to a design feature or incompatible uses, and no further analysis is necessary. (See also *Mission Village Initial Study*, Appendix ES, p. 16.) With respect to parking, the proposed project would provide parking consistent with the parking regulations set forth in *Newhall Ranch Specific Plan*, Section 3.7. Therefore, the project would provide adequate parking for the uses proposed under the Mission Village tract map and no further analysis of parking capacity is necessary.

12 The *Mission Village Initial Study* determined that the proposed project would not result in potential impacts relating to inadequate emergency access. (See, *Mission Village Initial Study*, Appendix ES, p. 16.) Therefore, no further analysis is necessary. For related information, see EIR **Section 4.11, Sheriff Services**, and **Section 4.12, Fire Protection Services**.

13 In addition to the analysis provided in this section, EIR, **Section 2.0**, **Environmental and Regulatory Setting**, analyzes the proposed project's consistency with SCAG's Regional Transportation Plan, and Compass Growth Vision Report. The project is considered consistent with these adopted plans and programs.

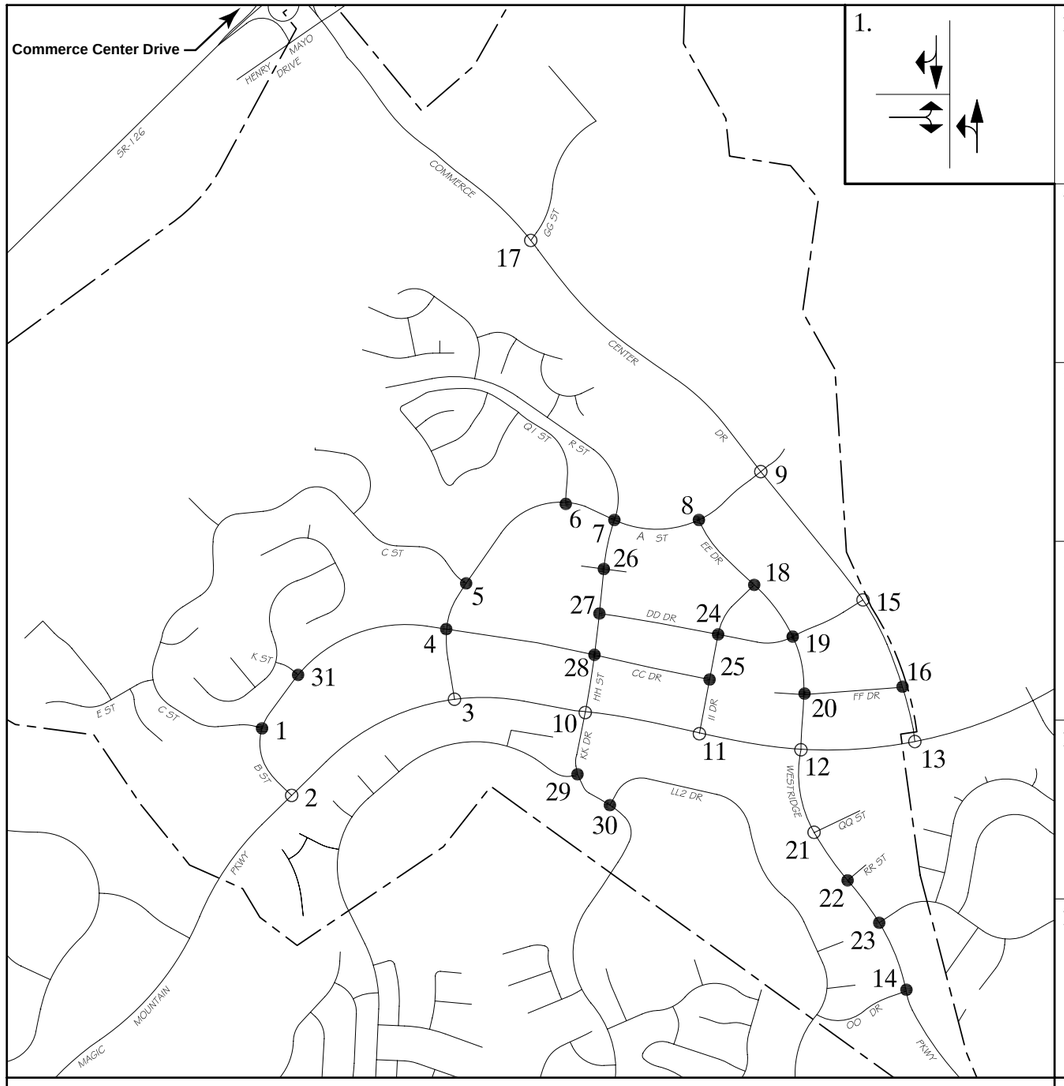


SOURCE: Austin Foust Associates, Inc. – August 2010

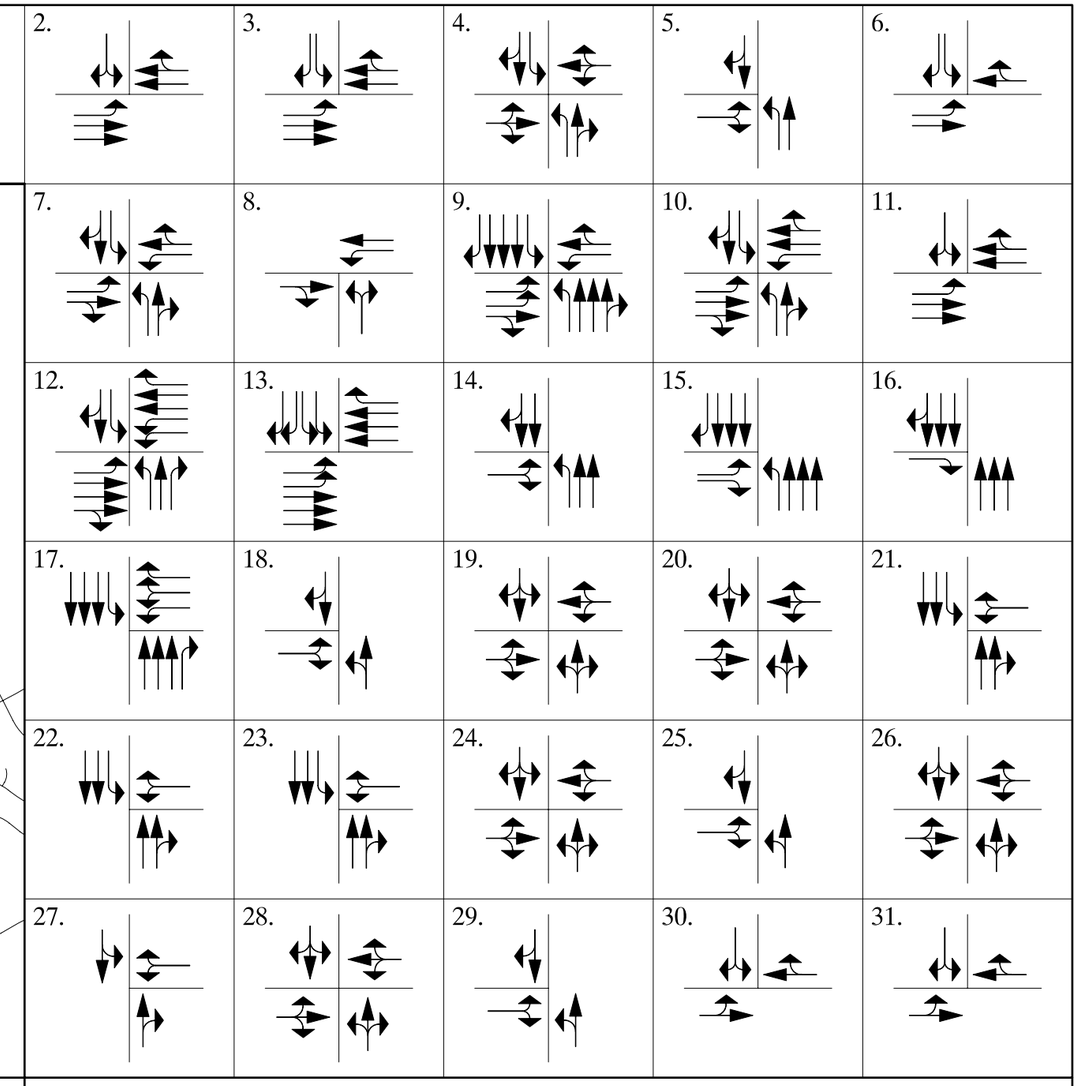
FIGURE **4.5-9**

Roadway Classifications – On-Site

32-99A•08/10



INTERSECTION LOCATIONS



INTERSECTION LANES

Legend

- Intersection Location (Stop Sign Control)
- Intersection Location (Signal Control)
- Project Boundary
- Intersection Lane

NOT TO SCALE

SOURCE: Austin Foust Associates, Inc. – August 2010

FIGURE **4.5-10**

Intersection Lane Configurations – On-Site

032-99A•08/10

Table 4.5-6, Volume/Capacity Ratio Level of Service Ranges, summarizes the V/C ranges that correspond to LOS "A" through "F" for arterial roads, intersections, and freeway segments. The V/C ranges listed for arterial roads and intersections within the study area are those used by the County of Los Angeles and the City of Santa Clarita. The V/C ranges listed for freeway segments are based on the V/C and LOS relationships specified in the *2000 Highway Capacity Manual* for basic freeway sections with free-flow speeds of 105 kilometers per hour (65 miles per hour); the V/C methodology is specified by the County's CMP for the evaluation of CMP freeway monitoring stations.

Both the V/C ratio and the LOS are used in determining impact significance. Certain LOS values are deemed unacceptable by the County and City, and increases in the V/C ratio that cause or contribute to the LOS being unacceptable are defined as a significant impact (see following sections for details). With respect to state highways, the Caltrans *Guide for the Preparation of Traffic Impact Studies* does not identify a specific impact criteria due to differences between rural and urban areas of the State, as well as differences between the northern, central, and southern regions. Accordingly, the local Caltrans districts determine the impact criteria based on the appropriate requirements of that district. In this case, while Caltrans District 7 generally does not consider Los Angeles County's CMP criteria alone to be adequate for the analysis of transportation impacts pursuant to CEQA review, in light of the supplemental freeway analysis conducted as part of the EIR and the various mitigation measures built into the proposed project, Caltrans District 7 has determined that ~~while the Caltrans guidelines for the preparation of traffic studies recommends the HCM method for the evaluation of state highway facilities, those guidelines do not include a threshold of significance criteria for the determination of a significant project impact based on the HCM methodologies. As such,~~ the thresholds of significance criteria specified by the local agencies (i.e., County of Los Angeles, City of Santa Clarita, and the LA County CMP) are acceptable and, therefore, the County's CMP impact criteria are utilized for this analysis.

Table 4.5-6
Volume/Capacity Ratio Level of Service Ranges

V/C Ratio Range	LOS
Arterial Roads/Intersections	
0.00–0.60	A
0.61–0.70	B
0.71–0.80	C
0.81–0.90	D
0.91–1.00	E
Above 1.00	F

V/C Ratio Range	LOS
Freeway Segments (FFS = 65 mph)	
0.00–0.30	A
0.31–0.50	B
0.51–0.71	C
0.72–0.89	D
0.90–1.00	E
Above 1.00	F

*Source: Austin-Foust Associates, Inc., Mission Village Traffic Impact Analysis, October 2010 (**Appendix 4.5**).*

In establishing V/C based performance criteria, there are certain items that need to be addressed to obtain suitable V/C estimates and relate them to LOS. For instance, while average daily traffic is a useful measure to show general levels of traffic on a facility and to provide data for other related aspects such as noise and air quality, highway congestion is largely a peak hour or peak period occurrence and ADT does not reflect peak period conditions very effectively. For this reason, the analysis presented here focuses on those parts of the day when such congestion can occur, specifically the AM and PM peak hours. For the arterial and freeway system, the peak hour is the accepted period used for impact evaluation and a number of techniques are available to establish suitable V/C ratios and define the corresponding LOS. These definitions and procedures are established by individual local jurisdictions, such as the County, the City of Santa Clarita, or by regional programs such as the Congestion Management Program.

The analysis of the arterial road system is based on intersection capacity since this is the defining capacity limitation on an arterial highway system. There may be exceptions where certain facilities have long distances between signalized intersections, but within the traffic analysis study area in this case, peak hour intersection performance is the most representative measure for evaluating the arterial road system.

As to the freeway system, the analysis of the freeway system is based on peak hour volumes by direction. The measure used to provide an estimate of LOS can be V/C, speed (miles per hour) or density (passenger cars/mile/lane). The three basic measurements for traffic (speed, density, and volume) are interrelated in such a way that if values for two of these measures are known, the third can be computed. **Table 4.5-7, LOS Criteria for Basic Freeway Segments**, shows the relationship between these three measures and how they translate to LOS.

Table 4.5-7
LOS Criteria for Basic Freeway Segments

Criteria	LOS				
	A	B	C	D	E
Maximum density (pc/mi/ln)	11	18	26	35	45
Minimum speed (mi/h)	65.0	65.0	64.6	59.7	52.2
Maximum V/C	0.30	0.50	0.71	0.89	1.00
Maximum service flow rate (pc/h/ln)	710	1,170	1,680	2,090	2,350

Notes:
The exact mathematical relationship between density and V/C has not always been maintained at LOS boundaries because of the use of rounded values. Density is the primary determinant of LOS. The speed criterion is the speed at maximum density for a given LOS.
Values based on a free flow speed of 65 mph.
*Source: Highway Capacity Manual 2000 (HCM 2000) (**Appendix 4.5**, AFA Traffic Impacts Analysis, October 2010).*

Levels of service for arterial roadway intersections and for freeway mainline segments are determined based on operating conditions during the AM and PM peak hours. For intersections, the intersection capacity utilization (ICU) methodology is applied, providing a planning level basis for determining V/C and LOS. This methodology sums the V/C ratios for the critical movements of an intersection and is the preferred procedure for intersection analysis by the City of Santa Clarita and the County of Los Angeles. The ICU methodology is generally compatible with the intersection capacity analysis methodology outlined in the *HCM 2000*. For freeway segments, the V/C methodology is applied, which also provides a planning level basis for determining capacity utilization and LOS, and which is the methodology specified by the County CMP. The HCM 2000 equates V/C ratios to other performance measures such as speed and density as shown in **Table 4.5-7**.

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

(1) Arterial Intersections

The ICU calculation methodology and associated impact criteria for the project study area arterial system are summarized in **Table 4.5-8, Arterial Intersection Performance Criteria**. The County strives to maintain LOS C (ICU not to exceed 0.80) at existing intersections, and utilizes LOS D (ICU not to exceed 0.90) as the accepted standard and target LOS for the design of future intersections, as well as for existing intersections for long-range planning purposes. The City of Santa Clarita strives to maintain LOS D for existing and future conditions. However, several intersections in both the city and county have been identified as operating at LOS E for General Plan Buildout Conditions as part of the pending General Plan/Area Plan update.

Table 4.5-8
Arterial Intersection Performance Criteria

V/C Calculation Methodology	
Level of service to be based on peak hour intersection capacity utilization (ICU) values calculated using the following assumptions:	
Saturation Flow Rates	
County Methodology:	1,600 vehicles/hour/lane for through lanes, right-turn lanes and single left-turn lanes
	2,880 vehicles/hour for dual left-turn lanes
City Methodology:	1,750 vehicles/hour/lane for all lanes
Clearance Interval:	.10
Performance Targets	
County:	LOS D (peak hour ICU less than or equal to 0.90) for long-range cumulative buildout conditions
	Mid-LOS C (peak hour ICU less than 0.75) or existing LOS, whichever is greater, for existing intersections for short-range conditions
City:	LOS D or existing LOS, whichever is greater, or LOS E as identified in the General Plan for select intersections

Impact Thresholds	
An intersection is considered to be significantly impacted if compared to the ICU in the no-project alternative, the ICU in the with-project alternative increases the ICU by the following:	
County Thresholds: Pre-Project ICU	Project Increment
0.71–0.80 (LOS C)	greater than or equal to 0.04
0.81–0.90 (LOS D)	greater than or equal to 0.02
0.91 or more (LOS E & F)	greater than or equal to 0.01
City Thresholds: With-Project ICU	Project Increment
0.81–0.90 (LOS D)	greater than or equal to 0.02
0.91 or more (LOS E&F)	greater than or equal to 0.01

*Source: Austin-Foust Associates, Inc., Mission Village Traffic Impact Analysis, October 2010 (**Appendix 4.5**).*
Abbreviations: ICU – Intersection Capacity Utilization; V/C – Volume/Capacity Ratio
Note: The County guidelines do not address situations where pre-project conditions are less than 0.71. In that situation, County staff has interpreted the guidelines to mean that an increase that results in a with-project condition of 0.75 or more is considered significant. The interpretation is based on the following scenario, which is addressed by the guidelines: 0.71 (pre-project) + 0.04 (project increment) = 0.75 and is a significant impact.

(2) Freeway Mainline Facilities

The freeway V/C calculation methodology and associated impact criteria for the study area freeway system are summarized below in **Table 4.5-9, Freeway Mainline Performance Criteria**. The County CMP specifies that LOS E or existing LOS, whichever is worse, represents the performance standard for freeway segments, and Caltrans goal is to maintain no worse than LOS E conditions in urban areas.

Table 4.5-9
Freeway Mainline Performance Criteria

V/C Calculation Methodology	
Level of service to be based on peak hour V/C values calculated using the following assumptions:	
Saturation/Service Flow Rates:	
Mainline Mixed-flow/General Purpose Lane:	2,~~2~~000 vehicles/hour/lane
Mainline Mixed-flow/General Purpose Lane on an Extended Uphill Grade:	1,600 vehicles/hour/lane
High Occupancy Vehicle (HOV) Lane:	1,600~~2,200~~ vehicles/hour/lane[1]
Auxiliary Lane:	1,000 vehicles/hour/lane
Truck Lane:	1,200 vehicles/hour/lane
Saturation flow rates derived from Caltrans PeMS data and through discussions with Caltrans staff.	
Performance Standard	
LOS E or existing LOS, whichever is worse (applicable to Urban areas)	
Impact Threshold	
A freeway mainline segment is considered to be adversely impacted if each of the following conditions are met:	
The segment is forecast to operate deficiently (i.e., worse than the performance standard).	
Compared to the V/C in the no-project alternative, the V/C in the with-project alternative increases by greater than or equal to 0.02 (the impact threshold specified in the CMP).	

[1] *Two separate analyses were conducted, one utilizing 2000 vehicles/hour/lane for HOV lanes and the other utilizing 1600 vehicles/hour/lane for HOV lanes.*

Abbreviations:
V/C – Volume/Capacity Ratio
PeMS – Performance Monitoring System
LOS – Level of Service
CMP – Congestion Management Program
*Source: Austin-Foust Associates, Inc. Traffic Impacts Analysis (October 2010) (see **Appendix 4.5**)*

(3) Congestion Management Program

As noted above, the CMP defines a significant impact as occurring when the proposed project increases traffic demand on a CMP facility by 2 percent or more of capacity (V/C ≥ 0.02), causing or worsening LOS F (V/C > 1.00).

The Los Angeles County Congestion Management Program requires that a proposed development address two major subject areas with respect to traffic impacts. These are the project's impacts on the CMP highway system and the project's impacts on the local and regional transit systems.

With respect to CMP highway system impacts, according to the CMP guidelines, the geographical area examined in a CMP traffic impact analysis consists of the CMP monitoring locations that meet the following criteria:

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

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

b. Construction-Related Impacts

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

- All traffic control measures, construction signs, delineators, etc., and their use during the construction phase of this project shall conform to the provisions set forth in the State of California, Department of Transportation, Manual of Traffic Controls, January 1992.

- In areas where traffic control necessitates, the contractor shall provide, post, and maintain "No Parking" and "No Stopping" signs, as directed by the Director of Public Works.

- The location of all signs shall be determined in the field by the County Engineer in conjunction with the contractor.

- No travel lane shall be less than 10 feet wide.

- Delineators shall be spaced at 50 feet maximum, or as noted on the final Traffic Control Plan.

- All traffic signal facilities shall be protected during construction or relocation.

- "Construction Ahead" and appurtenant signs are to be placed 1,000 feet in advance of all approaches to the project area, for the duration of construction.

- Private driveway closures shall be limited to the times of the day that construction is in progress.

- Cross street closures shall be limited to the times of the day that construction is in process.

With respect to the additional traffic that would be added to the study area roadway system as a result of construction-related vehicle trips, because the level of construction activities will vary throughout the

duration of the project and, therefore, the level of average daily vehicle trips will vary, average daily worker trips were estimated for each category of vehicle trip for each year of the period of project construction. Based on those estimates, the peak year for construction activity was determined to be in the 13th quarter of construction, when approximately 640 ADT due to construction activity would be generated. (See EIR **Appendix 4.5**, Traffic Impacts Analysis, Appendix H.)

The construction trips will be dispersed throughout the project site, with trips to and from the site occurring primarily on Magic Mountain Parkway and Commerce Center Drive. By the peak year of construction activity, the project will have constructed the Magic Mountain Parkway extension (which will be 4 to 10 lanes in size, with 6 lanes at the easterly project limits), and the Westridge Parkway extension (which will be 4 lanes). These two roadways collectively would provide capacity for approximately 90,000 ADT, of which construction-related traffic would utilize less than 1 percent of the available capacity. Therefore, based on the dispersed trip distribution, in combination with the fact that the construction activities would generate a relatively negligible amount of traffic on any given roadway, the increase in traffic due to construction activities would not result in a significant impact.

c. Project Trip Generation

Trip generation estimates for the proposed project are shown in **Table 4.5-10, Mission Village Land Use and Trip Generation Summary**. The trip generation estimates were calculated utilizing ITE trip generation rates and rates derived from the SCVCTM, as shown in the table. As depicted in **Table 4.5-10**, the proposed project is estimated to generate approximately 58,452 ADT at project buildout, with approximately 5,065 tripends occurring in the AM peak hour and approximately 5,926 tripends occurring in the PM peak hour.

d. Project Trip Distribution

(1) Internal Trips

As shown in **Table 4.5-10,** at buildout the proposed project would result in approximately 58,500 gross ADT, with approximately 5,100 gross trips during the AM peak hour (2,700 inbound), and approximately 5,900 gross trips during the PM peak hour (3,200 outbound), based on standard SCVCTM and ITE rates. However, due to the complementary mix of uses planned for the site, many of the trips generated by the project will remain internal to the project site. To determine the amount of trips that would be internal to the project site, as noted above, a mixed-use development (MXD) trip generation estimate has been prepared for the project.[14]

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[14] As noted above, the quantitative model was developed by Fehr & Peers in cooperation with the U.S. Environmental Protection Agency and ITE.

Table 4.5-10
Mission Village Land Use and Trip Generation Summary

			AM Peak Hour			PM Peak Hour			
Land Use Type	**Units**		**IB**	**OB**	**Total**	**IB**	**OB**	**Total**	**ADT**
3. Single Family (6–10 du/ac)	382	du	73	213	286	244	143	387	3,783
4. Condominium/Townhouse	2,315	du	234	1,110	1,344	1,086	604	1,690	18,520
5. Apartment	905	du	73	388	461	370	190	560	6,244
7. Senior (Active)	459	du	37	54	91	73	45	118	1,702
8. CCRC	351	du	42	21	63	49	53	102	986
Residential Total	*4,412*	*du*	*459*	*1,786*	*2,245*	*1,822*	*1,035*	*2,857*	*31,235*
13. Commercial Shops	224.1	tsf	162	107	269	404	404	808	8,306
20. Elementary/Middle School	900	STU	234	180	414	72	81	153	1,305
24. Library	36	tsf	27	11	38	122	133	255	3,059
31. Business Park	697	tsf	836	160	996	210	690	900	7,110
40. Commercial Office	634	tsf	983	120	1,103	132	819	951	7,329
51. Developed Park[1]	40.9	AC	0	0	0	1	1	2	108
Non-Residential Total			*2,242*	*578*	*2,820*	*941*	*2,128*	*3,069*	*27,217*
TOTAL			2,701	2,364	5,065	2,763	3,163	5,926	58,452
Trip Rates									
3. Single Family (6–10 du/ac)[2]	du		0.19	0.56	0.75	0.64	0.37	1.01	9.90
4. Condominium/Townhouse[2]	du		0.10	0.48	0.58	0.47	0.26	0.73	8.00
5. Apartment[2]	du		0.08	0.43	0.51	0.41	0.21	0.62	6.90
7. Senior (Active)[2]	du		0.08	0.12	0.20	0.16	0.10	0.26	3.71
8. CCRC[3]	du		0.12	0.06	0.18	0.14	0.15	0.29	2.81
13. Commercial Shops[2]	tsf		0.72	0.48	1.20	1.80	1.80	3.60	37.06
20. Elementary/Middle School[2]	STU		0.26	0.20	0.46	0.08	0.09	0.17	1.45
24. Library[2]	tsf		0.76	0.30	1.06	3.40	3.69	7.09	84.98
31. Business Park[2]	tsf		1.20	0.23	1.43	0.30	0.99	1.29	10.20
40. Commercial Office[2]	tsf		1.55	0.19	1.74	0.21	1.29	1.50	11.56
51. Developed Park[2]	AC		0.00	0.00	0.00	0.03	0.04	0.07	2.60

du = Dwelling Units
tsf = Thousand Square Feet
STU = Students
AC = Acres
[1] *Includes private recreation centers.*
Trip rate sources:
[2] *Santa Clarita Valley Consolidated Transportation Model (SCVCTM)*
[3] *Institute of Transportation Engineers (ITE) Trip Generation 8th Edition, Category 255 (Continued Care Retirement Community)*
Source: Austin-Foust Associates, Inc., Traffic Impact Analysis, October 2010, ***Appendix 4.5****.*

A description of the MXD model and the model's results for the Mission Village project is provided in Appendix E of the AFA Traffic Impacts Analysis in **Appendix 4.5**. The MXD analysis concluded that due to the specific characteristics of the proposed project, approximately one-third (33 percent) of the daily gross tripends would remain internal to the project site. Specific to the peak hours, approximately

29 percent of the AM peak hour tripends and approximately 30 percent of the PM peak hour tripends would remain internal to the project site, as summarized in **Table 4.5-11, Project MXD Trip Generation and Internalization Estimate**.[15]

Table 4.5-11
Project MXD Trip Generation/Internalization Estimate

Period	Gross Trips	Net External Trips	Vehicle Trip Internalization
Daily	57,878	38,922	33 percent
AM Peak Hour	5,101	3,615	29 percent
PM Peak Hour	5,889	4,123	30 percent

Source: Fehr & Peers
Note: Gross trips derived using MXD model and these values differ slightly (<1%) from SCVCTM/ITE estimates.

To illustrate how the complementary mix of land uses interact with each other, an approximation of the split of internal and external trips has been derived for each of the individual project land use categories, and is presented in **Table 4.5-12, Internal/External Trip Volumes and Percentages**. The individual project land uses will have varying amounts of internal capture based on the specific type of land use that is planned. For example, commercial office uses are anticipated to have approximately 20 percent overall internal capture, while the schools, library and parks are anticipated to have approximately 50 percent internal capture, with approximately 90 percent internalization during the peak hour in the peak direction. In addition, the balanced mix of project uses would result in approximately 30 percent of the overall residential tripends as internal trips. For additional information regarding the MXD model and internal capture, please see Final EIR Responses to Comments, **Topical Response No. 3, Internal Trip Capture Model and Methodology**.

(2) External Trips

As previously noted, the geographic distribution of project-generated external trips (i.e., those trips external to the project site) was derived by utilizing the SCVCTM, a computerized travel demand model. The SCVCTM first calculates production and attraction tripends for the proposed land uses and, by using the built in distribution functions of the model, an estimation of travel patterns for the project site is developed. The SCVCTM derives trip distribution patterns and related trip lengths based on mathematical functions that consider the amount of trips generated on a zone-by-zone basis, the type of trips generated, and the geographic relationship between these trips and the remainder of trips generated in the modeled area. Data input into the model includes details relevant to the specific land uses that

15 This data was reviewed and approved by the County Department of Public Works Traffic and Lighting Division staff in February 2010 for use in this traffic impact analysis.

would be developed in each travel analysis zone with implementation of the proposed project. The trip distribution process then utilizes a statistical probability formula to calculate the interchange of trips between travel analysis zones. As discussed above, the volume of trips internal and external to the project site has been derived using a model developed specifically for mixed-use developments of this type (MXD model). To derive the distribution patterns of the external trips, a special select zone trip assignment was prepared using the SCVCTM based on the total volume of external trips estimated by the MXD model.

Illustrations of the project's trip distribution patterns are provided in **Figure 4.5-11, Trip Distribution (%),** and **Figure 4.5-11a, Trip Distribution (%) Off-Site**, and are based on the adjusted SCVCTM select zone run. As shown on **Figure 4.5-11**, the model calculates that approximately 28 percent of the project's traffic would be distributed to Magic Mountain Parkway east of the project site and approximately 21 percent is distributed to Commerce Center Drive north of the site. Approximately 9 percent of the project's traffic is distributed to Westridge Parkway south of the project site, and approximately 8 percent is distributed to Magic Mountain Parkway west of the project site. Less than 1 percent of the project traffic is distributed to each of the four local streets that also access the project site (three streets that provide access to the Legacy Village project site and one street that provides access to the Entrada project site). Project only peak hour turning movement volumes for project buildout 2021 and long-range 2035 conditions are illustrated in EIR **Appendix 4.5,** Traffic Impacts Analysis, Figures 3-8 through 3-15.

(3) Commerce Center Drive Bridge

The initial access to the project site will be provided via the extensions of Magic Mountain Parkway and Westridge Parkway. As noted in the previous sections, an extension of Commerce Center Drive between SR-126 and the project site will provide access to the north, and a future extension of Magic Mountain Parkway to the west of the project site will provide access to the westerly areas of the Newhall Ranch Specific Plan area.

Since the initial occupancies within the project site are anticipated to occur prior to completion of the Commerce Center Drive connection, this section identifies the interim level of project development that could be accommodated without the Commerce Center Drive connection. This interim level of development is based on the amount of traffic that could be accommodated by the remaining roadways (i.e., the area roadways without the Commerce Center Drive connection), and is summarized in **Table 4.5-13, Land Use and Trip Generation without Commerce Center Drive Extension**.

Table 4.5-12
Internal/External Trip Volumes and Percentages

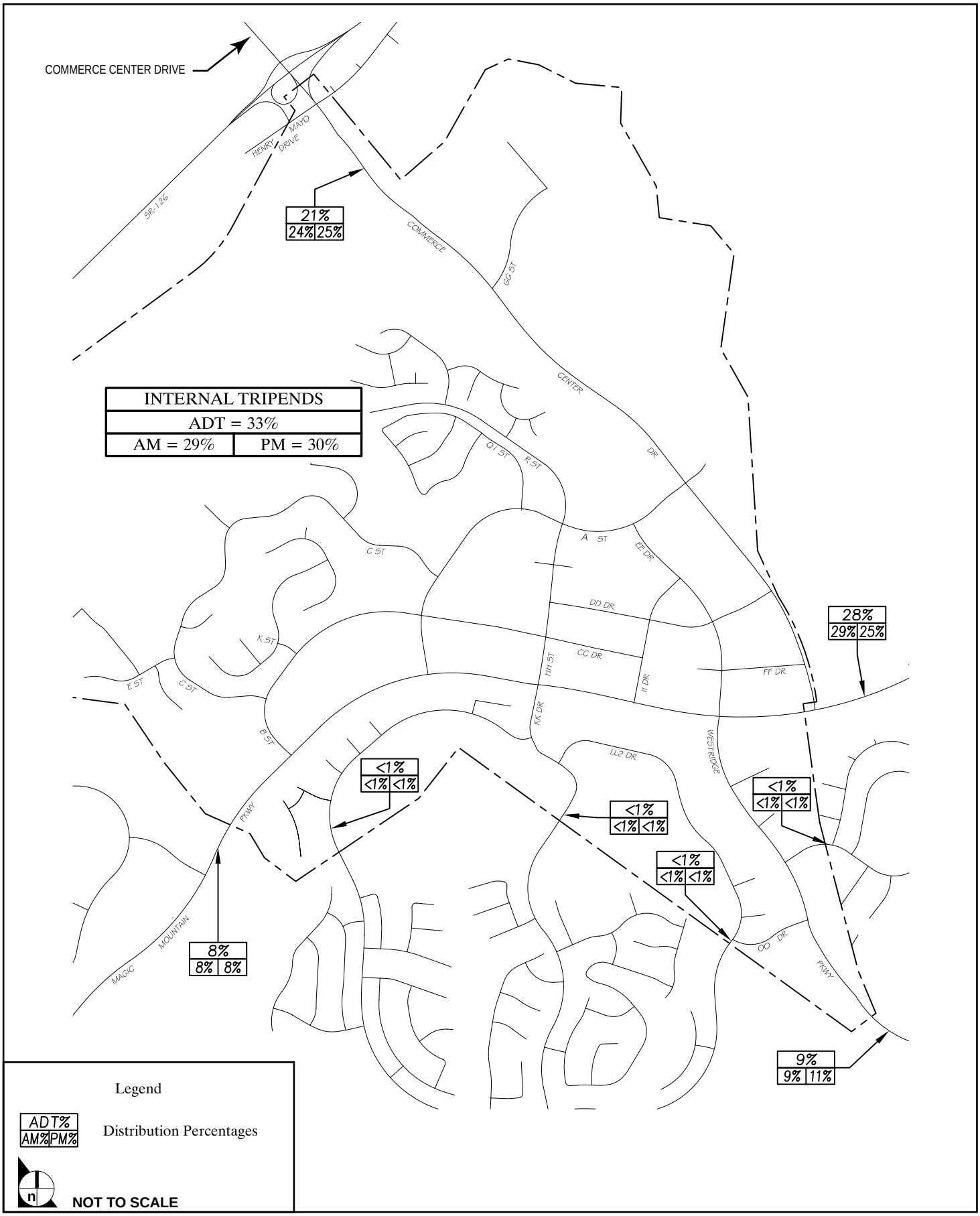
Land Use	Units		AM Peak Hour			PM Peak Hour			ADT
			IB	OB	Total	IB	OB	Total	
Traditional Residential									
Single Family (6–10 du/ac)	382	du	73	213	286	244	143	387	3,783
Condominium/Townhouse	2,315	du	234	1,110	1,344	1,086	604	1,690	18,520
Apartment	905	du	73	388	461	370	190	560	6,244
Sub-total	3,602	du	380	1,711	2,091	1,700	937	2,637	28,547
Internal %			30%	30%		25%	30%		30%
Tripends for Trips Internal to Site			114	513	627	425	281	706	8,564
Tripends for Trips External to Site			266	1,198	1,464	1,275	656	1,931	19,983
Active Senior Residential									
Senior (Active)	459	du	37	54	91	73	45	118	1,702
Internal %			20%	25%		30%	30%		30%
Tripends for Trips Internal to Site			7	14	21	22	14	36	511
Tripends for Trips External to Site			30	40	70	51	31	82	1,191
Continuing Care Senior Residential									
CCRC	351	du	42	21	63	49	53	102	986
Internal %			10%	10%		15%	15%		20%
Tripends for Trips Internal to Site			4	2	6	7	8	15	197
Tripends for Trips External to Site			38	19	57	42	45	87	789
School, Library & Parks									
Elementary/Middle School	900	STU	234	180	414	72	81	153	1,305
Library	36	tsf	27	11	38	122	133	255	3,059
Developed Park	40.9	AC	0	0	0	1	1	2	108
Sub-total			261	191	452	195	215	410	4,472
Internal %			90%	35%		45%	75%		50%
Tripends for Trips Internal to Site			235	67	302	88	161	249	2,236
Tripends for Trips External to Site			26	124	150	107	54	161	2,236
Commercial Retail									
Commercial Shops	224.1	tsf	162	107	269	404	404	808	8,306
Internal %			65%	65%		70%	55%		60%
Tripends for Trips Internal to Site			105	70	175	283	222	505	4,984
Tripends for Trips External to Site			57	37	94	121	182	303	3,322
Commercial Office									
Business Park	697	tsf	836	160	996	210	690	900	7,110
Commercial Office	634	tsf	983	120	1,103	132	819	951	7,329
Sub-total	1,331	tsf	1,819	280	2,099	342	1,509	1,851	14,439
Internal %			15%	15%		20%	15%		20%
Tripends for Trips Internal to Site			273	42	315	68	226	294	2,888
Tripends for Trips External to Site			1,546	238	1,784	274	1,283	1,557	11,551
Total									
Total Tripends			2,701	2,364	5,065	2,763	3,163	5,926	58,452
Total Tripends for Trips Internal to Site			738	708	1,446	893	912	1,805	19,380
Total Internal %			27%	30%	29%	32%	29%	30%	33%
Total Tripends for Trips External to Site			1,963	1,656	3,619	1,870	2,251	4,121	39,072

Table 4.5-13
Land Use and Trip Generation without Commerce Center Drive Extension

Land Use Type	Units	AM Peak Hour			PM Peak Hour			
		IB	OB	Total	IB	OB	Total	ADT
3. Single Family (6–10 du/ac)	250 du	48	140	188	160	93	253	2,475
4. Condominium/Townhouse	1,500 du	150	720	870	705	390	1,095	12,000
5. Apartment	500 du	40	215	255	205	105	310	3,450
7. Senior (Active)	300 du	24	36	60	48	30	78	1,113
8. CCRC	230 du	28	14	41	32	35	67	646
Residential Total	2,780 du	289	1,125	1,414	1,150	652	1,802	19,684
% of Total		17%	76%	45%	65%	33%	48%	53%
13. Commercial Shops	135 tsf	97	65	162	243	243	486	5,004
20. Elementary/Middle School	600 STU	156	120	276	48	54	102	870
24. Library	36 tsf	27	11	38	122	133	255	3,059
31. Business Park	420 tsf	504	97	601	126	416	542	4,284
40. Commercial Office	380 tsf	589	72	661	80	490	570	4,393
51. Developed Park1	40.9 AC	0	0	0	1	2	3	106
Non-Residential Total		1,374	364	1,738	620	1,338	1,958	17,717
% of Total		83%	24%	55%	35%	67%	52%	47%
TOTAL		1,663	1,489	3,152	1,771	1,990	3,760	37,401
% of Full Project		62%	63%	62%	64%	63%	63%	64%
External Trips		1,210	1,041	2,251	1,196	1,418	2,615	25,002
% External		73%	70%	71%	68%	71%	70%	67%

du = Dwelling Units
tsf = Thousand Square Feet
STU = Students
AC = Acres
[1] *Includes private recreation centers.*
Source: Austin-Foust Associates, Inc., Traffic Impact Analysis (October 2010), ***Appendix 4.5****.*

The interim level of development that can be accommodated without the Commerce Center Drive connection maintains the same ratio of residential to non-residential development as does the full project, and therefore is anticipated to achieve a rate of internal trip capture that is comparable to the full project. As shown on **Table 4.5-13**, this scenario would consist of 2,780 residential units and approximately 935,000 square feet of non-residential commercial development. **Table 4.5-13** also illustrates that this interim level of development would generate approximately 25,000 external trips daily (2,250 in the AM peak hour and 2,600 in the PM peak hour), which is roughly equivalent to the amount of project traffic that will be accommodated by each of the project access roadways other than the Commerce Center Drive connection.

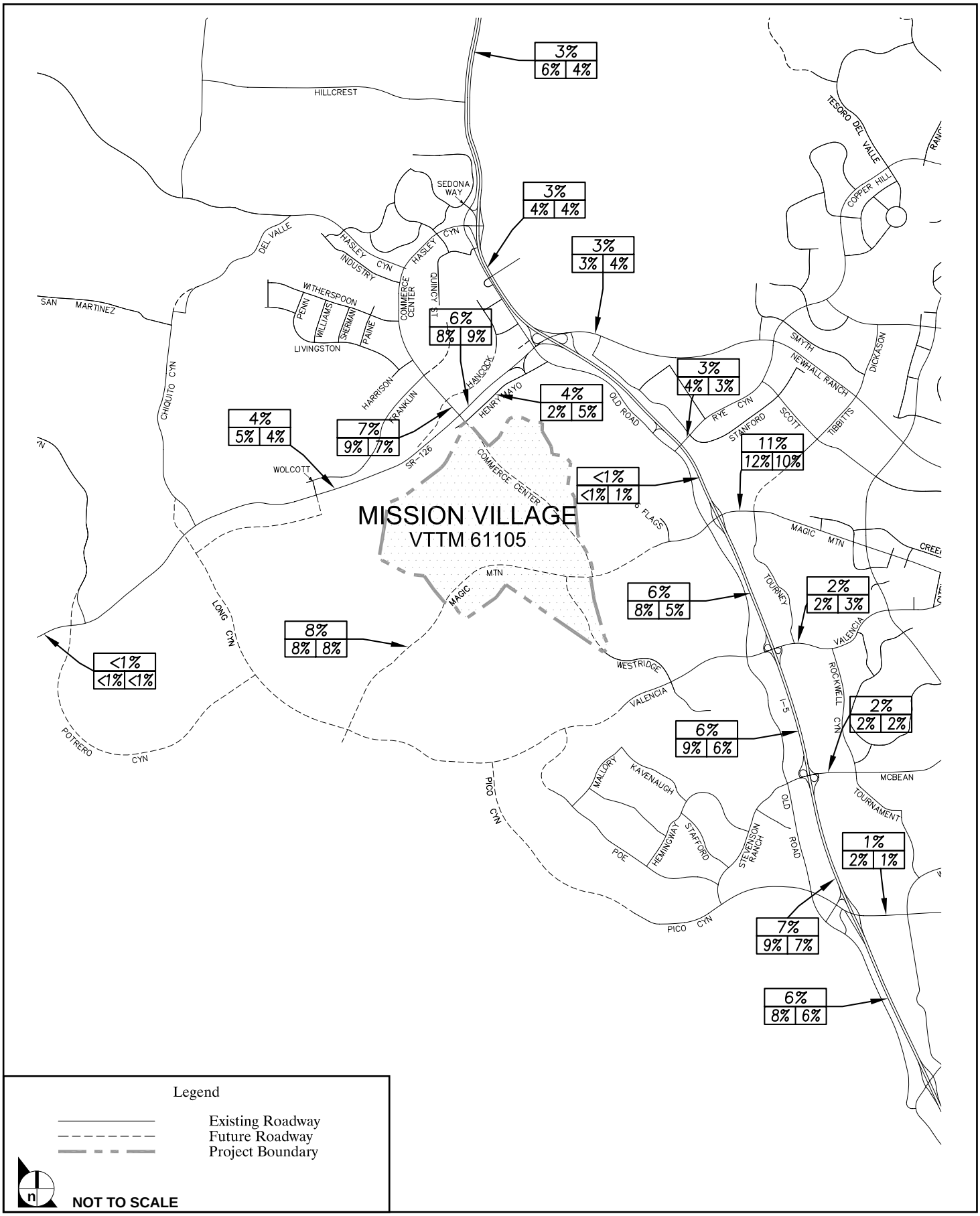


SOURCE: Austin Foust Associates, Inc. – August 2010

FIGURE **4.5-11**

Trip Distribution (%)

32-223•08/10



SOURCE: Austin Foust Associates, Inc. – October 2010

FIGURE **4.5-11a**

Trip Distribution (%) Off-Site

32-223•10/10

The land use mix depicted in **Table 4.5-13** represents one scenario that could be accommodated prior to construction of the Commerce Center Drive extension. However, multiple combinations of residential and non-residential development could result in similar amounts of off-site project traffic volumes and, therefore, could be accommodated prior to the construction of the Commerce Center Drive extension. The determining factor is that the net amount of off-site traffic generated by the project does not exceed the amounts indicated in **Table 4.5-13**.

Table 4.5-14, External Totals With and Without Commerce Center Drive Extension, summarizes the amount of project traffic that is anticipated to utilize the Commerce Center Drive connection to the north. As shown in **Table 4.5-14**, approximately 30 percent to 37 percent of the project's external traffic is anticipated to utilize the Commerce Center Drive connection to the north once the project is fully built out.

Table 4.5-14
External Trip Totals With and Without Commerce Center Drive Extension

	AM Peak Hour			PM Peak Hour			
	IB	OB	Total	IB	OB	Total	ADT
Total External Project Trips	1,960	1,660	3,620	1,870	2,250	4,120	39,000
Commerce Center Drive Bridge Volumes	590	620	1,210	680	770	1,450	12,000
% of Total	30%	37%	33%	36%	34%	35%	31%
Volumes for Remainder of Access Roadway	1,370	1,040	2,410	1,190	1,480	2,670	27,000
% of Total	70%	63%	67%	64%	66%	65%	69%

Source: Austin-Foust Associates, Inc., Mission Village Traffic Impact Analysis, April 2010, Table 4-13.

e. Project Impacts

As discussed above, the impacts of the proposed project relative to roadway capacities are assessed under four ~~three~~ different scenarios: (1) Existing plus Ambient plus Project, (2) 2021 Project Buildout Cumulative Conditions, ~~and~~ (3) Long-Range (2035) Cumulative Conditions, and (4) Existing plus Project Conditions. Scenarios 1, ~~and~~ 2 and 4 are each addressed separately below. The Long-Range 2035 Cumulative Conditions scenario is addressed in **subsection 10, Long-Range Cumulative Impacts**.

(1) Existing plus Ambient plus Project

As noted above, project occupancies are anticipated to begin in 2014 and reach buildout in 2021. Therefore, in accordance with the County of Los Angeles Traffic Study Guidelines, a 2021 horizon has been derived based on an annual ambient growth rate; that is, the project buildout traffic conditions are based on existing roadway conditions plus 12 years of ambient growth (2010 through 2021). For purposes of this analysis, a 2.0 percent ambient growth rate generally was utilized to represent growth that would occur absent any other cumulative developments.[16] This results in total ambient growth (i.e., growth not including cumulative development) of 24 percent between the 2009 traffic count year and the year 2021. The purpose of this scenario is to evaluate the impacts of the project in a setting that does not include the traffic from other future developments; hence, the use of this ambient growth factor. Future conditions inclusive of traffic generated by other future cumulative development projects are addressed in the other two impact scenarios.

The existing conditions plus ambient growth (2021 no project) peak hour turning movement volumes for the intersections in the project study area and ADT volumes for select roadway segments are shown in Section 4.1.2 of the AFA report in EIR **Appendix 4.5.** As shown on **Table 4.5-15, ICU and LOS Summary – Existing plus Ambient Conditions With and Without Project**, each of the intersections would operate at LOS D or better under without project conditions, with the exception of The Old Road/I-5 Southbound Ramps, which would operate at LOS E. As noted above, the City of Santa Clarita does not consider this hypothetical scenario in assessing impacts within the City.

Year 2021 peak hour turning movement volumes without and with traffic from the project at buildout (existing conditions plus ambient growth plus project) are depicted on Figures 4-9 through 4-12 in the AFA Traffic Impacts Analysis in EIR **Appendix 4.5**. Peak hour ICU values and the resulting LOS are depicted in EIR **Table 4.5-15, ICU and LOS Summary – Existing plus Ambient Conditions With and Without Project**, which provides a comparison between 2021 no-project and 2021 with-project conditions. As shown on **Table 4.5-15**, under this scenario the following County intersections would be significantly impacted as a result of project traffic:

28. The Old Road & McBean Parkway (County); and

94. Commerce Center Drive and SR-126 (Caltrans/County)

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16 The 2.0 percent annual growth rate was not applied to estimate traffic into and out of the Commerce Center area since Commerce Center development currently is capped at 9.3 million square feet until the Commerce Center Drive/SR-126 interchange is constructed. Therefore, for the Commerce Center Drive at SR-126 intersection only, County staff determined that the ambient growth rate applied for peak hour operations should be based on the specific volume of traffic occurring prior to reaching the cap on development. All other traffic movements through the intersection are evaluated based on the 2.0 percent annual growth rate.

Mitigation that would reduce the identified impacts to a level below significant is provided below.

Table 4.5-15
ICU and LOS Summary – Existing plus Ambient Conditions with and without Project

Intersection	Existing plus Ambient				Existing plus Ambient plus Project				Increase	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
Freeway Ramp Intersections (County)										
7. I-5 SB Ramps & Henry Mayo Drive (SR-126)	0.86	D	.50	A	0.84	D	0.55	A	0.02	0.05
9. The Old Road & I-5 SB Ramps	0.88	D	1.11	F	0.88	D	1.06	F	0.00	0.05
10. I-5 SB Ramps & Magic Mountain Parkway	0.43	A	0.44	A	0.52	A	0.49	A	0.09	0.05
12. I-5 SB Ramps & Valencia Boulevard	0.62	B	0.55	A	0.68	B	0.59	A	0.06	0.04
14. I-5 SB Ramps & McBean Parkway	0.45	A	0.58	A	0.46	A	0.60	A	0.01	0.02
16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue	0.69	B	0.73	C	0.69	B	0.74	C	0.00	0.01
County Arterial Intersections										
25. The Old Road & Rye Canyon	0.74	C	0.79	C	0.65	B	0.79	C	0.09	0.00
26. The Old Road & Magic Mountain Parkway	0.32	A	0.38	A	0.49	A	0.43	A	0.17	0.05
27. The Old Road & Valencia Boulevard	0.80	C	0.53	A	0.82	D	0.58	A	0.02	0.05
28. The Old Road & McBean Parkway	0.70	B	0.92	E	0.78	C	0.95	E	**0.08**	**0.03**
29. The Old Road & Pico Canyon Road	0.75	C	0.84	D	0.75	C	0.84	D	0.00	0.00
94. Commerce Center Drive & SR-126	0.64	B	0.89	D	1.13	F	1.15	F	**0.49**	**0.26**
105. Westridge Parkway & Valencia Boulevard	0.66	B	0.22	A	0.71	C	0.35	A	0.05	0.13
108. Stevenson Ranch Parkway & Pico Canyon Road	0.57	A	0.62	B	0.58	A	0.62	B	0.01	0.00
109. Stevenson Ranch Parkway & Poe Parkway/Chase	0.77	C	0.47	A	0.77	C	0.48	A	0.00	0.01

Bold = Significant Impact (See criteria in Table 4.5-8)
Level of service ranges: 0.00–0.60 = A 0.61–0.70 = B 0.71–0.80 = C 0.81–0.90 = D 0.91–1.00 = E Above 1.00 = F

(2) Project Buildout Year 2021 Cumulative Conditions

As noted above, the proposed project is expected to reach buildout in year 2021; therefore, a horizon year of 2021 is utilized to evaluate project impacts. Under the scenario presented in this section, the impacts of

the proposed project are evaluated under Year 2021 cumulative conditions. As noted above, long-range cumulative conditions, which represent buildout of the Santa Clarita Valley, are derived by the SCVCTM based on the proposed County Area Plan and City of Santa Clarita General Plan updates. Year 2021 cumulative conditions have been derived using data interpolated from the long-range cumulative 2035 SCVCTM traffic forecasts. Impacts to arterial intersections and the I-5 freeway mainline are addressed separately below.

(a) Arterial Intersections

The 2021 no-project cumulative conditions peak hour turning movement volumes for the intersections in the project study area are depicted on Figures 4-1 through 4-4 in the AFA Traffic Impacts Analysis, EIR **Appendix 4.5. Table 4.5-16, ICU and LOS Summary – 2021 Cumulative Conditions With and Without Project**, depicts the ICU and LOS for each of the study area intersections under no-project conditions and provides a comparison between the no-project and the with-project conditions. As shown on **Table 4.5-16**, each of the intersections would operate at LOS D or better under without project conditions, with the exception of the following:

9. The Old Road & I-5 Southbound Ramps (LOS F PM)

25. The Old Road & Rye Canyon (LOS F AM/PM)

94. Commerce Center Drive & SR-126 (LOS F AM/PM)

45. McBean Pkwy & Magic Mountain Pkwy (LOS E PM)

48. McBean Pkwy & Newhall Ranch Road (LOS F PM)

65. Bouquet Canyon Road & Soledad Canyon Road (LOS E PM)

66. Bouquet Canyon Road & Newhall Ranch Road (LOS F PM)

The 2021 with-project cumulative conditions peak hour turning movement volumes for the intersections in the project study area are depicted on Figures 4-5 through 4-8 in the AFA Traffic Impacts Analysis, EIR **Appendix 4.5.** EIR **Table 4.5-16, ICU and LOS Summary – 2021 Cumulative Conditions With and Without Project**, depicts the ICU and LOS for each of the study area intersections under with project conditions and provides a comparison between the no-project and the with-project conditions. As shown on **Table 4.5-16**, under 2021 cumulative conditions, the following intersections are forecast to be significantly impacted by the project:

Table 4.5-16
ICU and LOS Summary – 2021 Cumulative Conditions With and Without Project

Intersection	2021 Cumulative without Project				2021 Cumulative with Project				Increase	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
Freeway Ramp Intersections (County)										
7. I-5 SB Ramps & Henry Mayo Drive (SR-126)	0.83	D	0.70	B	0.85	D	0.75	C	**0.02**	**0.05**
9. The Old Road & I-5 SB Ramps	0.81	D	1.06	F	0.82	D	1.06	F	0.01	0.00
10. I-5 SB Ramps & Magic Mountain Parkway	0.58	A	0.56	B	0.64	B	0.62	B	0.06	0.06
12. I-5 SB Ramps & Valencia Boulevard	0.72	C	0.81	D	0.76	C	0.85	D	**0.04**	**0.04**
14. I-5 SB Ramps & McBean Parkway	0.52	A	0.71	C	0.54	A	0.73	C	0.02	0.02
16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue	0.61	B	0.69	B	0.62	B	0.71	C	0.01	0.02
Freeway Ramp Intersections (City)										
8. I-5 NB Ramps & Henry Mayo Drive (SR-126)	0.59	A	0.59	A	0.61	B	0.62	B	0.02	0.03
11. I-5 NB Ramps & Magic Mountain Parkway	0.60	A	0.61	B	0.68	B	0.70	B	0.08	0.09
13. I-5 NB Ramps & Valencia Boulevard	0.67	B	0.62	B	0.68	B	0.64	B	0.01	0.02
15. I-5 NB Ramps & McBean Parkway	0.52	A	0.57	A	0.53	A	0.59	A	0.01	0.02
17. I-5 NB On/Off & Lyons Avenue	0.51	A	0.75	C	0.52	A	0.77	C	0.01	0.02
County Arterial Intersections										
25. The Old Road & Rye Canyon	1.03	F	1.21	F	1.09	F	1.25	F	**0.06**	**0.04**
26. The Old Road & Magic Mountain Parkway	0.43	A	0.51	A	0.60	A	0.59	A	0.17	0.08
27. The Old Road & Valencia Boulevard	0.68	B	0.60	A	0.71	C	0.73	C	0.03	0.13
28. The Old Road & McBean Parkway	0.53	A	0.85	D	0.54	A	0.88	D	0.01	**0.03**
29. The Old Road & Pico Canyon Road	0.71	C	0.80	C	0.74	C	0.82	D	0.03	0.02
94. Commerce Center Drive & SR-126	1.04	F	1.17	F	1.44	F	1.53	F	**0.40**	**0.36**
105. Westridge Parkway & Valencia Boulevard	0.53	A	0.38	A	0.58	A	0.51	A	0.05	0.13
108. Stevenson Ranch Parkway & Pico Canyon Road	0.60	A	0.55	A	0.60	A	0.56	A	0.00	0.01
109. Stevenson Ranch Parkway & Poe Parkway/Chase	0.57	A	0.46	A	0.57	A	0.46	A	0.00	0.00

Intersection	2021 Cumulative without Project				2021 Cumulative with Project				Increase	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
City Arterial Intersections										
30. Avenue Stanford & Rye Canyon Road	0.57	A	0.66	B	0.60	A	0.68	B	0.03	0.02
33. Copper Hill Drive & Newhall Ranch Road	0.72	C	0.77	C	0.75	C	0.80	C	0.03	0.03
City Arterial Intersections										
35. Copper Hill Drive & Decoro Drive	0.63	B	0.63	B	0.65	B	0.64	B	0.02	0.01
36. Tourney Road & Valencia Boulevard	0.51	A	0.60	A	0.52	A	0.62	B	0.01	0.02
37. Tourney Road & Magic Mountain Parkway	0.52	A	0.56	A	0.56	A	0.62	B	0.04	0.06
44. McBean Parkway & Valencia Boulevard	0.70	B	0.83	D	0.70	B	0.84	D	0.00	0.01
45. McBean Parkway & Magic Mountain Parkway	0.71	C	0.92	E	0.75	C	0.94	E	0.04	**0.02**
48. McBean Parkway & Newhall Ranch Road	0.78	C	1.01	F	0.79	C	1.05	F	0.01	**0.04**
49. McBean Parkway & Decoro Drive	0.70	B	0.60	A	0.72	C	0.61	B	0.02	0.01
51. Wiley Canyon Road & Lyons Avenue	0.65	B	0.83	D	0.66	B	0.84	D	0.01	0.01
54. Orchard Village Road & Wiley Canyon Road	0.65	B	0.75	C	0.65	B	0.75	C	0.00	0.00
55. Orchard Village Road & McBean Parkway	0.65	B	0.83	D	0.66	B	0.85	D	0.01	**0.02**
57. Valencia Boulevard & Magic Mountain Parkway	0.79	C	0.83	D	0.80	C	0.84	D	0.01	0.01
65. Bouquet Canyon Road & Soledad Canyon Road	0.79	C	0.91	E	0.80	C	0.91	E	0.01	0.00
66. Bouquet Canyon Road & Newhall Ranch Road[1]	0.81~~9~~	D	~~1.01~~ .87	D~~E~~	0.83 ~~91~~	D~~E~~	.88 ~~1.03~~	D~~E~~	**0.02**	-0.01 ~~**0.02**~~

Bold = Significant Impact

Level of service ranges: 0.00–0.60 = A 0.61–0.70 = B 0.71–0.80 = C 0.81–0.90 = D 0.91–1.00 = E Above 1.00 = F

Source: Austin-Foust Associates, Inc., Traffic Impact Analysis (October 2010), ***Appendix 4.5****.*

[1] See *Mission Village - Responses to Comments Analysis*, AFA (April 29, 2011), **Final EIR, Appendix F4.5.**

7. I-5 SB Ramps & Henry Mayo Drive (SR-126) (Caltrans/County)

12. I-5 SB Ramps & Valencia Boulevard (Caltrans/County)

25. The Old Road & Rye Canyon Road (County)

28. The Old Road & McBean Parkway (County)

45. McBean Parkway & Magic Mountain Parkway (City)

48. McBean Parkway & Newhall Ranch Road (City)

55. Orchard Village Road & McBean Parkway (City)

66. Bouquet Canyon Road & Newhall Ranch Road (City)

94. Commerce Center Drive & SR-126 (County)

Mitigation that would reduce the identified impacts to a level below significant is provided below.

(b) Freeway Mainline

The proposed project would be located approximately 1.25 miles west of I-5, and approximately 0.5 mile south of SR-126. In the vicinity of the project site, I-5 is generally an eight-lane (four lanes in each direction) freeway. SR-126 is generally a four-lane highway between I-5 and Commerce Center Drive and it transitions to a two-lane highway west of Commerce Center Drive.

As discussed above, the I-5 freeway currently operates at an acceptable level of service within the Santa Clarita Valley, with the exception of the southbound segments just north and south of the SR-14 interchange. Also as noted above, a Caltrans project currently is underway to add one HOV lane in each direction to the I-5 within the Santa Clarita Valley from SR-14 to Parker Road, as well as add new dedicated truck lanes south of Pico Canyon Road. The first stage of that project will address the existing deficiency between Calgrove and SR-14 by adding dedicated truck lanes to that segment.

South of the SR-14, Caltrans currently is constructing the I-5/SR-14 Direct HOV Connector project. This project involves the construction of an elevated two-lane direct HOV connector at the I-5 and SR-14 interchange, and construction of HOV lanes in the north- and southbound directions of I-5 at the interchange, which will address the existing deficiency south of SR-14.

The volume of project traffic forecast to utilize the State highway system is summarized in **Table 4.5-17, Project Only Peak Hour Volumes – State Highway System (Buildout Conditions)**. **Table 4.5-17** shows how the project's peak hour directional volumes within the Santa Clarita Valley vary from 0 to 269 vehicles per hour on I-5, and vary from 78 to 331 vehicles per hour on SR-126. South of the Santa Clarita Valley, the project's peak hour directional volumes are less than 150 vehicles per hour. North of the Santa Clarita Valley, the project's peak hour directional volumes are less than 90 vehicles per hour.

The results of an evaluation of the I-5 freeway for conditions with and without the project are ~~is~~ provided in **Table 4.5-18, Freeway Volumes and V/C Ratios - 2021 Conditions (HOV 2000 VPH)** and **Table 4.5-18A, Freeway Volumes and V/C Ratios - 2021 Conditions (HOV 1600 VPH).** The analysis is based on a 2021 horizon, which represents the estimated buildout year of the project. Year 2021 traffic volumes have

been derived by interpolating between existing (2010) traffic counts and the SCVCTM Year 2035 long-range cumulative buildout conditions traffic forecasts. ~~While~~ Since the entire I-5 Truck Lane and HOV project is anticipated to be completed in 2016, well in advance of ~~by~~ 2021 project buildout, ~~only the first stage of improvements (the truck lane portion of the project)~~ the improvement has been assumed to be in place for the analysis of the 2021 horizon ~~in order to present a worst case scenario~~.[17] The analysis was conducted utilizing two different capacity assumptions for the HOV lanes -- 2000 VPH and 1600 VPH. The 2000 VPH capacity is the same threshold utilized by Caltrans in connection with its review of the I-5 Improvement Project presently underway on the freeway, as well as the threshold utilized under the County's CMP for freeway impacts analyses. The 1600 VPH capacity analysis was conducted at the request of Caltrans staff and is based on its desire to achieve an operating condition for the HOV lanes that is better than the operating condition for the general purpose lanes.

Table 4.5-17
Project Only Peak Hour Volumes - State Highway System (Buildout Conditions)

I-5 Freeway				
	AM Peak Hour		PM Peak Hour	
Segment	NB	SB	NB	SB
401. North of Lake Hughes	32	87	66	34
402. Between Lake Hughes & Parker	45	129	112	50
403. Between Parker & Hasley Canyon	53	174	152	72
404. Between Hasley Canyon & SR-126	53	162	152	59
405. Between SR-126 & Rye Canyon	0	33	23	52
406. Between Rye Canyon & Magic Mtn	0	27	23	61
407. Between Magic Mtn & Valencia	142	269	113	183
408. Between Valencia & McBean	200	243	144	227
409. Between McBean & Pico/Lyons	261	201	155	263
410. Between Pico/Lyons & Calgrove	233	150	123	241
411. Between Calgrove & SR-14	217	120	109	225
412. South of SR-14	133	109	90	141

[17] In September 2009, Caltrans approved a Final Environmental Impact Report/Environmental Assessment for the I-5 HOV/Truck Lanes Project SR-14 to Parker Road, or I-5 Improvement Project. (See Draft EIR Appendix 4.5.) The improvement project will add: one HOV lane in each direction on I-5 from the SR-14 interchange north to Parker Road; truck climbing lanes in each direction from the SR-14 interchange to Calgrove Boulevard (northbound) and Pico Canyon Road/Lyons Avenue (southbound); and full auxiliary lanes within portions of the Project study area. The Caltrans EIR/EIS reports the project is included in the 2008 Regional Transportation Plan and is fully funded, and construction is anticipated to begin in 2011, with completion scheduled for 2015. Subsequent communications with Caltrans indicate that the first phase of construction, or Early Implementation Project, is estimated to be completed in July, 2013, and the full project is estimated to be completed in February, 2016. (See TIA Appendix K; see also, Caltrans comment letter, A5 for additional information regarding project status.)

SR-126 Highway				
	AM Peak Hour		PM Peak Hour	
Segment	**EB**	**WB**	**EB**	**WB**
501. Between I-5 and Commerce Center	174	206	331	170
502. West of Commerce Center	154	78	110	129

The freeway impact analysis is based on the Los Angeles County CMP impact criteria. This criteria identifies a significant project impact when project traffic causes or worsens LOS F conditions by a V/C of 0.02 or more. ~~As previously discussed, Caltrans has not adopted criteria for the evaluation of impacts resulting from the development of private projects such as the proposed project; therefore, the CMP impact criteria is applied to this analysis.~~

2000 VPH HOV Lanes

As shown in **Table 4.5-18**, under the 2021 buildout horizon year cumulative analysis utilizing a 2000 VPH capacity for the HOV lanes, the incremental increase in traffic caused by the proposed project would not result in significant impacts to the I-5 freeway.

1600 VPH HOV Lanes

As shown in **Table 4.5-18A**, under the 2021 buildout horizon year cumulative analysis utilizing a 1600 VPH capacity for the HOV lanes, all lanes are forecast to operate at a V/C ratio less than 1.00 for the project's buildout year under cumulative conditions and, therefore, the incremental increase in traffic caused by the proposed project would not result in significant impacts to the I-5 freeway under this scenario.

Table 4.5-18
Freeway Volumes and V/C Ratios – 2021 Conditions (HOV 2000 VPH)

Segment		Lanes	Capacity	2021 Without Project				2021 With Project				Project Increment	
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
				Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	AM	PM
Northbound													
401.	North of Lake Hughes	4M	8,000	2,200	0.28	4,000	0.50	2,232	0.28	4,066	0.51	0.00	0.01
402.	Between Lake Hughes & Parker	4M	8,000	2,400	0.30	4,700	0.59	2,445	0.31	4,812	0.60	0.01	0.01
403.	Between Parker & Hasley Canyon	4M + 1H	10,000	2,700	0.27	5,600	0.56	2,753	0.28	5,752	0.58	0.01	0.02
404.	Between Hasley Canyon & SR-126	4M + 1H + 1A	11,000	3,800	0.35	6,300	0.57	3,853	0.35	6,452	0.59	0.00	0.02
405.	Between SR-126 & Rye Canyon	4M + 1H	10,000	4,400	0.44	6,000	0.60	4,400	0.44	6,023	0.60	0.00	0.00
406.	Between Rye Canyon & Magic Mtn	4M + 1H	10,000	4,400	0.44	6,000	0.60	4,400	0.44	6,023	0.60	0.00	0.00
407.	Between Magic Mtn & Valencia	4M + 1H + 1A	11,000	5,300	0.48	6,400	0.58	5,442	0.49	6,513	0.59	0.01	0.01
408.	Between Valencia & McBean	4M + 1H	10,000	6,300	0.63	7,200	0.72	6,500	0.65	7,344	0.73	0.02	0.01
409.	Between McBean & Pico/Lyons	4M + 1H	10,000	6,300	0.63	7,200	0.72	6,561	0.66	7,355	0.74	0.03	0.02
410.	Between Pico/Lyons & Calgrove	4M + 1H + 1A	11,000	6,200	0.56	7,400	0.67	6,433	0.58	7,523	0.68	0.02	0.01
411.	Between Calgrove & SR-14	4M + 1H + 1T	11,200	6,200	0.55	7,400	0.66	6,417	0.57	7,509	0.67	0.02	0.01
412.	South of SR-14	6M + 1H + 2T	16,400	8,200	0.50	15,200	0.93	8,333	0.51	15,290	0.93	0.01	0.00
Southbound													
401.	North of Lake Hughes	4M	8,000	2,800	0.35	3,800	0.48	2,887	0.36	3,834	0.48	0.01	0.00
402.	Between Lake Hughes & Parker	4M	8,000	3,400	0.43	4,100	0.51	3,529	0.44	4,150	0.52	0.01	0.01
403.	Between Parker & Hasley Canyon	4M + 1H	10,000	4,300	0.43	4,800	0.48	4,474	0.45	4,872	0.49	0.02	0.01
404.	Between Hasley Canyon & SR-126	4M + 1H	10,000	5,000	0.50	5,700	0.57	5,162	0.52	5,759	0.58	0.02	0.01
405.	Between SR-126 & Rye Canyon	4M + 1H	11,000	5,200	0.47	6,300	0.57	5,233	0.48	6,352	0.58	0.01	0.01

Segment		Lanes	Capacity	2021 Without Project				2021 With Project				Project Increment	
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
				Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	AM	PM
		+ 1A											
406.	Between Rye Canyon & Magic Mtn	4M + 1H + 1A	11,000	5,700	0.52	7,500	0.68	5,727	0.52	7,561	0.69	0.00	0.01
407.	Between Magic Mtn & Valencia	4M + 1H	10,000	5,800	0.58	7,400	0.74	6,069	0.61	7,583	0.76	0.03	0.02
408.	Between Valencia & McBean	4M + 1H + 1A	11,000	6,900	0.63	8,100	0.74	7,143	0.65	8,327	0.76	0.02	0.02
409.	Between McBean & Pico/Lyons	4M + 1H	10,000	7,100	0.71	8,000	0.80	7,301	0.73	8,263	0.83	0.02	0.03
410.	Between Pico/Lyons & Calgrove	4M + 1H + 1T	11,200	7,300	0.65	8,200	0.73	7,450	0.67	8,441	0.75	0.02	0.02
411.	Between Calgrove & SR-14	4M + 1H + 2T	12,400	7,500	0.60	8,300	0.67	7,620	0.61	8,525	0.69	0.01	0.02
412.	South of SR-14	6M + 1H + 2T	16,400	15,100	0.92	11,300	0.69	15,209	0.93	11,441	0.70	0.01	0.01

M = Mixed-Flow/General Purpose Lane (Capacity = 2,000 vehicles per hour)
H = HOV Lane (Capacity = 2,000 vehicles per hour)
T = Truck Lane (Capacity = 1,200 vehicles per hour)
A = Auxiliary Lane (Capacity = 1,000 vehicles per hour)
Capacities derived from PeMS data and through discussions with Caltrans staff.
Source: Austin-Foust Associates, Inc., Traffic Impact Analysis (October 2010), ***Appendix 4.5***

Table 4.5-18A
Freeway Volumes and V/C Ratios - 2021 Conditions (HOV 1600 VPH)

				2021 Without Project				2021 With Project				Project Increment	
		Capacities		MF Lanes		HOV Lanes		MF Lanes		HOV Lanes			
Segment	Lanes	MF Lanes	HOV Lanes	Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	MF	HOV
Northbound - AM Peak Hour													
401. North of Lake Hughes	4M	8,000	n/a	2,200	0.28	n/a	n/a	2,232	0.28	n/a	n/a	0.00	n/a
402. Between Lake Hughes & Parker	4M	8,000	n/a	2,400	0.30	n/a	n/a	2,445	0.31	n/a	n/a	0.01	n/a
403. Between Parker & Hasley Canyon	4M + 1H	8,000	1,600	2,390	0.30	310	0.19	2,433	0.30	320	0.20	0.00	0.01
404. Between Hasley Canyon & SR-126	4M + 1H + 1A	9,000	1,600	3,450	0.38	350	0.22	3,493	0.39	360	0.23	0.01	0.01
405. Between SR-126 & Rye Canyon	4M + 1H	8,000	1,600	3,900	0.49	500	0.31	3,900	0.49	500	0.31	0.00	0.00
406. Between Rye Canyon & Magic Mtn	4M + 1H	8,000	1,600	3,880	0.49	520	0.33	3,880	0.49	520	0.33	0.00	0.00
407. Between Magic Mtn & Valencia	4M + 1H+ 1A	9,000	1,600	4,750	0.53	550	0.34	4,882	0.54	560	0.35	0.01	0.01
408. Between Valencia & McBean	4M + 1H	8,000	1,600	5,710	0.71	590	0.37	5,890	0.74	610	0.38	0.03	0.01
409. Between McBean & Pico/Lyons	4M + 1H	8,000	1,600	5,650	0.71	650	0.41	5,881	0.74	680	0.43	0.03	0.02
410. Between Pico/Lyons & Calgrove	4M + 1H+ 1A	9,000	1,600	5,540	0.62	660	0.41	5,753	0.64	680	0.43	0.02	0.02
411. Between Calgrove & SR-14	4M + 1H + 1T	9,200	1,600	5,540	0.60	660	0.41	5,737	0.62	680	0.43	0.02	0.02
412. South of SR-14	6M + 1H + 2T	14,400	1,600	7,500	0.52	700	0.44	7,623	0.53	710	0.44	0.01	0.00

				2021 Without Project				2021 With Project				Project Increment	
		Capacities		MF Lanes		HOV Lanes		MF Lanes		HOV Lanes			
Segment	Lanes	MF Lanes	HOV Lanes	Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	MF	HOV
Northbound - PM Peak Hour													
401. North of Lake Hughes	4M	8,000	n/a	4,000	0.50	n/a	n/a	4,066	0.51	n/a	n/a	0.01	n/a
402. Between Lake Hughes & Parker	4M	8,000	n/a	4,700	0.59	n/a	n/a	4,812	0.60	n/a	n/a	0.01	n/a
403. Between Parker & Hasley Canyon	4M + 1H	8,000	1,600	5,120	0.64	480	0.30	5,252	0.66	500	0.31	0.02	0.01
404. Between Hasley Canyon & SR-126	4M + 1H + 1A	9,000	1,600	5,790	0.64	510	0.32	5,922	0.66	530	0.33	0.02	0.01
405. Between SR-126 & Rye Canyon	4M + 1H	8,000	1,600	5,380	0.67	620	0.39	5,403	0.68	620	0.39	0.01	0.00
406. Between Rye Canyon & Magic Mtn	4M + 1H	8,000	1,600	5,350	0.67	650	0.41	5,373	0.67	650	0.41	0.00	0.00
407. Between Magic Mtn & Valencia	4M + 1H+ 1A	9,000	1,600	5,740	0.64	660	0.41	5,843	0.65	670	0.42	0.01	0.01
408. Between Valencia & McBean	4M + 1H	8,000	1,600	6,430	0.80	770	0.48	6,564	0.82	780	0.49	0.02	0.01
409. Between McBean & Pico/Lyons	4M + 1H	8,000	1,600	6,410	0.80	790	0.49	6,545	0.82	810	0.51	0.02	0.02
410. Between Pico/Lyons & Calgrove	4M + 1H+ 1A	9,000	1,600	6,610	0.73	790	0.49	6,723	0.75	800	0.50	0.02	0.01
411. Between Calgrove & SR-14	4M + 1H + 1T	9,200	1,600	6,590	0.72	810	0.51	6,689	0.73	820	0.51	0.01	0.00
412. South of SR-14	6M + 1H + 2T	14,400	1,600	13,780	0.96	1,420	0.89	13,860	0.96	1,430	0.89	0.00	0.00
Southbound - AM Peak Hour													
401. North of Lake Hughes	4M	8,000	n/a	2,800	0.35	n/a	n/a	2,887	0.36	n/a	n/a	0.01	n/a
402. Between Lake Hughes & Parker	4M	8,000	n/a	3,400	0.43	n/a	n/a	3,529	0.44	n/a	n/a	0.01	n/a
403. Between Parker & Hasley Canyon	4M + 1H	8,000	1,600	3,920	0.49	380	0.24	4,074	0.51	400	0.25	0.02	0.01

				2021 Without Project				2021 With Project				Project Increment	
		Capacities		MF Lanes		HOV Lanes		MF Lanes		HOV Lanes			
Segment	**Lanes**	**MF Lanes**	**HOV Lanes**	**Vol**	**V/C**	**Vol**	**V/C**	**Vol**	**V/C**	**Vol**	**V/C**	**MF**	**HOV**
404. Between Hasley Canyon & SR-126	4M + 1H	8,000	1,600	4,600	0.58	400	0.25	4,742	0.59	420	0.26	0.01	0.01
405. Between SR-126 & Rye Canyon	4M + 1H+ 1A	9,000	1,600	4,760	0.53	440	0.28	4,793	0.53	440	0.28	0.00	0.00
406. Between Rye Canyon & Magic Mtn	4M + 1H+ 1A	9,000	1,600	5,250	0.58	450	0.28	5,277	0.59	450	0.28	0.01	0.00
407. Between Magic Mtn & Valencia	4M + 1H	8,000	1,600	5,330	0.67	470	0.29	5,569	0.70	500	0.31	0.03	0.02
408. Between Valencia & McBean	4M + 1H+ 1A	9,000	1,600	6,400	0.71	500	0.31	6,623	0.74	520	0.33	0.03	0.02
409. Between McBean & Pico/Lyons	4M + 1H	8,000	1,600	6,580	0.82	520	0.33	6,761	0.85	540	0.34	0.03	0.01
410. Between Pico/Lyons & Calgrove	4M + 1H + 1T	9,200	1,600	6,770	0.74	530	0.33	6,900	0.75	550	0.34	0.01	0.01
411. Between Calgrove & SR-14	4M + 1H + 2T	10,400	1,600	6,970	0.67	530	0.33	7,080	0.68	540	0.34	0.01	0.01
412. South of SR-14	6M + 1H + 2T	14,400	1,600	13,690	0.95	1,410	0.88	13,789	0.96	1,420	0.89	0.01	0.01
Southbound - PM Peak Hour													
401. North of Lake Hughes	4M	8,000	n/a	3,800	0.48	n/a	n/a	3,834	0.48	n/a	n/a	0.00	n/a
402. Between Lake Hughes & Parker	4M	8,000	n/a	4,100	0.51	n/a	n/a	4,150	0.52	n/a	n/a	0.01	n/a
403. Between Parker & Hasley Canyon	4M + 1H	8,000	1,600	4,370	0.55	430	0.27	4,432	0.55	440	0.28	0.00	0.01
404. Between Hasley Canyon & SR-126	4M + 1H	8,000	1,600	5,240	0.66	460	0.29	5,289	0.66	470	0.29	0.00	0.00
405. Between SR-126 & Rye Canyon	4M + 1H+ 1A	9,000	1,600	5,820	0.65	480	0.30	5,862	0.65	490	0.31	0.00	0.01
406. Between Rye Canyon & Magic Mtn	4M + 1H+ 1A	9,000	1,600	6,970	0.77	530	0.33	7,021	0.78	540	0.34	0.01	0.01
407. Between Magic Mtn & Valencia	4M + 1H	8,000	1,600	6,800	0.85	600	0.38	6,973	0.87	610	0.38	0.02	0.00
408. Between Valencia & McBean	4M + 1H+ 1A	9,000	1,600	7,420	0.82	680	0.43	7,637	0.85	690	0.43	0.03	0.00

				2021 Without Project				2021 With Project				Project Increment	
		Capacities		MF Lanes		HOV Lanes		MF Lanes		HOV Lanes			
Segment	**Lanes**	**MF Lanes**	**HOV Lanes**	**Vol**	**V/C**	**Vol**	**V/C**	**Vol**	**V/C**	**Vol**	**V/C**	**MF**	**HOV**
409. Between McBean & Pico/Lyons	4M + 1H	8,000	1,600	7,230	0.90	770	0.48	7,483	0.94	780	0.49	0.04	0.01
410. Between Pico/Lyons & Calgrove	4M + 1H + 1T	9,200	1,600	7,420	0.81	780	0.49	7,641	0.83	800	0.50	0.02	0.01
411. Between Calgrove & SR-14	4M + 1H + 2T	10,400	1,600	7,520	0.72	780	0.49	7,725	0.74	800	0.50	0.02	0.01
412. South of SR-14	6M + 1H + 2T	14,400	1,600	10,330	0.72	970	0.61	10,461	0.73	980	0.61	0.01	0.00

MF (or M) = Mixed-Flow/General Purpose Lane (Capacity = 2,000 vehicles per hour)
HOV (or H) = HOV Lane (Capacity = 1,600 vehicles per hour)
A = Auxiliary Lane (Capacity = 1,000 vehicles per hour)
T = Truck Lane (Capacity = 1,200 vehicles per hour)
Capacities derived from PeMS data and through discussions with Caltrans staff.

(3) Existing Plus Project Scenario

Under this scenario, the proposed project's buildout traffic volumes are added to the existing traffic volumes and roadway configuration, and impacts are assessed. This scenario is regarded by traffic engineers as a hypothetical scenario when used in connection with a long-range development project such as the proposed Mission Village project, which is not anticipated to reach full buildout until approximately 2021. The scenario is hypothetical because it assumes that the proposed project would be fully built out immediately and the corresponding full buildout traffic volumes added to existing roadway volumes and infrastructure. Thus, the existing plus project analysis presumes that the existing environment (existing traffic volumes, existing roadway infrastructure, and existing land uses) will not change over the long-term buildout of the project. As a result, future increases in traffic volumes attributable to other development projects (i.e., cumulative traffic volumes) are not accounted for in the analysis. This results in the analysis potentially understating project impacts because capacity that otherwise would be utilized by future development that precedes the proposed project is now available to the project. On the other hand, because the scenario does not account for future planned roadway network improvements that would increase roadway capacities, the analysis potentially results in overstating project impacts. Furthermore, because the analysis does not take into account future development and related changing land uses, the analysis does not account for the corresponding change in trip distribution patterns that accompanies changing land uses.

Notwithstanding, an existing plus project analysis has been conducted and the results of the analysis are summarized below. (See **Final EIR Appendix F4.5**, Mission Village Traffic Impact Analysis – Existing Plus Project Scenario, AFA, for additional details, including ICU worksheets.) Because of the hypothetical nature of the scenario, the analysis presented below is provided for comparative purposes only; the proposed project's significance determinations and corresponding mitigation measures are based on the analysis presented under the following three scenarios: (1) Existing plus Ambient Growth plus Project; (2) Year 2021 Cumulative Conditions with Project; and (3) Year 2035 Cumulative Buildout Conditions with Project.

Peak hour ICU values for existing conditions both with and without the proposed project are presented below in **Table 4.5-18B, ICU and LOS Summary – Existing Conditions With and Without Project**. The table provides a comparison between the existing without-project condition and with-project conditions. As shown on the table, under existing plus project conditions, the following intersections would be significantly impacted by the proposed project:

25. The Old Road & Rye Canyon Road (County)

45. McBean Parkway & Magic Mountain Parkway (City)

48. McBean Parkway & Newhall Ranch Road (City)

66. Bouquet Canyon Road & Newhall Ranch Road (City)

94. Commerce Center Drive & SR-126 (Caltrans/County)

In comparison, under the Existing plus Ambient plus Project analysis and the 2021 Project Buildout Cumulative Conditions analysis (pp. 4.5-50 to 4.5-53, supra), the proposed project would result in significant impacts to the above five intersections, as well as the following additional four intersections:

7. I-5 SB Ramps & Henry Mayo Drive (SR-126) (Caltrans/County)

12. I-5 SB Ramps & Valencia Boulevard (Caltrans/County)

28. The Old Road & McBean Parkway (County)

55. Orchard Village Road & McBean Parkway (City)

Table 4.5-18B
ICU and LOS Summary – Existing Conditions With and Without Project

Intersection	Existing Conditions without Project				Existing Conditions with Project				Project Increment	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
Freeway Ramp Intersections (County)										
7. I-5 SB Ramps & Henry Mayo Drive (SR-126)	.71	C	.43	A	.68	B	.42	A	-.03	-.01
9. The Old Road & I-5 SB Ramps	.72	C	.91	E	.72	C	.91	E	.00	.00
10. I-5 SB Ramps & Magic Mountain Parkway	.36	A	.37	A	.52	A	.48	A	.16	.11
12. I-5 SB Ramps & Valencia Boulevard	.52	A	.46	A	.61	B	.61	B	.09	.15
14. I-5 SB Ramps & McBean Parkway	.38	A	.50	A	.38	A	.51	A	.00	.01
16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue	.58	A	.59	A	.59	A	.62	B	.01	.03
Freeway Ramp Intersections (City)										
8. I-5 NB Ramps & Henry Mayo Drive (SR-126)	.66	B	.68	B	.66	B	.68	B	.00	.00
11. I-5 NB Ramps & Magic Mountain Parkway	.42	A	.42	A	.60	A	.49	A	.18	.07
13. I-5 NB Ramps & Valencia Boulevard	.59	A	.49	A	.61	B	.52	A	.02	.03
15. I-5 NB Ramps & McBean Parkway	.43	A	.48	A	.44	A	.52	A	.01	.04
17. I-5 NB On/Off & Lyons Avenue	.53	A	.66	B	.55	A	.68	B	.02	.02

Intersection	Existing Conditions without Project				Existing Conditions with Project				Project Increment	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
County Arterial Intersections										
25. The Old Road & Rye Canyon	.61	B	.66	B	.62	B	.82	D	.01	**.16**
26. The Old Road & Magic Mountain Parkway	.28	A	.32	A	.66	B	.43	A	.38	.11
27. The Old Road & Valencia Boulevard	.67	B	.44	A	.72	C	.60	A	.05	.16
28. The Old Road & McBean Parkway	.58	A	.76	C	.72	C	.79	C	.14	.03
29. The Old Road & Pico Canyon Road	.63	B	.71	C	.62	B	.72	C	-.01	.01
94. Commerce Center Drive & SR-126	.54	A	.78	C	.86	D	.90	D	**.32**	**.12**
105. Westridge Parkway & Valencia Boulevard	.55	A	.20	A	.73	C	.67	B	.18	.47
108. Stevenson Ranch Parkway & Pico Canyon Road	.49	A	.51	A	.49	A	.51	A	.00	.00
109. Stevenson Ranch Parkway & Poe Parkway/Chase	.63	B	.39	A	.65	B	.40	A	.02	.01
City Arterial Intersections										
30. Avenue Stanford & Rye Canyon Road	.51	A	.54	A	.54	A	.61	B	.03	.07
33. Copper Hill Drive & Newhall Ranch Road	.63	B	.70	B	.65	B	.74	C	.02	.04
35. Copper Hill Drive & Decoro Drive	.57	A	.51	A	.59	A	.53	A	.02	.02
36. Tourney Road & Valencia Boulevard	.45	A	.48	A	.47	A	.49	A	.02	.01
37. Tourney Road & Magic Mountain Parkway	.49	A	.45	A	.54	A	.55	A	.05	.10
44. McBean Parkway & Valencia Boulevard	.61	B	.74	C	.62	B	.75	C	.01	.01
45. McBean Parkway & Magic Mountain Parkway	.61	B	.76	C	.71	C	.81	D	.10	**.05**
48. McBean Parkway & Newhall Ranch Road	.73	C	.78	C	.76	C	.85	D	.03	**.07**
49. McBean Parkway & Decoro Drive	.77	C	.54	A	.78	C	.56	A	.01	.02
51. Wiley Canyon Road & Lyons Avenue	.60	A	.69	B	.62	B	.72	C	.02	.03
54. Orchard Village Road & Wiley Canyon Road	.60	A	.62	B	.61	B	.64	B	.01	.02
55. Orchard Village Road & McBean Parkway	.57	A	.68	B	.59	A	.70	B	.02	.02
57. Valencia Boulevard & Magic Mountain Parkway	.58	A	.66	B	.62	B	.70	B	.04	.04

Intersection	Existing Conditions without Project				Existing Conditions with Project				Project Increment	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
65. Bouquet Canyon Road & Soledad Canyon Road	.68	B	.77	C	.71	C	.77	C	.03	.00
66. Bouquet Canyon Road & Newhall Ranch Road	.66	B	.82	D	.69	B	.84	D	.03	**.02**

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

Roadway improvements that would mitigate the identified impacts are presented below in **Table 4.5-18C, Mitigation Measures for Project Intersection Impacts – Existing Conditions With Project**. **Table 4.5-18D, ICU and LOS Summary – With Mitigation**, summarizes the resulting ICUs and LOS with the mitigation in place.

Table 4.5-18C
Mitigation Measures for Project Intersection Impacts – Existing Conditions With Project

Location	Jurisdiction	Mitigation
25. The Old Road & Rye Canyon Road	County	Add a 2nd northbound through lane and a 2nd southbound left-turn lane. Convert the northbound and westbound free-flow right-turn lanes to conventional right-turn lanes with overlap phasing.
45. McBean Parkway & Magic Mountain Parkway	City	Add right-turn overlap phase for the westbound right-turn lane.
48. McBean Parkway & Newhall Ranch Road	City	Re-stripe the northbound approach to provide dual right-turn lanes in conjunction with appropriate pedestrian safety enhancements.
66. Bouquet Canyon Road & Newhall Ranch Road	City	Add right-turn overlap phase for the westbound right-turn lane.
94. Commerce Center & SR-126	Caltrans/County	Existing intersection to be replaced by a grade separated interchange. (Project is in the final design stage)

Table 4.5-18D
ICU and LOS Summary – With Mitigation

Intersection	Existing Conditions without Project				Existing Conditions plus Project with Mitigation				Change	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
25. The Old Road & Rye Canyon	.61	B	.66	B	.62	B	.67	B	.01	.01
45. McBean Parkway & Magic Mountain Parkway	.61	B	.76	C	.71	C	.79	C	.10	.03
48. McBean Parkway & Newhall Ranch Road	.73	C	.78	C	.76	C	.79	C	.03	.01
66. Bouquet Canyon Road & Newhall Ranch Road	.66	B	.82	D	.69	B	.81	D	.03	-.01
94. Commerce Center & SR-126	.54	A	.78	C	n/a (Grade Separated Interchange)					

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

In addition to an intersection level of service analysis, an evaluation of the I-5 freeway under the Existing plus Project scenario also was conducted.

In the vicinity of the proposed project site, I-5 generally is an eight-lane (four lanes in each direction) freeway. At the I-5/SR-14 interchange, Caltrans currently is constructing the I-5/SR-14 Direct HOV Connector project, which will address the existing deficiency on I-5 south of SR-14. The I-5/SR-14 interchange project includes the construction of an elevated two-lane direct HOV connector at the I-5 and SR-14 interchange, and construction of high occupancy vehicle (HOV) lanes in the north- and southbound directions of I-5 south of the interchange. The project is approximately 60 percent complete at this time and is anticipated to be completed in Fall 2012. (**Final EIR, Appendix F4.5**, I-5/SR-14 Direct HOV Connector Project Status.) In addition, Caltrans previously approved the I-5 HOV/Truck Lanes Project SR-14 to Parker Road, which will add: one HOV lane in each direction on I-5 from the SR-14 interchange north to Parker Road; truck climbing lanes in each direction from the SR-14 interchange to Calgrove Boulevard (northbound) and Pico Canyon Road/Lyons Avenue (southbound); and full auxiliary lanes within portions of the project study area (I-5 Improvement Project). (See Draft EIR Appendix 4.5.) The I-5 Improvement Project is estimated to be completed in February 2016, also well before the planned buildout of Mission Village. Notwithstanding, under the Existing plus Project analysis, neither the I-5/SR-14 Direct HOV Connector project nor the I-5 Improvement Project is considered as part of the analysis.

Table 4.5-18E, Freeway Volumes and V/C Ratios – Existing Plus Project Conditions, presents the results of the analysis, illustrating conditions with and without the proposed Mission Village project. As shown

on **Table 4.5-18E**, under the Existing plus Project scenario, without the I-5/SR-14 HOV Direct Connector Project or the I-5 Improvement Project in place, the following I-5 freeway segments would be significantly impacted by the proposed project:

411. Southbound I-5 between Calgrove & SR-14; and

412. South of SR-14 between SR-14 and I-210.

Table 4.5-18E
Freeway Volumes and V/C Ratios – Existing + Project Conditions

Segment		Lanes	Capacity	Existing Without Project				Existing With Project				Project Increment	
				AM Pk Hr		PM Pk Hr		AM Pk Hr		PM Pk Hr			
				Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	AM	PM
Northbound													
401	North of Lake Hughes	4M	8,000	1,300	.16	2,200	.28	1,314	.16	2,241	.28	.00	.00
402	Between Lake Hughes & Parker	4M	8,000	1,400	.18	2,500	.31	1,418	.18	2,567	.32	.00	.01
403	Between Parker & Hasley Canyon	4M	8,000	1,700	.21	3,100	.39	1,731	.22	3,197	.40	.01	.01
404	Between Hasley Canyon & SR-126	4M	8,000	2,300	.29	4,100	.51	2,198	.27	4,196	.52	-.02	.01
405	Between SR-126 & Rye Canyon	4M	8,000	3,200	.40	4,400	.55	2,981	.37	4,388	.55	-.03	.00
406	Between Rye Canyon & Magic Mtn	4M	8,000	3,200	.40	4,400	.55	2,981	.37	4,388	.55	-.03	.00
407	Between Magic Mtn & Valencia	4M	8,000	4,100	.51	5,200	.65	4,177	.52	5,189	.65	.01	.00
408	Between Valencia & McBean	4M	8,000	5,200	.65	6,000	.75	5,522	.69	6,360	.80	.04	.05

Segment		Lanes	Capacity	Existing Without Project				Existing With Project				Project Increment	
				AM Pk Hr		PM Pk Hr		AM Pk Hr		PM Pk Hr			
				Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	AM	PM
409	Between McBean & Pico/ Lyons	4M	8,000	5,200	.65	6,300	.79	5,616	.70	6,664	.83	.05	.04
410	Between Pico/ Lyons & Calgrove	4M	8,000	5,100	.64	6,800	.85	5,460	.68	7,105	.89	.04	.04
411	Between Calgrove & SR-14	4M	8,000	5,100	.64	6,800	.85	5,428	.68	7,079	.88	.04	.03
412	South of SR-14	6M + 2T (6M + 1H + 2T)	14,400 (16,000)	6,700 (6,700)	.47 (.42)	13,500 (13,500)	.94 (.84)	6,950 (6,950)	.48 (.43)	13,739 (13,739)	.95 (.86)	.01 (.01)	.01 (.02)
Southbound													
401	North of Lake Hughes	4M	8,000	1,400	.18	1,800	.23	1,417	.18	1,835	.23	.00	.00
402	Between Lake Hughes & Parker	4M	8,000	1,700	.21	2,000	.25	1,740	.22	2,047	.26	.01	.01
403	Between Parker & Hasley Canyon	4M	8,000	2,200	.28	2,400	.30	2,200	.28	2,400	.30	.00	.00
404	Between Hasley Canyon & SR-126	4M	8,000	3,100	.39	3,000	.38	3,200	.40	3,062	.38	.01	.00
405	Between SR-126 & Rye Canyon	4M	8,000	3,500	.44	4,200	.53	3,493	.44	4,134	.52	.00	-.01

Segment		Lanes	Capacity	Existing Without Project				Existing With Project				Project Increment	
				AM Pk Hr		PM Pk Hr		AM Pk Hr		PM Pk Hr			
				Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	AM	PM
406	Between Rye Canyon & Magic Mtn	4M	8,000	4,400	.55	5,400	.68	4,395	.55	5,345	.67	.00	-.01
407	Between Magic Mtn & Valencia	4M	8,000	4,600	.58	5,600	.70	4,641	.58	5,549	.69	.00	-.01
408	Between Valencia & McBean	4M	8,000	5,600	.70	6,400	.80	5,977	.75	6,935	.87	.05	.07
409	Between McBean & Pico/Lyons	4M	8,000	6,200	.78	6,700	.84	6,577	.82	7,217	.90	.04	.06
410	Between Pico/Lyons & Calgrove	4M	8,000	6,700	.84	6,500	.81	7,011	.88	6,922	.87	.04	.06
411	Between Calgrove & SR-14	4M*	6,400	6,900	1.08	6,500	1.02	7,184	1.12	6,891	1.08	**.04**	**.06**
412	South of SR-14	5M + 2T (6M + 1H + 2T)	12,400 (16,000)	13,900 (13,900)	1.12 (.87)	9,300 (9,300)	.75 (.58)	14,157 (14,157)	1.14 (.88)	9,560 (9,560)	.77 (.60)	**.02** (.01)	.02 (.02)

M = Mixed-Flow/General Purpose Lane (Capacity = 2,000 vehicles per hour)
M = Mixed-Flow Lane on an Extended Uphill Grade, Without a Truck Lane (Capacity = 1,600 vehicles per hour)*
T = Truck Lane (Capacity = 1,200 vehicles per hour)
H = HOV Lane (Capacity = 1,600 vehicles per hour)
() = Currently under construction
***Bold** = Significant impact*
Capacities derived from PeMS data and through discussions with Caltrans staff.

In comparison to the Existing plus Project scenario, the Project Buildout Year 2021 Cumulative Conditions scenario presented above depicts the 2021 project buildout scenario and includes both the I-5/SR-14 HOV Direct Connector Project and the I-5 Improvement Project in place and, on that basis, determined that the proposed project would not result in significant impacts to the I-5 freeway mainline.

As noted above, the I-5/SR-14 Direct HOV Connector project is approximately 60 percent complete at this time and is anticipated to be completed in Fall 2012. (**Final EIR, Appendix F4.5**, I-5/SR-14 Direct HOV Connector Project Status.) However, the analysis presented here assumes the improvement is not in place and, therefore, under the Existing plus Project scenario, the proposed project would result in significant impacts on I-5 south of the SR-14 interchange south to the junction with I-210. With completion of the Direct HOV Connector project, there would be no significant impacts south of the SR-14 interchange, i.e., freeway segment number 412 would not be significantly impacted. (See **Table 4.5-18E** above, Segment 412, (numbers in parentheticals depict conditions with improvement in place).

As to the segment of I-5 between Calgrove and SR-14, the improvement recommended to mitigate the identified impact is the addition of one truck lane in the southbound direction. This improvement will be constructed as part of the first phase of construction of the I-5 Improvement Project discussed above; the Early Implementation Project, which will include construction of a truck lane in the southbound direction from Pico/Lyons to the SR-14, is scheduled to be completed in July 2013. (See footnote 17, supra.) **Table 4.5-18F, Freeway Volumes and V/C Ratios – Existing Plus Project Plus Mitigation Conditions**, summarizes the resulting V/C with the mitigation in place. The project applicant will pay to Caltrans the Mission Village project's pro-rata share of the costs to implement the I-5 Improvement Project. See Section 11, Cumulative Mitigation Measures, MV 4.5-29.

Table 4.5-18F
Freeway Volumes and V/C Ratios – Existing + Project + Mitigation Conditions

Segment		Lanes	Capacity	Existing Without Project				Existing With Project				Project Increment	
				AM Pk Hr		PM Pk Hr		AM Pk Hr		PM Pk Hr			
				Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	AM	PM
Southbound													
411.	Between Calgrove & SR-14	4M + 1T	9,200	6,900	1.08	6,500	1.02	7,184	.78	6,891	.75	-.30	-.27

M = Mixed-Flow/General Purpose Lane (Capacity = 2,000 vehicles per hour)
T = Truck Lane (Capacity = 1,200 vehicles per hour)
Capacities derived from PeMS data and through discussions with Caltrans staff.

f. Congestion Management Program (CMP) Analysis

As noted above, the CMP is a state-mandated program enacted by the state legislature with the passage of various Assembly Bills. The requirements for the program became effective with voter approval of Proposition 111 in June 1990. The Los Angeles County CMP requires that a proposed development project address two subject area with respect to traffic impacts—the project's impacts on the CMP highway system and the project's impacts on the local and regional transit system. Each is addressed separately below.

(1) Highways

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

According to the CMP guidelines, the geographical area examined in a CMP traffic impact analysis consists of the CMP monitoring locations that meet the following criteria:

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

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

(a) CMP Intersections

The CMP intersections nearest to the project site are the intersection of Chiquito Canyon Road/SR-126 and the Valencia Boulevard/Magic Mountain Parkway intersection. The number of trips to and from the proposed project is forecast to include more than 50 peak hour trips at each of these intersections; 201 peak hour trips for Chiquito Canyon Road/SR-126 and 174 peak hour trips for Valencia Boulevard/Magic Mountain Parkway. The next closest CMP intersection is the intersection of Railroad Avenue (formerly San Fernando Road) and Lyons Avenue, and the maximum number of project trips at that location would be less than 50 during the peak hour (approximately 6 peak hour trips).

The impact analyses presented above show how the proposed project alone does not result in a significant impact at either CMP intersection location; however, under cumulative conditions each intersection requires mitigation to operate at an acceptable CMP level of service. As shown on **Table 4.5-21, ICU and LOS Summary – With Project Conditions with Mitigation**, the mitigation identified for each intersection would result in LOS D conditions at each location, which exceeds the CMP acceptable LOS E threshold.

(b) CMP Freeway Segments

The nearest mainline freeway CMP monitoring locations are the following:

- I-5 north of SR-126
- I-5 north of SR-14

The proposed project is forecast to add 150 or more peak hour trips to each of these locations and, as such, a CMP mainline freeway analysis is required. See **Appendix 4.5**, Traffic Impacts Analysis, Table 3-5. The next closest mainline freeway CMP monitoring location is the segment of I-5 north of Osborne Street in the San Fernando Valley. The maximum number of project trips at that location is less than 150 during the peak hour since the amount of project trips entering and leaving the Santa Clarita Valley is under that threshold. See **Appendix 4.5**, Traffic Impacts Analysis, Table 3-5.

As shown above in **Table 4.5-18,** analysis of the I-5 mainline freeway segments that meet the CMP criteria for analysis determined that the proposed project would not result in a significant impact at either of those locations.

(2) Project Transit Impacts

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

Buildout of the Mission Village project is forecast to generate approximately 58,000 ADT. To estimate the number of project trips that would use public transit, the number of project ADT is multiplied by an occupancy factor (1.4) to determine total person trips, the resulting number is then multiplied by the applicable Metro factor (0.035) to determine the forecast number of transit trips that would be generated by the proposed project. As shown on **Table 4.5-19, Transit Trip Summary**, under the Standard Bus Route scenario, the proposed project would generate approximately 230 transit trips during the AM peak hour and 290 transit trips during the PM peak hour. Under the CMP Transit Corridor Scenario, which represents a scenario in which there would be more bus routes and shorter headways, the proposed project would generate approximately 400 transit trips during the AM peak hour and 500 transit trips during the PM peak hour

Table 4.5-19
Transit Trip Summary

	Standard Bus Route Scenario		CMP Transit Corridor Scenario1	
	AM Peak Hour	**PM Peak Hour**	**AM Peak Hour**	**PM Peak Hour**
Residential Vehicle Trips	2,245	2,857	2,245	2,857
Residential Person Trips[2]	3,143	4,000	3,143	4,000
Factor to Transit Trips	3.5%	3.5%	5%	5%
Sub-Total - Residential Transit Trips	110	140	157	200
Commercial Vehicle Trips	2,406	2,916	2,406	2,916
Commercial Person Trips[2]	3,368	4,082	3,368	4,082
Factor to Person Trips	3.5%	3.5%	7%	7%
Sub-Total – Commercial Transit Trips	118	143	236	286
Total Transit Trips	**228**	**283**	**393**	**486**

[1] *"Transit Corridor" consists of a series of transit nodes where frequent transit activity occurs. A transit node is defined as the intersection of two bus lines or fixed route shuttles, each with evening peak hour headways of 10 minutes or less.*
[2] *Person Trips = Vehicle Trips x 1.4*
Sources: Congestion Management Program for Los Angeles County, 2002 and 2004.

The City of Santa Clarita *Transportation Development Plan 2006–2015* (November 2006) (TDP) includes recommendations for short-term and medium term (5 to 10 years in future) transit service expansion in the Santa Clarita Valley. Specific to the vicinity of the Mission Village project, the TDP recommends the following medium-term bus route modifications as development proceeds and new road linkages are available:

> *Routes 3/7: As further development occurs, these routes should be extended further west on Magic Mountain Parkway and Valencia Boulevard. Portions could be converted to hybrid [combination fixed route/flexible route] service.*
>
> *Route 11: This potential hybrid route would serve the Newhall Ranch Landmark Village along Henry Mayo Drive, connecting to the MTS via Commerce Center Drive and Magic Mountain Parkway. [Route 11 would travel north on the Commerce Center Drive extension through the Mission Village project site and intersect with Henry Mayo Drive at SR-126.]*

With respect to funding, the TDP notes "if there are no significant changes in present formulas, it appears that SCT will maintain sufficient financial capacity to fund the recommended service expansion, subject to keeping escalation in operating expenses under tight control. If service expansion increases the budget faster than available revenues, the service expansion implementation can be delayed by a year or two." (TDP Executive Summary.)

The County does not have LOS standards for transit service that are applicable to future development, such as the proposed project; however, the potential demand for transit service that would result from the Mission Village project has the potential to result in a significant impact to transit services. As previously noted, in accordance with Specific Plan approval, the project includes a 1.2-acre site for a bus transfer station, which would facilitate the use of public transit for those who live or work at the project site. Additionally, the project applicant is working with City of Santa Clarita Transit to provide bus service to the project site.

Transit service is evaluated and funded on an as-needed basis. Coordination with the transit provider to identify appropriate bus stops (three proposed for Mission Village) and the payment of transit mitigation fees (adopted by SCT, Metro), as appropriate, would reduce the potential for transit-related impacts to a less than significant level. In this regard, to ensure that adequate transit capacity to serve the proposed project is available in the future, mitigation is proposed that requires the project applicant to pay applicable transit mitigation fees at the time of building permit issuance, unless the payment of such fees is modified by a transit mitigation agreement.

Metrolink, which is operated by the Southern California Regional Rail Authority (SCRAA), provides commuter rail service between the Antelope Valley and Downtown Los Angeles, and also links Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties with transfer service between the bus and rail systems. The closest Metrolink station to the project site (approximately 4.5 miles east) is located along Soledad Canyon Road east of Bouquet Canyon Road. Long-range plans as yet unspecified include an eventual Metrolink extension along the SR-126 corridor; land within Newhall Ranch is set aside for the Metrolink right-of-way, and a park-and-ride and/or train station.

With respect to bicycle and pedestrian facilities, the project has been designed for pedestrian connectivity and includes facilities for walking and bicycle use. The proposed project includes approximately 18,900 linear feet of community trails, 12,400 linear feet of local trails, and 9,200 linear feet of pathways. Community trails are unified pedestrian and bicycle routes (i.e., multi-use) in landscaped parkways, and are located along major roads in order to connect the Villages of the Specific Plan. A local trail is a multi-use route that may or may not follow a roadway; it provides access to amenities, the community trail network, or serves to link the Specific Plan Villages. Pathways consist of multi-purpose trails located adjacent to local collector roadways and provide a means of access between residential neighborhoods and parks, recreation centers, the school, and mixed-use commercial areas. In addition to these pedestrian/bicycle facilities, the project includes the installation of Class 2 bicycle lanes on portions of Magic Mountain Parkway and Commerce Center Drive extensions. For additional information regarding the pedestrian and bicycle facilities that would be provided as part of the project, please see EIR **Section 4.14**, **Parks and Recreation**.

In addition to the range of pedestrian and bicycle facilities that would be provided as part of the project, the proposed project would not conflict with the Metro Bicycle Transportation Strategic Plan to promote links between bicycle facilities and the transit network, including completion of the identified gaps in the inter-jurisdictional bikeway network.

g. On-Site Circulation Impacts

(1) On-Site Traffic Forecast

To derive traffic volume forecasts for the roadways within the project site, a focused traffic model was developed. Referred to as the Mission Village Traffic Model (MVTM), the model was developed to estimate traffic volume forecasts for roadways within the project site. The model was developed with the capability to derive detailed peak hour turning movement volumes at each of the on-site intersections. Forecast ADT volumes for buildout conditions (including Newhall Ranch plus other cumulative developments) within the project site and are provided in **Figure 4.5-12, ADT Volumes, Newhall Ranch Buildout Conditions – On-Site**.

As previously noted, the SCVCTM was used to calculate the general distribution of trips to and from the project site. From these overall distribution patterns, the MVTM was developed to provide an additional level of detail not possible with the SCVCTM. **Figure 4.5-13, Intersection Location Map – On-Site**, illustrates the intersection locations that were analyzed for peak hour volumes. Forecast traffic volumes for buildout conditions, including buildout of the entire Newhall Ranch Specific Plan, are illustrated in **Figure 4.5-14, AM Peak Hour Volumes, Newhall Ranch Buildout and Other Cumulative Development Buildout Conditions– On-Site**, for the AM peak hour and in **Figure 4.5-15, PM Peak Hour Volumes, Newhall Ranch Buildout And Other Cumulative Development Buildout Conditions – On-Site**, for the PM peak hour.

The peak hour traffic volumes referenced above were utilized to derive intersection lane configurations for the on-site intersections. An intersection capacity analysis based on these lanes and the forecast peak hour volumes is summarized in **Table 4.5-20, ICU and LOS Summary – On-Site Intersections**. As shown, each intersection of local and/or private street roadways is anticipated to operate at LOS C or better under buildout conditions. Two intersections along Magic Mountain Parkway, KK Drive/HH Street at Magic Mountain Parkway and Westridge Parkway at Magic Mountain Parkway, are forecast to operate at LOS D during the PM peak hour and LOS C during the AM peak hour. Detailed ICU calculation worksheets for each intersection are provided in Appendix B of the AFA Traffic Impacts Analysis in **Appendix 4.5** of the EIR.

Table 4.5-20
ICU and LOS Summary – On-Site Intersections

Intersection		Peak Hour			
		AM		PM	
		ICU	LOS	ICU	LOS
1.	B St/C St	0.16	A	0.18	A
2.	B St/Magic Mtn Pkwy	0.56	A	0.61	B
3.	A St/Magic Mtn Pkwy	0.62	B	0.66	B
4.	A St/B St	0.29	A	0.29	A
5.	A St/C St	0.19	A	0.19	A
6.	Q1 St/A St	0.25	A	0.24	A
7.	R St/A St	0.50	A	0.49	A
8.	EE Dr/A St	0.51	A	0.44	A
9.	Commerce Center Drive/A St	0.60	A	0.60	A
10.	KK/HH Dr/Magic Mtn Pkwy	0.72	C	0.82	D
11.	II Dr/Magic Mtn Pkwy	0.65	B	0.72	C
12.	Westridge Pkwy/Magic Mtn Pkwy	0.71	C	0.89	D
13.	Commerce Center Drive/Magic Mtn Pkwy	0.73	C	0.69	B
14.	Westridge Pkwy/OO Dr	0.34	A	0.42	A
15.	Commerce Center Drive/DD Dr	0.44	A	0.59	A
16.	Commerce Center Drive/FF Dr	0.37	A	0.55	A
17.	Commerce Center Drive/GG St	0.60	A	0.52	A
18.	EE Dr/II Dr	0.13	A	0.13	A
19.	EE Dr/DD Dr	0.28	A	0.37	A
20.	EE Dr/FF Dr	0.50	A	0.49	A
21.	Westridge Pkwy/QQ St	0.40	A	0.43	A
22.	Westridge Pkwy/RR St	0.36	A	0.42	A
23.	Westridge Pkwy/Entrada	0.35	A	0.39	A
24.	II Dr/DD Dr	0.14	A	0.17	A
25.	II Dr/CC Dr	0.13	A	0.18	A
26.	HH St/Driveway	0.36	A	0.33	A
27.	HH St/DD Dr	0.29	A	0.28	A
28.	HH St/CC Dr	0.34	A	0.38	A
29.	KK Dr/LL St	0.15	A	0.14	A
30.	KK Dr/LL2 Dr	0.15	A	0.14	A
31.	K St/B St	0.14	A	0.16	A

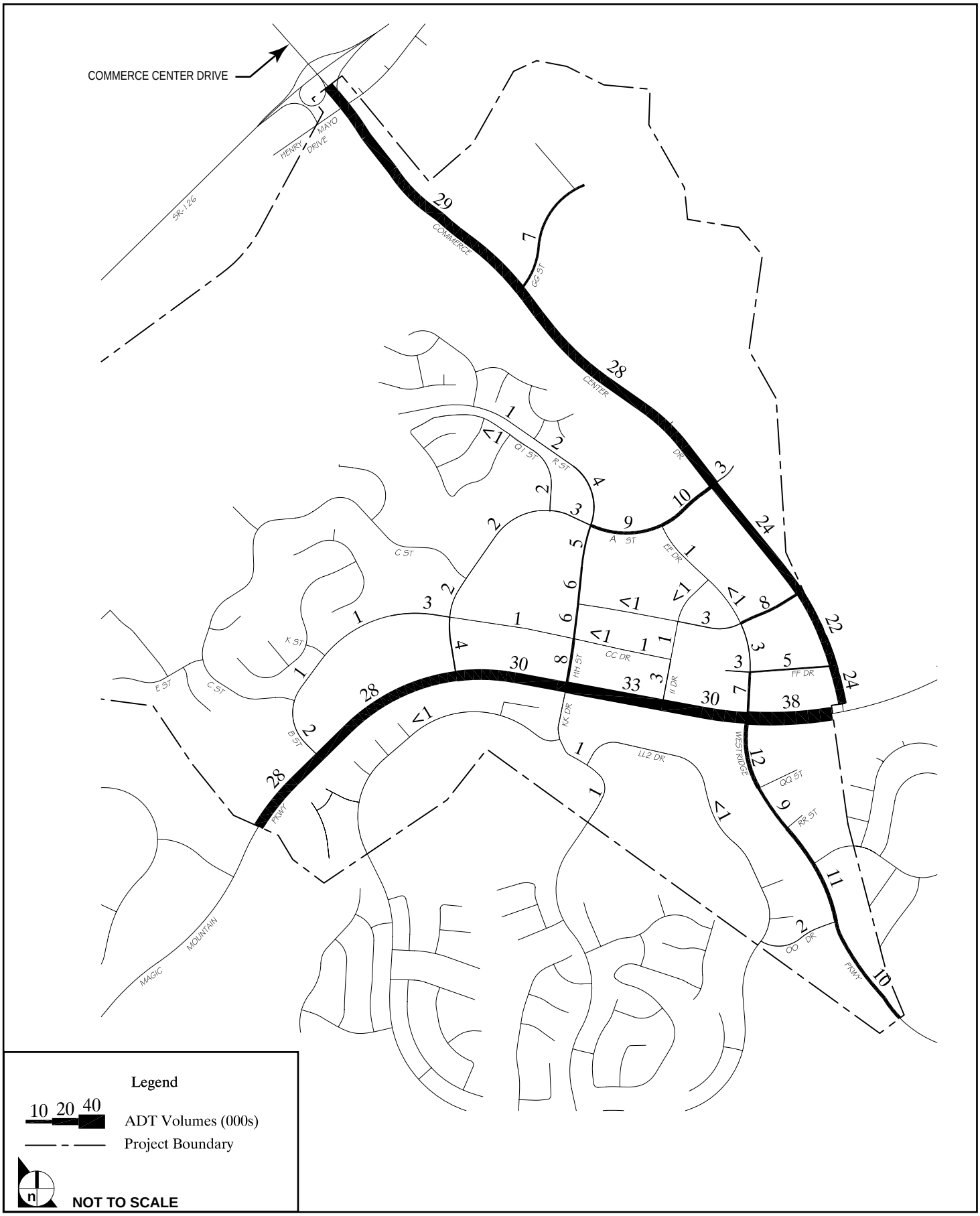
Level of service ranges: 0.00–0.60 = A 0.61–0.70 = B 0.71–0.80 = C 0.81–0.90 = D 0.91–1.00 = E Above 1.00 = F

*Source: Austin-Foust Associates, Inc., Mission Village Traffic Impact Analysis, October 2010 (**Appendix 4.5**).*

Each on-site intersection also was evaluated regarding the need for traffic signals based on peak hour traffic signal warrants. Details of the warrants analysis are provided in Appendix I to the AFA Traffic Impacts Analysis, which is included in **Appendix 4.5** of this EIR. Based on the warrants analysis, the following intersections are anticipated to meet the peak hour warrants when the Newhall Ranch Specific Plan area is fully built out:

2. B Street and Magic Mountain Parkway
3. A Street and Magic Mountain Parkway
9. Commerce Center Drive and A Street
10. KK Drive/HH Street and Magic Mountain Parkway
11. II Drive and Magic Mountain Parkway
12. Westridge Parkway and Magic Mountain Parkway
13. Commerce Center Drive and Magic Mountain Parkway
15. Commerce Center Drive and DD Drive
17. Commerce Center Drive and GG Street
21. Westridge Parkway and QQ Street (fire station signal)

In addition, the County has determined that a traffic signal will be necessary at the Westridge Parkway at Old Rock Road/Boulder Crest Drive intersection due to the proximity of the existing elementary school.

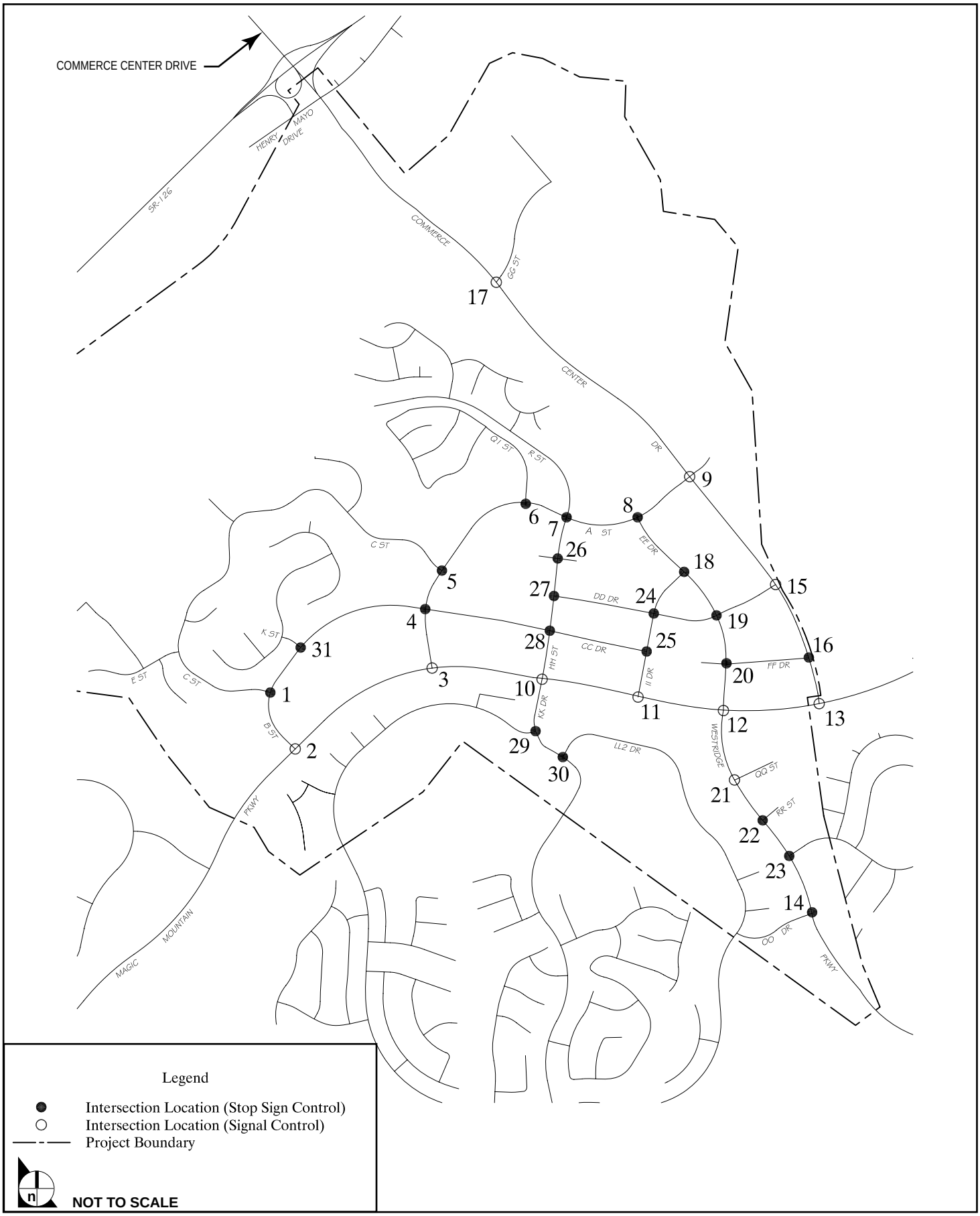


SOURCE: Austin Foust Associates, Inc. – August 2010

FIGURE **4.5-12**

ADT Volumes, Newhall Ranch Buildout Conditions – On-Site

32-99A•08/10

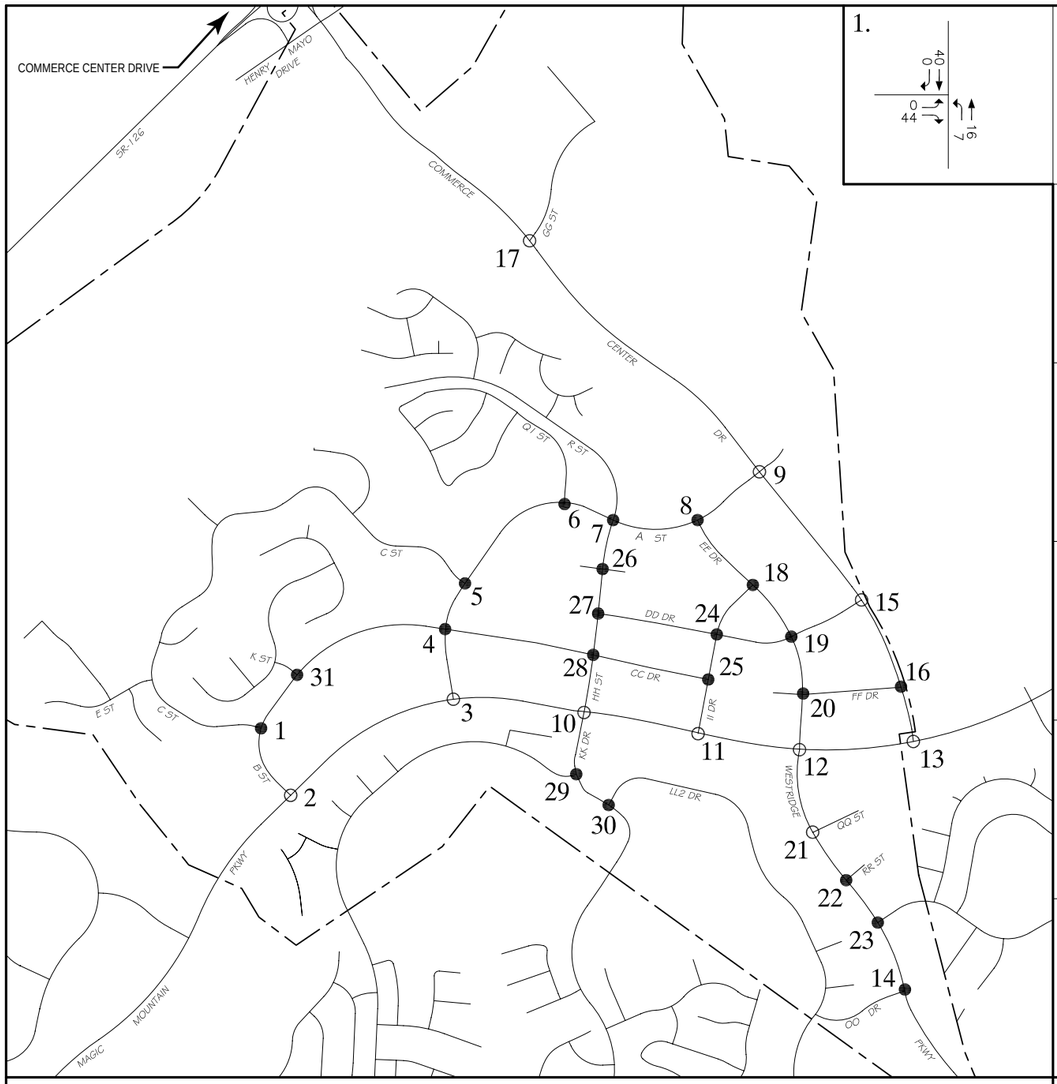


SOURCE: Austin Foust Associates, Inc. – August 2010

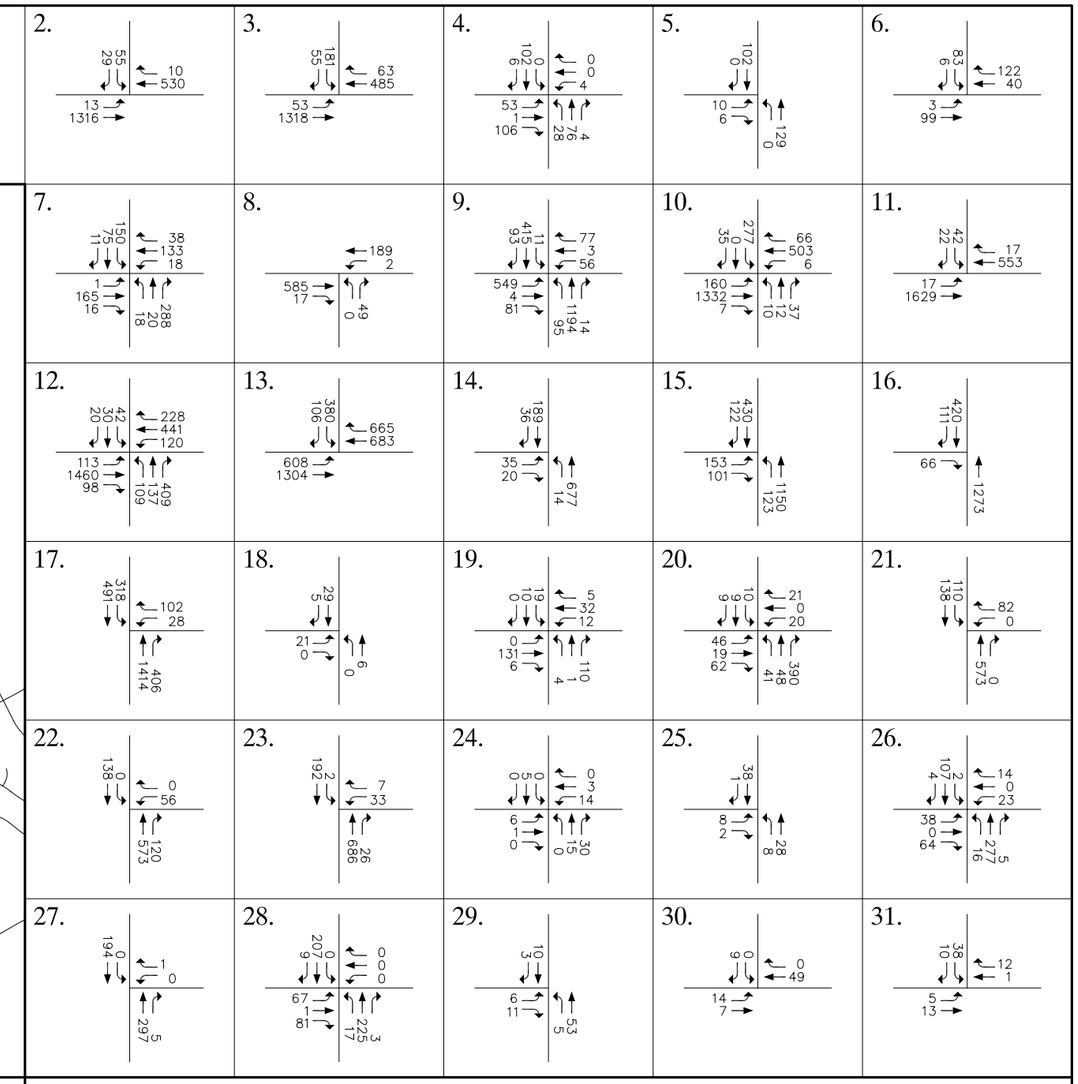
FIGURE **4.5-13**

Intersection Location Map – On-Site

32-99A•08/10



INTERSECTION LOCATIONS



INTERSECTION VOLUMES - AM PEAK HOUR

Legend

- ● Intersection Location (Stop Sign Control)
- ○ Intersection Location (Signal Control)
- —·— Project Boundary
- XX Intersection Volume

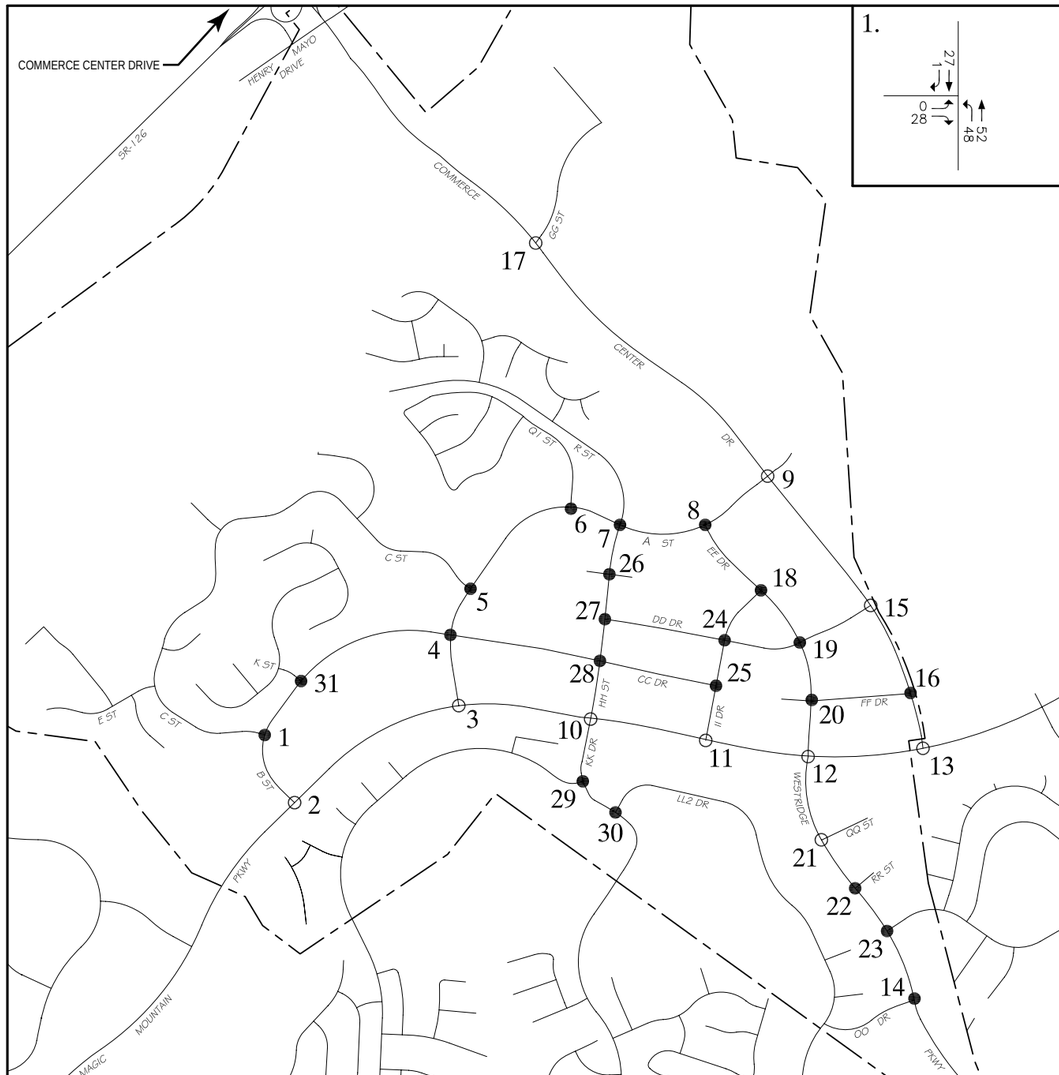
NOT TO SCALE

SOURCE: Austin Foust Associates, Inc. – August 2010

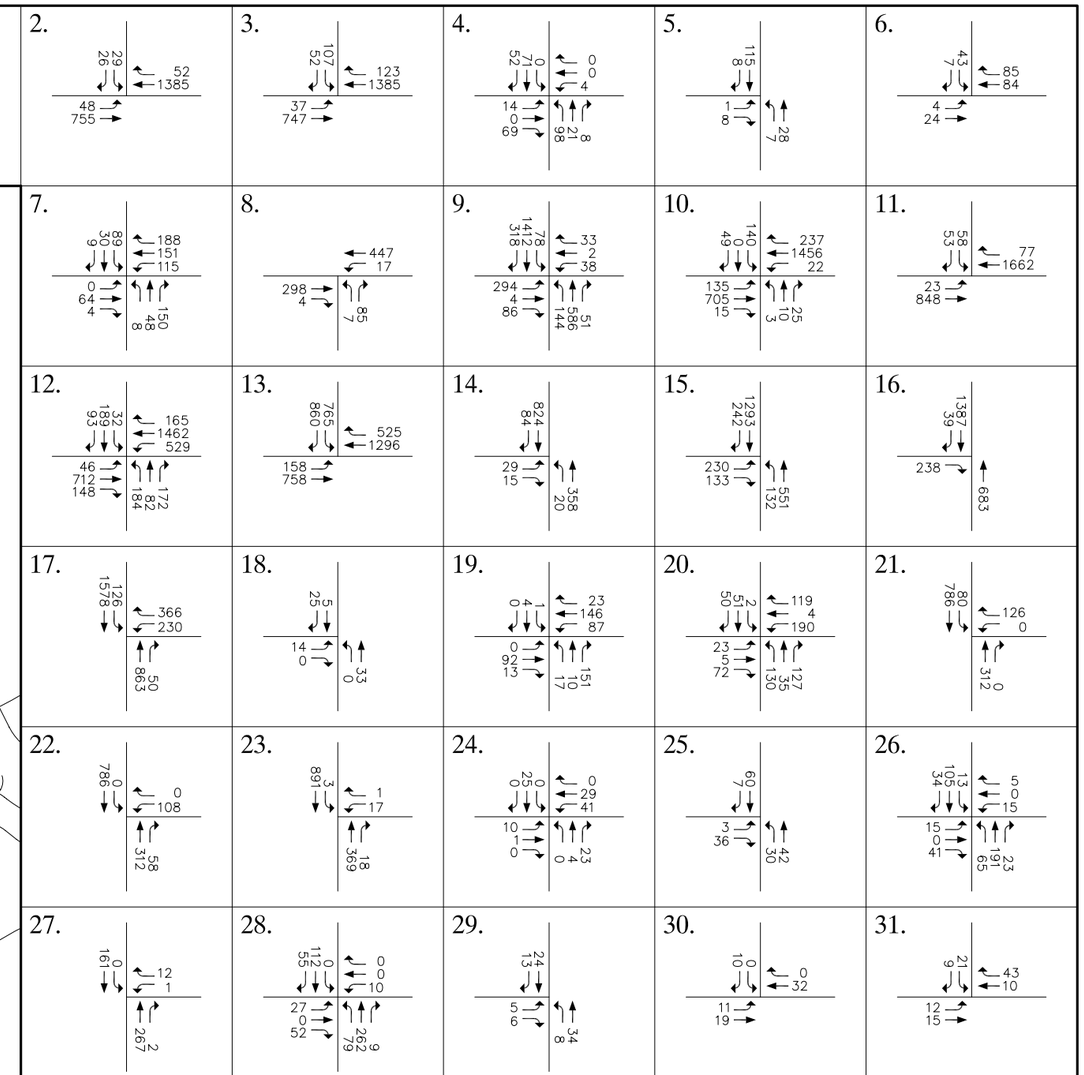
FIGURE **4.5-14**

AM Peak Hour Volumes, Newhall Ranch and Other Cumulative Development Buildout Conditions – On-Site

032-99A•08/10



INTERSECTION LOCATIONS



INTERSECTION VOLUMES - PM PEAK HOUR

Legend

- ● Intersection Location (Stop Sign Control)
- ○ Intersection Location (Signal Control)
- —·— Project Boundary
- ← XX Intersection Volume

NOT TO SCALE

SOURCE: Austin Foust Associates, Inc. – August 2010

FIGURE **4.5-15**

PM Peak Hour Volumes, Newhall Ranch and Other Cumulative Development Buildout Conditions – On-Site

032-99A•08/10

9. MITIGATION MEASURES

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

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

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

(1) On-Site Mitigation

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

SP 4.8-2 Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall indicate the specific improvements for all on-site roadways which are necessary to provide adequate roadway and intersection capacity as well as adequate right-of-way for the subdivision and other expected traffic. Transportation performance evaluations shall be approved by Los Angeles County Department of Public Works according to standards and policies in effect at that time. The transportation performance evaluation shall form the basis for specific conditions of approval for the subdivision. *[This EIR, **Section 4.5**, provides the required transportation performance evaluation and, in combination with **Project Description, Section 1.0**, indicates the on-site roadway improvements necessary to provide adequate capacity.]*

SP 4.8-3 The applicants for future subdivisions shall provide the traffic signals at the 15 locations labeled B through P in Figure 4.8-17 [of the Newhall Ranch Specific Plan Final EIR] as well as any additional signals warranted by future subdivision design. Signal warrants shall be prepared as part of the transportation performance evaluations noted in Mitigation Measure 4.8-2 [of the Newhall Ranch Specific Plan Final EIR]**.** *[Ten (10) of the intersections located within the Mission Village site will be signalized intersections, including the three intersections depicted as signalized by Specific Plan Figure 4.8-17: Commerce Center Drive and "A" Street, Commerce Center Drive and Magic Mountain Parkway, and Magic Mountain Parkway and "A" Street. This EIR,* ***Section 4.5****, in combination with the traffic analysis presented in EIR* ***Appendix 4.5****, provides the required signal warrants.]*

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

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

(2) Off-Site Arterials

SP 4.8-6 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall determine the specific improvements needed to each off-site arterial and related costs in order to provide adequate roadway and intersection capacity for the expected Specific Plan and General Plan buildout traffic trips. The transportation performance evaluation shall be based on the Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant shall be required to fund its fair share of improvements to these arterials, as stated on Table 4.8-18 [of the Newhall Ranch Specific Plan Final EIR]. The applicants' total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor-Serving, Mixed-Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the County and/or the City at each building permit. For off-site areas within the County unincorporated area, the applicant may construct improvements for credit against or in lieu of paying the fee. *[This mitigation measure may or may not be applicable depending upon approval of other Newhall Ranch Specific Plan subdivisions in process.]*

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

SP 4.8-7 Each future performance evaluation which shows that a future subdivision map will create significant impacts on SR-126 shall analyze the need for additional travel lanes on SR-126. If adequate lane capacity is not available at the time of subdivision, the applicant of the subdivision shall fund or construct the improvements necessary to serve the proposed increment of development. Construction or funding of any required facilities

shall not preclude the applicant's ability to seek state, federal, or local funding for these facilities. *[The future performance evaluation presented in this EIR, **Section 4.5**, determined that the Mission Village project would cause significant impacts at the Commerce Center Drive/SR-126 intersection at buildout, and that the project would be responsible for its fair-share of improvements to the intersections.]*

(4) Congestion Management Plan Mitigation

SP 4.8-8 Project-specific environmental analysis for future subdivision maps which allow construction shall comply with the requirements of the CMP in effect at the time that subdivision map is filed. *[The future performance evaluation presented in this EIR, **Section 4.5**, complies with the requirements of the Congestion Management Program presently in effect.]*

(a) SR-126 in Ventura County

SP 4.8-9 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation evaluation including all of the Specific Plan land uses which shall determine the specific improvements needed to the following intersections with SR-126 in the City of Fillmore and community of Piru in Ventura County: "A", "B", "C", "D", and "E" Streets, Old Telegraph, Olive, Central, Santa Clara, Mountain View, El Dorado Road, and Pole Creek (Fillmore), and Main/Torrey and Center (Piru). The related costs of those intersection improvements and the project's fair share shall be estimated based upon the expected Specific Plan traffic volumes. The transportation performance evaluation shall be based on the Los Angeles County Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant's total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor Center, Mixed Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the City of Fillmore and the County of Ventura at each building permit. *[This mitigation measure may or may not be applicable depending upon approval of other Newhall Ranch Specific Plan subdivisions in process. The referenced transportation evaluation was prepared as part of the Landmark Village EIR (SCH No. 2004021002).]*

(5) Freeway/Highway Intersections and Interchanges

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

*EIR, **Section 4.5**, fulfills the requirements of this Specific Plan mitigation measure relative to Mission Village.]*

SP-4.8-11 The applicant of the Newhall Ranch Specific Plan shall participate in an I-5 developer fee program, if adopted by the Board of Supervisors for the Santa Clarita Valley. *[The Board of Supervisors has not adopted a developer fee program for the Santa Clarita Valley. However, the applicant and ~~currently is in negotiations with~~ Caltrans have prepared ~~regarding~~ a funding agreement under which the applicant will pay to Caltrans the project's pro-rata share of the I-5 Improvement Project. See Final EIR, **Appendix F4.5.**].*

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

SP-4.8-13 Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a traffic analysis approved by the Los Angeles County Department of Public Works. The analysis will assess project and cumulative development (including an existing plus cumulative development scenario under the County's Traffic Impact Analysis Report Guidelines [TIA] and its Development Monitoring System [DMS]). In response to the traffic analysis, the applicant may construct off-site traffic improvements for credit against, or in lieu of paying, the mitigation fees described in **Mitigation Measure 4.8-6** [of the Newhall Ranch Specific Plan Final EIR]. If future subdivision maps are developed in phases, a traffic study for each phase of the subdivision map may be submitted to determine the improvements needed to be constructed with that phase of development. *[The traffic analysis presented in this **Section 4.5** fulfills the requirements of this Specific Plan mitigation measure.]*

b. Additional Mitigation Measures Proposed by this EIR

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

Mitigation is proposed relative to the significant impacts identified under the existing plus ambient plus project scenario, and under the 2021 project buildout cumulative scenario. (Mitigation relative to the significant impacts identified under a 2035 long-range cumulative scenario are set forth in Section 11, Cumulative Mitigation Measures, below.) As to the improvements proposed to mitigate the identified impacts under the existing plus ambient plus project condition, the project, along with other projects as appropriate, is responsible for the construction of these improvements and, consistent with County Department of Public Works policy, the improvements are to be implemented prior to occupancy of the project, unless otherwise indicated by an approved phasing analysis.

With respect to the 2021 project buildout cumulative mitigation, the project is responsible for its fair share of the recommended improvements, and the timing of these improvements shall be as determined by the *Westside Santa Clarita Valley Phasing Analysis for the City of Santa Clarita* (July 2006) and the *Westside Santa Clarita Valley Roadway Phasing Analysis* (November 2006), as updated (collectively, *Westside Roadway Phasing Analysis*). As discussed above, the *Westside Roadway Phasing Analysis* identifies the specific roadway and intersection improvements necessary to support Westside development. The cumulative mitigation measures identified below and in Section 11 are derived from the improvements identified in the phasing analysis and, consequently, represent a subset of the phasing analysis improvements. The phasing analysis considered the additional traffic associated with all Westside development, not just the proposed Mission Village project, and it apportions to each project its share of the identified improvements based on ADT volumes, not on the basis of significant impacts as is the case with the analysis presented in this section.

The *Westside Roadway Phasing Analysis* also identifies milestones based on residential unit counts and commercial square footages to specify when the improvements identified herein as mitigation should be in place. As such, the proposed project will be developed in accordance with these milestones and the corresponding specific improvements as identified in the most current County Department of Public Works-approved phasing analysis. The project applicant intends to document regularly the amount of Westside development that has occurred and that the required improvements have been constructed at the identified milestones. A copy of the *Westside Roadway Phasing Analysis* is included in EIR **Appendix 4.5**.

In the event the project fully constructs any of the mitigation improvements set forth below at its own cost, the project shall be entitled to a credit in an amount equal to the cost to construct the improvement, less the project's proportionate share. Additionally, once the B&T District is established that encompasses the area covered by the *Westside Roadway Phasing Analysis*, i.e., the Westside B&T District, the payment of B&T fees by the project shall be in lieu of any remaining proportionate share due for those improvements located within the boundaries of the newly formed district.

For those improvements identified below that are located within the Valencia or Via Princessa B&T District, no payment of mitigation or B&T District fees towards the improvements is required by the proposed project. The Mission Village project site is not located within the boundaries of either district, and the defined "area of benefit" for these districts, i.e., those properties identified as receiving benefit from the improvements funded by the respective district, does not include the project site. Therefore, payment of the B&T District fees is not required of the project. Moreover, the Valencia and Via Princessa B&T Districts are full mitigation districts, which means that the B&T fees paid by development within the districts (development east of I-5 or "Eastside Development"), combined with other funding sources (e.g.,

state and federal funds, gas and sales taxes, etc.), have been calculated to cover the full cost of all improvements necessary to construct the arterial network as described in the respective county and city general plan transportation elements. This network has been designed to accommodate both local and cumulative traffic from outside the B&T districts, including Mission Village. Therefore, the B&T district improvements, which include improvements identified as project mitigation below, will be fully funded and constructed through the respective district without Mission Village participation and, as a result, the corresponding significant impacts identified in this section will be fully mitigated and no further mitigation is necessary. (Please see EIR **Appendix 4.5** for copies of the Valencia B&T District Report Update [March 2008] and the Via Princessa Bridge and Major Thoroughfare Construction Fee District Update Report [March 2002].)

Additionally, as previously noted, the project applicant is in the process of forming a new B&T District, the Westside B&T District, which would encompass the Mission Village site, as well as other Westside development. By its participation in the new district, the project will be required to contribute funding towards construction of the planned Westside roadway infrastructure. As is the case with the Valencia and Via Princessa B&T Districts, the infrastructure to be constructed within the district will be based on approved general plan transportation elements and, accordingly, has been designed to accommodate both local traffic within the district and cumulative traffic from outside the district. In this manner, the Mission Village project will be required to fund its share of the improvements within the new district that are necessary to support both Westside and Eastside Development.

(1) Off-Site Mitigation

(a) Off-Site Mitigation Measures – Existing Plus Ambient Plus Project Conditions

MV 4.5-1 28. The Old Road & McBean Parkway – Consistent with the milestones established in the most current County Department of Public Works (DPW) approved Westside Roadway Phasing Analysis, the project applicant shall stripe a third southbound through lane and a westbound right-turn lane at the intersection. Detailed signing and striping plans and traffic signal plans shall be submitted to the County Department of Public Works for review and approval. (*The Mission Village project's fair-share responsibility for the improvements identified in this mitigation measure is 27% in the cumulative condition. This fair-share information is provided to facilitate any future action by the Project applicant to seek participatory funding from other development unrelated to the Mission Village project. Please refer to EIR **Appendix 4.5**, AFA Traffic Impact Analysis, Appendix J, for fair-share calculations.*)

MV 4.5-2 94. Commerce Center Drive & SR-126 – The project applicant shall reconstruct the existing intersection as a grade-separated interchange prior to issuance of building permits for the 2,780th residential unit and 935,000 square feet of non-residential commercial uses (or an equivalent traffic-generating combination thereof), or as otherwise provided in the most current County DPW approved Westside Roadway Phasing Analysis, whichever would require reconstruction of the intersection first.

Detailed signing and striping plans and traffic signal plans shall be submitted to the County Department of Public Works for review and approval. (*The Mission Village project's fair-share responsibility for the improvements identified in this mitigation measure is 44.8% in the cumulative condition. This fair-share information is provided to facilitate any future action by the Project applicant to seek participatory funding from other development unrelated to the Mission Village project. Please refer to EIR* ***Appendix 4.5****, AFA Traffic Impact Analysis, Appendix J, for fair-share calculations.*)

(b) Off-Site Mitigation Measures – 2021 Project Buildout Cumulative Conditions

MV 4.5-3 7. I-5 Southbound Ramps & SR-126 – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to stripe a fourth westbound through lane. (Project Share = 14.3 percent. Please refer to EIR **Appendix 4.5**, AFA Traffic Impact Analysis, Appendix J, for fair-share calculations.)

MV 4.5-4 12. I-5 Southbound Ramps & Valencia Boulevard – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to re-stripe the second westbound free-flow right-turn lane to a third westbound through lane/shared free-flow right-turn lane. (Project Share = 7.5 percent)

MV 4.5-5 25. The Old Road & Rye Canyon Road – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to: (i) add a second northbound through lane and a second southbound left-turn lane; and (ii) convert the northbound and westbound free-flow right-turn lanes to conventional right-turn lanes with overlap phasing. (Project Share = 7.1 percent)

28. The Old Road & McBean Parkway – The project's compliance with **mitigation MV 4.5-1** would mitigate the project's contribution to the identified significant impact and no further mitigation is required.

MV 4.5-6 45. McBean Parkway/Magic Mountain Parkway – The improvements recommended to mitigate the project's identified significant impacts at this intersection are to re-stripe for a third eastbound through lane and add a right-turn overlap phase for a westbound right-turn lane. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvement and, under such scenario, shall be entitled to reimbursement from the Valencia B&T District for the full cost of the improvement, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis.~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~

MV 4.5-7 48. McBean Parkway/Newhall Ranch Road – The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) Re-stripe for a fourth westbound through lane; and (ii) ~~Reconstruct~~ Re-stripe the northbound approach to provide dual right-turn lanes in conjunction with appropriate pedestrian safety enhancements ~~remove the pork chop island and reconfigure as conventional dual right-turn lanes~~. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (7%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis.~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~

MV 4.5-8 55. Orchard Village & McBean Parkway – The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) add a separate southbound left-turn lane; (ii) add a separate southbound through lane; (iii) add a separate southbound right-turn lane; and (iv) reconfigure the existing southbound right-turn lane as a shared left-turn through lane, as identified in the mitigation for the Henry Mayo Newhall Memorial Hospital expansion project. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the project applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (3%) and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. ~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~ (Note: In the event the above improvements are implemented as part of the Henry Mayo Newhall Memorial Hospital expansion project, Mission Village would no longer result in significant impacts at this intersection and no mitigation would be necessary.)

MV 4.5-9 66. Bouquet Canyon Road & Newhall Ranch Road – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to reconfigure the second eastbound right-turn lane to a shared through/right-turn-lane ~~stripe a third eastbound through lane while maintaining three eastbound left-turn lanes and two eastbound right-turn lanes~~. This improvement is located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the

potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (4%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis.~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~

94. Commerce Center Drive & SR-126 – The project's compliance with **Mitigation MV 4.5-2** would mitigate the project's contribution to the identified significant impact and no further mitigation is required.

(c) Other Mitigation Measures

MV 4.5-10~~6~~ Applicable transit mitigation fees shall be paid by the project applicant at the time of building permit issuance, unless modified by an approved transit mitigation agreement.

MV 4.5-11~~7~~ Prior to the commencement of project construction activities, the project applicant shall institute construction traffic management controls in accordance with the California Department of Transportation (Caltrans) traffic manual. These traffic management controls shall include measures determined on the basis of site-specific conditions including, as appropriate, the use of construction signs (e.g., "Construction Ahead") and delineators, and private driveway and cross-street closures.

MV 4.5-12~~8~~ Traffic signals shall be installed at the following intersections within the project site. The design and construction of the traffic signals shall be the sole responsibility of the project. The signals shall be in place to the satisfaction of the County Department of Public Works. Detailed signing and striping plans and traffic signal plans shall be submitted to Public Works for review and approval:

- B Street at Magic Mountain Parkway;
- A Street at Magic Mountain Parkway;
- Commerce Center Drive at A Street;
- KK Drive/HH Street at Magic Mountain Parkway;
- II Drive at Magic Mountain Parkway;
- Westridge Parkway at Magic Mountain Parkway;
- Commerce Center Drive at Magic Mountain Parkway;
- Commerce Center Drive at DD Drive;
- Commerce Center Drive at GG Street; and
- Westridge Parkway at QQ Street (Fire Station Signal).

MV 4.5-13~~9~~ The project applicant, or the current owner of the development, shall monitor the following intersections for the installation of traffic signals once the Mission Village elementary school is opened and every year thereafter for up to five years after the certificate of occupancy of the last residential unit of Mission Village (excluding age restricted/qualified residential units and residential units within the Saugus School District) is issued and the full planned occupancy of 900 students for the school is reached (or fewer students if official documentation from the Newhall School District shows no increase in student enrollment for five consecutive school years):

- A Street at B Street/CC Drive;
- Q1 Street at A Street; and
- HH Street/R Street at A Street.

The referenced monitoring shall include the submittal of annual traffic signal warrant analyses to the County Department of Public Works for review and approval. At the time, if any, traffic signals are warranted, the applicant shall enter into a secured agreement/bond with Public Works to guarantee the installation of traffic signals, design the necessary striping and signal plans, and construct the signals to the satisfaction of Public Works. Any security for the traffic signal construction submitted will be returned once the construction is completed to the satisfaction of Public Works or at the expiration of the referenced monitoring program.

MV 4.5-14~~0~~ The project shall install a traffic signal at the following location after detailed signing and striping plans and traffic signal plans have been reviewed and approved by the County Department of Public Works:

- Westridge Parkway at Old Rock Road.

MV 4.5-15~~1~~ Prior to recordation of the first tract map in Mission Village, a revised Westside Roadway Phasing Analysis (RPA), prepared and submitted by the project applicant, shall be reviewed and approved by the County Department of Public Works (DPW). This RPA shall update the previously approved RPA and identify the necessary improvements and residential unit thresholds (timing requirements) for those improvements for Mission Village based on then-current phasing assumptions. The revised RPA shall include actual traffic counts on newly constructed roadways and/or at intersections where traffic mitigation measures have been carried out. Subsequent updates of the RPA shall be prepared based on the following development thresholds:

i) 3,176 residential units and 13.17 million square feet non-residential uses;

ii) 6,066 residential units and 14.87 million square feet non-residential uses;

iii) 14,515 residential units and 16.00 million square feet non-residential uses;

iv) 21,373 residential units and 17.65 million square feet non-residential uses;

v) 25,001 residential units and 19.78 million square feet non-residential uses; and

vi) 27,615 residential units and 22.08 million square feet non-residential uses.

In addition, the applicant shall submit to DPW for review and approval an annual report, due January 30th for the prior year, identifying the number and type of residential and commercial building permits issued for Mission Village (and any other development within the Westside Santa Clarita area). The purpose of this annual report will be to track development progress against the thresholds identified in the AFA Traffic Impact Analysis and the then-current RPA.

c. Post-Mitigation Level of Significance

Table 4.5-21, ICU and LOS Summary – With Project Conditions with Mitigation, depicts the level of service for each of the significantly impacted intersections, before and after implementation of the recommended mitigation measures. **Table 4.5-21** shows that, under project buildout conditions, implementation of the mitigation measures would fully mitigate the project's impacts.

Specific to the Commerce Center Drive/SR-126 intersection (Intersection 94), which is to be re-constructed as a grade-separated interchange, a project report for the interchange has been completed and as of this writing final design plans are being prepared. The interchange project will reconstruct the following three intersections: (1) Commerce Center Drive at Henry Mayo Drive (Intersection 81); (2) Commerce Center Drive at SR-126 Eastbound Ramps (Intersection 82); and (3) Commerce Center Drive at SR-126 Westbound Ramps (Intersection 83). Once the interchange project is completed, each of the three intersections will operate at LOS D or better under long-range buildout conditions that include the proposed Mission Village project. (See EIR **Appendix 4.5**, AFA Traffic Impacts Analysis, Appendix A.)

10. LONG-RANGE (2035) CUMULATIVE IMPACTS

a. Introduction

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

> *(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 areawide conditions contributing to the cumulative impact.*

Table 4.5-21
ICU and LOS Summary - With Project Conditions with Mitigation

Intersection	Existing plus Ambient without Project				Existing plus Ambient plus Project with Mitigation				Change	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
28. The Old Road & McBean Pky	0.70	B	0.92	E	0.67	B	0.91	E	-0.03	-0.01
94. Commerce Center Dr. & SR-126	0.57	A	0.84	D	n/a	n/a	n/a	n/a	n/a	n/a
Intersection	**2021 Cumulative Conditions without Project**				**2021 Cumulative Conditions with Project with Mitigation**				**Change**	
	AM		**PM**		**AM**		**PM**			
	ICU	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**AM**	**PM**
Freeway Ramp Intersections (County)										
7. I-5 SB Ramps & SR-126	0.83	D	0.70	B	0.73	C	0.66	B	-0.10	-0.04
12. I-5 SB Ramps & Valencia	0.72	C	0.81	D	0.62	B	0.67	B	-0.10	-0.14
County Arterial Intersections										
25. The Old Road & Rye Canyon	1.03	F	1.21	F	0.78	C	0.91	E	-0.25	-0.30
28. The Old Road & McBean Pky	0.53	A	0.85	D	0.54	A	0.86	D	0.01	0.01
City Arterial Intersections										
45. McBean Parkway & Magic Mountain Parkway	0.71	C	0.92	E	0.75	C	0.92	E	-0.04	-0.00
48. McBean Parkway & Newhall Ranch Road	0.78	C	1.01	F	0.70	B	0.81	D	-0.08	-0.20
55. Orchard Village & McBean Parkway	0.65	B	0.83	D	0.64	B	0.80	C	-0.01	-0.03
66. Bouquet Canyon Road & Newhall Ranch Road	0.89	D	1.01	F	0.83	D	0.88	D	-0.06	-0.13

Level of service ranges: 0.00–0.60 = A 0.61–0.70 = B 0.71–0.80 = C 0.81–0.90 = D 0.91–1.00 = E Above 1.00 = F

The impacts analysis presented above for the 2021 Project Buildout Cumulative Conditions scenario was based on the SCVCTM long-range model, which includes both specifically identified future development projects and a summary of projections based on the planned land uses designated in the County Area Plan and City General Plan update. As noted above, the 2021 scenario was derived based on an interpolation of the long-range 2035 buildout forecast for the Santa Clarita Valley, adjusted to 2021 conditions. The cumulative impacts analysis presented in this section is based on full valley buildout under 2035 conditions.

b. Long-Range 2035 Valley Buildout Conditions

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

As discussed above, future land development is anticipated for the Santa Clarita Valley as quantified in the SCVCTM. The SCVCTM includes a land use database prepared by Los Angeles County and the City of Santa Clarita that is based on the approved General Plans of each jurisdiction. This database is regularly updated as specific projects are proposed and thus is a comprehensive listing of cumulative projects. In addition, the land use database has also been updated based on the proposed One Valley One Vision plan.[18]

Table 4.5-22, Land Use and ADT Summary – 2035 Buildout Cumulative Conditions, summarizes the SCVCTM land use databases for the base year of the model and the Long-range Buildout/Cumulative horizon, which is referred to as 2035. From the land use summarized here, the SCVCTM calculates vehicle trip generation estimates for the Santa Clarita Valley.

As previously noted, where future development will occur but specific projects have not been developed, the SCVCTM Long-range Buildout/Cumulative database utilizes land use projections based on the allowable uses shown in the proposed One Valley One Vision County Area Plan/City General Plan update. Additionally, the trips forecast by the model are not limited to trips generated in the Santa Clarita Valley, but also include trips to and from the Valley, as well as through trips; thus, regional growth, which is traffic volume increases occurring outside of the SCVCTM area, is incorporated into the model.

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18 Austin-Foust Associates, Inc., *One Valley One Vision Valley-Wide Traffic Study*, September 2009.

Table 4.5-22
Land Use and ADT Summary – 2035 Buildout Cumulative Conditions

Land Use Type	Units	Existing[1]		Long-Range General Plan/Cumulative (2035)[2]	
		Amount	ADT	Amount	ADT
Single Family Residential	du	48,300	471,200	81,500	796,400
Multi-Family Residential	du	24,400	191,000	67,000	504,400
Commercial Retail	msf	9,200	515,700	23,300	1,215,700
Commercial Office	msf	2,100	26,000	18,100	214,400
Industrial Park	msf	18,300	107,600	40,700	240,700
Hotel	Rooms	1,000	8,000	2,500	20,800
Elem/Middle School	Stu.	29,900	43,400	51,900	75,200
High School	Stu.	10,500	18,800	18,500	33,100
Other	--	--	106,300	--	174,100
TOTAL	--	--	1,488,000	--	3,274,800

Notes:
du = Dwelling Units
msf = Million Square Feet
Stu. = Students
Source: Santa Clarita Valley Consolidated Traffic Model
[1] *Most current information available at time of report preparation (2004 conditions).*
[2] *Proposed One Valley One Vision County Area Plan/City General Plan update*
Source: Austin-Foust Associates, Inc., Traffic Impact Analysis (October 2010), ***Appendix 4.5***

(1) Year 2035 Cumulative Impacts on Arterial Roadways

The most current version of the SCVCTM that includes all the cumulative projects in the vicinity of the project site is the version of the model utilized in connection with preparation of the *One Valley One Vision (OVOV) Valley-Wide Traffic Study*, September 2009. The OVOV version of the SCVCTM provides forecasts of buildout conditions generally considered applicable to the year 2035, and it was updated specifically to include the proposed project and the current proposals for nearby cumulative projects. To estimate Santa Clarita Valley buildout conditions for a scenario without the project, the project traffic was subtracted from the SCVCTM forecasts for Valley buildout conditions.

The 2035 no project and with-project cumulative conditions peak hour turning movement volumes for the intersections in the project study area are depicted on Figures 4-13 through 4-20 in the AFA Traffic Impacts Analysis, EIR **Appendix 4.5**. Peak hour ICU values for project buildout conditions can be found in **Table 4.5-23, ICU and LOS Summary – Buildout Conditions with and without Project**, which provides a comparison between the no-project and the with-project conditions for 2035 cumulative conditions. As shown on the table, under buildout conditions with project traffic, several intersections are forecast to exceed the City's impact threshold. The following intersections are those at which the

proposed project's contribution would be cumulatively considerable, thereby resulting in significant cumulative impacts under cumulative buildout conditions:

7. I-5 SB Ramps & SR-126 (Caltrans/County)

9. The Old Road & I-5 SB Ramps (Caltrans/County)

10. I-5 SB Ramps & Magic Mountain Parkway (Caltrans/County)

11. I-5 NB Ramps & Magic Mountain Parkway (Caltrans/City)

12. I-5 SB Ramps & Valencia Boulevard (Caltrans/County)

14. I-5 SB Ramps & McBean Parkway (Caltrans/County)

16. I-5 SB Ramps/Marriott Way & Pico Canyon Road (Caltrans/County)

17. I-5 NB On/Off & Lyons Avenue (Caltrans/City)

25. The Old Road & Rye Canyon Road (County)

26. The Old Road & Magic Mountain Parkway (County)

28. The Old Road & McBean Parkway (County)

37. Tourney Road & Magic Mountain Parkway (City)

45. McBean Parkway & Magic Mountain Parkway (City)

48. McBean Parkway & Newhall Ranch Road (City)

51. Wiley Canyon Road & Lyons Avenue (City)

54. Orchard Village Road & Wiley Canyon (City)

55. Orchard Village Road & McBean (City)

57. Valencia Boulevard & Magic Mountain Parkway (City)

66. Bouquet Canyon Road & Newhall Ranch Road (City)

94. Commerce Center Drive & SR-126 (County/Caltrans)

(2) Year 2035 Cumulative Impacts on Freeway Mainline

Long-range cumulative impacts on freeways (I-5) were assessed based on a peak hour analysis as recommended by Caltrans and as required by the CMP, which identifies peak hour directional volumes as the basis for the evaluation. LOS was calculated based on volume-density (passenger cars per hour per lane) using the HCM procedures for mainline freeway segment analysis, as recommended by Caltrans.

Table 4.5-23
ICU and LOS Summary – Buildout Conditions with and without Project

Intersection	Year 2035 Cumulative Conditions without Project				Year 2035 Cumulative Conditions with Project				Increase	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
Freeway Ramp Intersections (County)										
7. I-5 SB Ramps & Henry Mayo Drive (SR-126)	0.96	E	0.96	E	0.97	**E**	0.98	**E**	**0.01**	**0.02**
9. The Old Road & I-5 SB Ramps	0.84	D	1.34	F	0.85	D	1.35	**F**	0.01	**0.01**
10. I-5 SB Ramps & Magic Mountain Parkway	0.82	D	0.88	D	0.89	D	0.95	**E**	0.07	**0.07**
12. I-5 SB Ramps & Valencia Boulevard	0.77	C	1.19	F	0.81	D	1.22	**F**	0.04	**0.03**
14. I-5 SB Ramps & McBean Parkway	0.72	C	0.94	E	0.74	C	0.98	**E**	0.02	**0.04**
16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue	0.67	B	1.08	F	0.69	B	1.09	**F**	0.02	**0.01**
Freeway Ramp Intersections (City)										
8. I-5 NB Ramps & SR-126	0.59	A	0.69	B	0.60	A	0.71	C	0.01	0.02
11. I-5 NB Ramps & Magic Mountain	0.78	C	0.86	D	0.87	D	0.95	**E**	0.09	**0.09**
13. I-5 NB Ramps & Valencia	0.78	C	0.83	D	0.79	C	0.84	D	0.01	0.01
15. I-5 NB Ramps & McBean	0.60	A	0.67	B	0.62	B	0.69	B	0.02	0.02
17. I-5 NB On/Off & Lyons Ave	0.56	A	0.89	D	0.57	A	0.91	**E**	0.01	**0.02**
County Arterial Intersections										
25. The Old Road & Rye Canyon	1.73	F	2.04	F	1.79	**F**[1]	2.10	**F**[1]	**0.06**	**0.06**
26. The Old Road & Magic Mountain Parkway	0.66	B	0.79	C	0.78	C	0.93	**E**	0.12	**0.14**
27. The Old Road & Valencia Boulevard	0.72	C	0.83	D	0.79	C[1]	0.89	D[1]	0.07	0.06
28. The Old Road & McBean Parkway	0.63	B	0.94	E	0.70	B	0.98	**E**	0.07	**0.04**
29. The Old Road & Pico Canyon Road	0.89	D	0.96	E	0.91	E[1]	0.97	E[1]	0.02	0.01
94. Commerce Center Drive & SR-126	1.31	F	1.60	F	1.60	**F**	1.89	**F**	**0.29**	**0.29**
105. Westridge Parkway & Valencia Boulevard	0.58	A	0.62	B	0.59	A	0.76	C	0.01	0.14
108. Stevenson Ranch Parkway & Pico Canyon Road	0.61	B	0.79	D	0.61	B	0.79	C	0.00	0.00
109. Stevenson Ranch Parkway & Poe Parkway/Chase	0.48	A	0.58	A	0.48	A	0.58	A	0.00	0.00

Intersection	Year 2035 Cumulative Conditions without Project				Year 2035 Cumulative Conditions with Project				Increase	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
City Arterial Intersections										
30. Stanford & Rye Canyon	0.55	A	0.77	C	0.57	A	0.78	C	0.02	0.01
33. Copper Hill & Newhall Ranch	0.78	C	0.84	D	0.81	D	0.87	D	0.03	0.03
35. Copper Hill & Decoro	0.70	B	0.80	C	0.72	C	0.81	D	0.02	0.01
36. Tourney & Valencia	0.67	B	0.87	D	0.68	B	0.88	D	0.01	0.01
37. Tourney & Magic Mountain	0.67	B	0.86	D	0.74	C	0.93	**E**	0.07	**0.07**
44. McBean & Valencia	0.69	B	0.94	E	0.70	B	0.94	E	0.01	0.00
45. McBean & Magic Mountain	0.92	E	1.19	F	0.96	E[1]	1.22	**F[1]**	0.04	**0.03**
48. McBean & Newhall Ranch	0.81	D	1.11	F	0.83	D	1.15	**F**	0.02	**0.04**
49. McBean & Decoro	0.65	B	0.66	B	0.65	B	0.66	B	0.00	0.00
51. Wiley Canyon & Lyons Cyn	0.70	B	1.07	F	0.71	C	1.08	**F**	0.01	**0.01**
54. Orchard Village & Wiley Cyn	1.06	F	1.42	F	1.08	**F[1]**	1.44	**F[1]**	**0.02**	**0.02**
55. Orchard Village & McBean	0.90	D	1.20	F	0.92	E[1]	1.23	**F[1]**	0.02	**0.03**
57. Valencia & Magic Mountain	1.10	F	1.24	F	1.12	**F**	1.25	**F**	**0.02**	**0.01**
65. Bouquet & Soledad	0.78	C	0.99	E	0.79	C	0.99	E	0.01	0.00
66. Bouquet & Newhall Ranch[2]	0.93~~9~~	E	~~1.14~~ .95	E~~F~~	0.95~~9~~	**E**	~~1.17~~ .97	**E~~F~~**	**0.02~~0~~**	**0.02~~3~~**

Bold = Significant Impact
Intersection Level of Service Performance Criteria is LOS D, unless noted otherwise.
[1] *LOS E is the Level of Service Performance Criteria for this location*
Level of service ranges: 0.00–0.60 = A 0.61–0.70 = B 0.71–0.80 = C 0.81–0.90 = D 0.91–1.00 = E Above 1.00 = F
Source: Austin-Foust Associates, Inc., Traffic Impact Analysis (October 2010), ***Appendix 4.5***
[2] See *Mission Village - Responses to Comments Analysis*, AFA (April 29, 2011), **Final EIR, Appendix F4.5**.

The results of the analysis are provided in **Table 4.5-24, Freeway Volumes and V/C Ratios - 2035 Valley Buildout Conditions (HOV 2000 VPH)** and **Table 4.5-24A, Freeway Volumes and V/C Ratios - 2035 Valley Buildout Conditions (HOV 1600 VPH)**. For this scenario, the full I-5 Improvement Project (I-5 Truck Lane and HOV project) is presumed to be in place, as are new HOV lanes south of the SR-14 interchange (I-5/SR-14 Direct HOV Connector project). As noted above, Caltrans presently is implementing the I-5/SR-14 Direct HOV Connector project with completion scheduled for 2012, and the I-5 Improvement Project (I-5 HOV Truck Lane Project SR-14 to Parker Road) ~~with completion~~ is scheduled for completion in 2016. As under the 2021 scenario, two separate analyses were conducted, one utilizing a 2000 VPH capacity for the HOV lanes and the second utilizing a 1600 VPH capacity for the HOV lanes.

As shown on **Table 4.5-24**, under the HOV 2000 VPH capacity scenario, the incremental increase in traffic resulting from the proposed project would not exceed 0.02 and, therefore, the proposed project would not result in significant cumulative impacts to the I-5 freeway under this scenario. Similarly, as shown on **Table 4.5-24A**, under the HOV 1600 VPH capacity scenario, the incremental increase in traffic resulting from the proposed project would not exceed 0.02 and, therefore, the proposed project would not result in

significant cumulative impacts to the I-5 freeway under this scenario. While several segments of the southbound HOV lane would exceed a V/C ratio of 1.00 under this scenario, since the 1600 capacity used for the HOV lane represents mid-LOS C conditions, a V/C ratio of 1.00 in the HOV lanes actually represents LOS C/D conditions and, therefore, a better operating condition than does a V/C ratio of 1.00 in a mixed-flow lane, which represents LOS E/F.

Based on the above analysis, and because the increment of project traffic decreases as the distance from the project site increases, the project also would not result in significant traffic impacts on the I-5 mainline north of Lake Hughes, nor south of the confluence of the I-5 and SR-14.

~~Nonetheless~~ The potential traffic impacts of the Mission Village project also were analyzed as part of the larger Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan (RMDP/SCP) project. The RMDP/SCP project was evaluated in a joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR; SCH No. 2000011025) prepared by the U.S. Army Corps of Engineers (Corps) and the California Department of Fish and Game (CDFG). The EIS/EIR analyzed the potential impacts associated with buildout of the Newhall Ranch Specific Plan, including Mission Village, the Valencia Commerce Center, and Entrada developments. The EIS/EIR determined that the development facilitated by the RMDP/SCP project would result in potentially significant cumulative impacts to I-5 and includes mitigation measures requiring that the project applicant contribute its fair-share of the costs to implement the I-5 Improvement Project. (See RMDP/SCP EIS/EIR Section 4.8, Traffic, Mitigation Measures TR-10 through TR-18. Relevant portions of RMDP/SCP EIS/EIR Section 4.8 are included in **Final EIR, Appendix F4.5**.) Thus, as identified in the EIS/EIR, when Mission Village traffic is considered as part of the larger volume of traffic that would be generated by the Newhall Ranch Specific Plan and other Westside development, the traffic generated by that larger project, in combination with other cumulative development within the Santa Clarita Valley and the surrounding areas, would result in significant cumulative impacts.

To implement the mitigation measures set forth in the EIS/EIR relative to Mission Village, and to ensure that the County is able to monitor and enforce such measures as they relate to the Mission Village project, this EIR includes mitigation measure MV 4.5-29, which requires the applicant to enter into an agreement with Caltrans to either construct or pay an equitable share of the costs to implement appropriate improvements. Please see **Section 11, Cumulative Mitigation Measures**, below, for additional information regarding MV 4.5-29.~~the project applicant presently is in negotiations with Caltrans regarding improvements to the I-5 freeway that would be funded, in part, by Westside development, including the Newhall Ranch Specific Plan area. While the proposed Mission Village project would not result in significant impacts to the I-5 freeway and, therefore, no mitigation is required under CEQA, the applicant and Caltrans, nevertheless, are working cooperatively towards transportation improvements for the facility.~~

Table 4.5-24
Freeway Volumes and V/C Ratios – 2035 Valley Buildout Conditions (HOV 2000 VPH)

Segment	Lanes	Capacity	Long-Range Without Project				Long-Range With Project				Project Increment	
			AM Pk Hr		PM Pk Hr		AM Pk Hr		PM Pk Hr			
			Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	AM	PM
Northbound												
401. North of Lake Hughes	4M	8,000	3,368	0.42	6,334	0.79	3,400	0.43	6,400	0.80	0.01	0.01
402. Between Lake Hughes & Parker	4M	8,000	3,655	0.46	7,388	0.92	3,700	0.46	7,500	0.94	0.00	0.02
403. Between Parker & Hasley Cyn	4M + 1H	10,000	4,047	0.40	8,848	0.88	4,100	0.41	9,000	0.90	0.01	0.02
404. Between Hasley Cyn & SR-126	4M + 1H + 1A	11,000	5,647	0.51	9,148	0.83	5,700	0.52	9,300	0.85	0.01	0.02
405. Between SR-126 & Rye Cyn	4M + 1H	10,000	6,000	0.60	8,077	0.81	6,000	0.60	8,100	0.81	0.00	0.00
406. Between Rye Cyn & Magic Mtn	4M + 1H	10,000	6,000	0.60	8,077	0.81	6,000	0.60	8,100	0.81	0.00	0.00
407. Between Magic Mtn & Valencia	4M + 1H + 1A	11,000	6,758	0.61	7,987	0.73	6,900	0.63	8,100	0.74	0.02	0.01
408. Between Valencia & McBean	4M + 1H	10,000	7,700	0.77	8,656	0.87	7,900	0.79	8,800	0.88	0.02	0.01
409. Between McBean & Pico/Lyons	4M + 1H	10,000	7,739	0.77	8,245	0.82	8,000	0.80	8,400	0.84	0.03	0.02
410. Between Pico/Lyons & Calgrove	4M + 1H + 1A	11,000	7,567	0.69	8,277	0.75	7,800	0.71	8,400	0.76	0.02	0.01
411. Between Calgrove & SR-14	4M + 1H + 1T	11,200	7,583	0.68	8,191	0.73	7,800	0.70	8,300	0.74	0.02	0.01
412. South of SR-14	6M + 2H + 2T	18,400	10,067	0.55	17,310	0.94	10,200	0.55	17,400	0.95	0.00	0.01
Southbound												
401. North of Lake Hughes	4M	8,000	4,613	0.58	6,366	0.80	4,700	0.59	6,400	0.80	0.01	0.00
402. Between Lake Hughes & Parker	4M	8,000	5,571	0.70	6,850	0.86	5,700	0.71	6,900	0.86	0.01	0.00
403. Between Parker & Hasley Cyn	4M + 1H	10,000	7,026	0.70	7,928	0.79	7,200	0.72	8,000	0.80	0.02	0.01

Segment	Lanes	Capacity	Long-Range Without Project				Long-Range With Project				Project Increment	
			AM Pk Hr		PM Pk Hr		AM Pk Hr		PM Pk Hr			
			Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	AM	PM
404. Between Hasley Cyn & SR-126	4M + 1H	10,000	7,338	0.73	9,241	0.92	7,500	0.75	9,300	0.93	0.02	0.01
405. Between SR-126 & Rye Cyn	4M + 1H + 1A	11,000	7,367	0.67	9,048	0.82	7,400	0.67	9,100	0.83	0.00	0.01
406. Between Rye Cyn & Magic Mtn	4M + 1H + 1A	11,000	7,373	0.67	10,239	0.93	7,400	0.67	10,300	0.94	0.00	0.01
407. Between Magic Mtn & Valencia	4M + 1H	10,000	7,231	0.72	9,717	0.97	7,500	0.75	9,900	0.99	0.03	0.02
408. Between Valencia & McBean	4M + 1H+ 1A	11,000	8,457	0.77	10,273	0.93	8,700	0.79	10,500	0.95	0.02	0.02
409. Between McBean & Pico/Lyons	4M + 1H	10,000	8,299	0.83	9,737	0.97	8,500	0.85	10,000	1.00	0.02	0.03
410. Between Pico/Lyons & Calgrove	4M + 1H + 1T	11,200	8,050	0.72	10,259	0.92	8,200	0.73	10,500	0.94	0.01	0.02
411. Between Calgrove & SR-14	4M + 1H + 2T	12,400	8,180	0.66	10,675	0.86	8,300	0.67	10,900	0.88	0.01	0.02
412. South of SR-14	6M + 2H + 2T	18,400	16,691	0.91	13,859	0.75	16,800	0.91	14,000	0.76	0.00	0.01

Notes:
M = Mixed-Flow/General Purpose Lane (Capacity = 2,200 vehicles per hour)
M = Mixed-Flow Lane on an Extended Uphill Grade, Without a Truck Lane (Capacity = 1,600 vehicles per hour)*
H = HOV Lane (Capacity = 2,200 vehicles per hour)
A = Auxiliary Lane (Capacity = 1,000 vehicles per hour)
T = Truck Lane (Capacity = 1,200 vehicles per hour)
Capacities derived from PeMS data and through discussions with Caltrans staff.
Source: Austin-Foust Associates, Inc., Traffic Impact Analysis (October 2010), ***Appendix 4.5***

Table 4.5-24A
Freeway Volumes and V/C Ratios - 2035 Valley Buildout Conditions (HOV 1600 VPH)

Segment	Lanes	Capacities		Long-Range Without Project				Long-Range With Project				Project Increment	
				MF Lanes		HOV Lanes		MF Lanes		HOV Lanes			
		MF Lanes	HOV Lanes	Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	MF	HOV
Northbound - AM Peak Hour													
401. North of Lake Hughes	4M	8,000	n/a	3,368	0.42	n/a	n/a	3,400	0.43	n/a	n/a	0.01	n/a
402. Between Lake Hughes & Parker	4M	8,000	n/a	3,655	0.46	n/a	n/a	3,700	0.46	n/a	n/a	0.00	n/a
403. Between Parker & Hasley Canyon	4M + 1H	8,000	1,600	3,717	0.46	330	0.21	3,760	0.47	340	0.21	0.01	0.00
404. Between Hasley Canyon & SR-126	4M + 1H + 1A	9,000	1,600	5,277	0.59	370	0.23	5,320	0.59	380	0.24	0.00	0.01
405. Between SR-126 & Rye Canyon	4M + 1H	8,000	1,600	5,480	0.69	520	0.33	5,480	0.69	520	0.33	0.00	0.00
406. Between Rye Canyon & Magic Mtn	4M + 1H	8,000	1,600	5,450	0.68	550	0.34	5,450	0.68	550	0.34	0.00	0.00
407. Between Magic Mtn & Valencia	4M + 1H+ 1A	9,000	1,600	6,148	0.68	610	0.38	6,280	0.70	620	0.39	0.02	0.01
408. Between Valencia & McBean	4M + 1H	8,000	1,600	6,990	0.87	710	0.44	7,170	0.90	730	0.46	0.03	0.02
409. Between McBean & Pico/Lyons	4M + 1H	8,000	1,600	7,019	0.88	720	0.45	7,250	0.91	750	0.47	0.03	0.02
410. Between Pico/Lyons & Calgrove	4M + 1H+ 1A	9,000	1,600	6,857	0.76	710	0.44	7,070	0.79	730	0.46	0.03	0.02
411. Between Calgrove & SR-14	4M + 1H + 1T	9,200	1,600	6,863	0.75	720	0.45	7,060	0.77	740	0.46	0.02	0.01
412. South of SR-14	6M + 2H + 2T	14,400	3,200	9,057	0.63	1,010	0.32	9,180	0.64	1,020	0.32	0.01	0.00
Northbound - PM Peak Hour													
401. North of Lake Hughes	4M	8,000	n/a	6,334	0.79	n/a	n/a	6,400	0.80	n/a	n/a	0.01	n/a
402. Between Lake Hughes & Parker	4M	8,000	n/a	7,388	0.92	n/a	n/a	7,500	0.94	n/a	n/a	0.02	n/a

Segment	Lanes	Capacities		Long-Range Without Project				Long-Range With Project				Project Increment	
				MF Lanes		HOV Lanes		MF Lanes		HOV Lanes			
		MF Lanes	HOV Lanes	Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	MF	HOV
403. Between Parker & Hasley Canyon	4M + 1H	8,000	1,600	7,538	0.94	1,310	0.82	7,670	0.96	1,330	0.83	0.02	0.01
404. Between Hasley Canyon & SR-126	4M + 1H + 1A	9,000	1,600	7,848	0.87	1,300	0.81	7,980	0.89	1,320	0.83	0.02	0.02
405. Between SR-126 & Rye Canyon	4M + 1H	8,000	1,600	6,787	0.85	1,290	0.81	6,810	0.85	1,290	0.81	0.00	0.00
406. Between Rye Canyon & Magic Mtn	4M + 1H	8,000	1,600	6,797	0.85	1,280	0.80	6,820	0.85	1,280	0.80	0.00	0.00
407. Between Magic Mtn & Valencia	4M + 1H+ 1A	9,000	1,600	6,697	0.74	1,290	0.81	6,800	0.76	1,300	0.81	0.02	0.00
408. Between Valencia & McBean	4M + 1H	8,000	1,600	7,326	0.92	1,330	0.83	7,460	0.93	1,340	0.84	0.01	0.01
409. Between McBean & Pico/Lyons	4M + 1H	8,000	1,600	6,895	0.86	1,350	0.84	7,030	0.88	1,370	0.86	0.02	0.02
410. Between Pico/Lyons & Calgrove	4M + 1H+ 1A	9,000	1,600	6,897	0.77	1,380	0.86	7,010	0.78	1,390	0.87	0.01	0.01
411. Between Calgrove & SR-14	4M + 1H + 1T	9,200	1,600	6,811	0.74	1,380	0.86	6,910	0.75	1,390	0.87	0.01	0.01
412. South of SR-14	6M + 2H + 2T	14,400	3,200	14,190	0.99	3,120	0.98	14,270	0.99	3,130	0.98	0.00	0.00
Southbound - AM Peak Hour													
401. North of Lake Hughes	4M	8,000	n/a	4,613	0.58	n/a	n/a	4,700	0.59	n/a	n/a	0.01	n/a
402. Between Lake Hughes & Parker	4M	8,000	n/a	5,571	0.70	n/a	n/a	5,700	0.71	n/a	n/a	0.01	n/a
403. Between Parker & Hasley Canyon	4M + 1H	8,000	1,600	6,336	0.79	690	0.43	6,490	0.81	710	0.44	0.02	0.01
404. Between Hasley Canyon & SR-126	4M + 1H	8,000	1,600	6,628	0.83	710	0.44	6,770	0.85	730	0.46	0.02	0.02
405. Between SR-126 & Rye Canyon	4M + 1H+ 1A	9,000	1,600	6,657	0.74	710	0.44	6,690	0.74	710	0.44	0.00	0.00
406. Between Rye Canyon & Magic Mtn	4M + 1H+ 1A	9,000	1,600	6,663	0.74	710	0.44	6,690	0.74	710	0.44	0.00	0.00

Segment	Lanes	Capacities		Long-Range Without Project				Long-Range With Project				Project Increment	
				MF Lanes		HOV Lanes		MF Lanes		HOV Lanes			
		MF Lanes	HOV Lanes	Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	MF	HOV
407. Between Magic Mtn & Valencia	4M + 1H	8,000	1,600	6,481	0.81	750	0.47	6,720	0.84	780	0.49	0.03	0.02
408. Between Valencia & McBean	4M + 1H+ 1A	9,000	1,600	7,567	0.84	890	0.56	7,790	0.87	910	0.57	0.03	0.01
409. Between McBean & Pico/Lyons	4M + 1H	8,000	1,600	7,359	0.92	940	0.59	7,540	0.94	960	0.60	0.02	0.01
410. Between Pico/Lyons & Calgrove	4M + 1H + 1T	9,200	1,600	7,060	0.77	990	0.62	7,190	0.78	1,010	0.63	0.01	0.01
411. Between Calgrove & SR-14	4M + 1H + 2T	10,400	1,600	7,170	0.69	1,010	0.63	7,280	0.70	1,020	0.64	0.01	0.01
412. South of SR-14	6M + 2H + 2T	14,400	3,200	13,701	0.95	2,990	0.93	13,800	0.96	3,000	0.94	0.01	0.01
Southbound - PM Peak Hour													
401. North of Lake Hughes	4M	8,000	n/a	6,366	0.80	n/a	n/a	6,400	0.80	n/a	n/a	0.00	n/a
402. Between Lake Hughes & Parker	4M	8,000	n/a	6,850	0.86	n/a	n/a	6,900	0.86	n/a	n/a	0.00	n/a
403. Between Parker & Hasley Canyon	4M + 1H	8,000	1,600	6,608	0.83	1,320	0.83	6,670	0.83	1,330	0.83	0.00	0.00
404. Between Hasley Canyon & SR-126	4M + 1H	8,000	1,600	7,851	0.98	1,390	0.87	7,900	0.99	1,400	0.88	0.01	0.01
405. Between SR-126 & Rye Canyon	4M + 1H+ 1A	9,000	1,600	7,578	0.84	1,470	0.92	7,630	0.85	1,470	0.92	0.01	0.00
406. Between Rye Canyon & Magic Mtn	4M + 1H+ 1A	9,000	1,600	8,399	0.93	1,840	1.15	8,460	0.94	1,840	1.15	0.01	0.00
407. Between Magic Mtn & Valencia	4M + 1H	8,000	1,600	7,777	0.97	1,940	1.21	7,960	1.00	1,940	1.21	0.03	0.00
408. Between Valencia & McBean	4M + 1H+ 1A	9,000	1,600	8,313	0.92	1,960	1.23	8,540	0.95	1,960	1.23	0.03	0.00
409. Between McBean & Pico/Lyons	4M + 1H	8,000	1,600	7,747	0.97	1,990	1.24	8,000	1.00	2,000	1.25	0.03	0.01

Segment	Lanes	Capacities		Long-Range Without Project				Long-Range With Project				Project Increment	
				MF Lanes		HOV Lanes		MF Lanes		HOV Lanes			
		MF Lanes	HOV Lanes	Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	MF	HOV
410. Between Pico/Lyons & Calgrove	4M + 1H + 1T	9,200	1,600	8,389	0.91	1,870	1.17	8,610	0.94	1,890	1.18	0.03	0.01
411. Between Calgrove & SR-14	4M + 1H + 2T	10,400	1,600	8,885	0.85	1,790	1.12	9,090	0.87	1,810	1.13	0.02	0.01
412. South of SR-14	6M + 2H + 2T	14,400	3,200	11,719	0.81	2,140	0.67	11,850	0.82	2,150	0.67	0.01	0.00

MF (or M) = Mixed-Flow/General Purpose Lane (Capacity = 2,000 vehicles per hour)
HOV (or H) = HOV Lane (Capacity = 1,600 vehicles per hour)
A = Auxiliary Lane (Capacity = 1,000 vehicles per hour)
T = Truck Lane (Capacity = 1,200 vehicles per hour)
Capacities derived from PeMS data and through discussions with Caltrans staff.

(3) Year 2035 Cumulative Impacts - No Potrero Canyon Road Bridge Scenario

The County's long-term plans as contained in the Los Angeles County Highway Plan, and the approved Newhall Ranch Specific Plan, identify three future bridge crossings of the Santa Clara River within the Specific Plan boundary – Commerce Center Drive Bridge, Long Canyon Road Bridge, and Potrero Canyon Road Bridge. Accordingly, the long-term (2035) cumulative impacts analysis presented above assumes the Potrero Canyon Road Bridge would be constructed and in place by 2035, consistent with the County's plans and the approved Specific Plan. However, the CDFG has approved, and the Corps presently is considering, a Newhall Ranch development scenario under which the Potrero Canyon Road Bridge would not be covered by federal and state permits. Specifically, as part of the Newhall Ranch RMDP/SCP, CDFG approved an alternative referred to as the Draft Least Environmentally Damaging Practicable Alternative (Draft LEDPA), which the Corps presently is considering as well. Under this alternative, in an effort to reduce impacts to jurisdictional waters and wetlands in the Santa Clara River and lower Potrero Canyon, construction of the Potrero Canyon Road Bridge would not be covered by the state and federal permits issued in connection with the RMDP/SCP.

In consideration of this potentiality, a supplemental analysis was conducted by AFA to determine what effect, if any, elimination of the Potrero Canyon Road Bridge would have on the results of the Long-Range (2035) Cumulative impacts analysis presented above, which includes the bridge as part of the circulation system. (See AFA Memorandum, *Long-Range Buildout Conditions Without Potrero Canyon Road Bridge* (February 22, 2011). A copy of the memorandum is included in **Appendix F4.5**. Note that the other analysis scenarios presented in this section do not include the bridge as part of the circulation system.) As

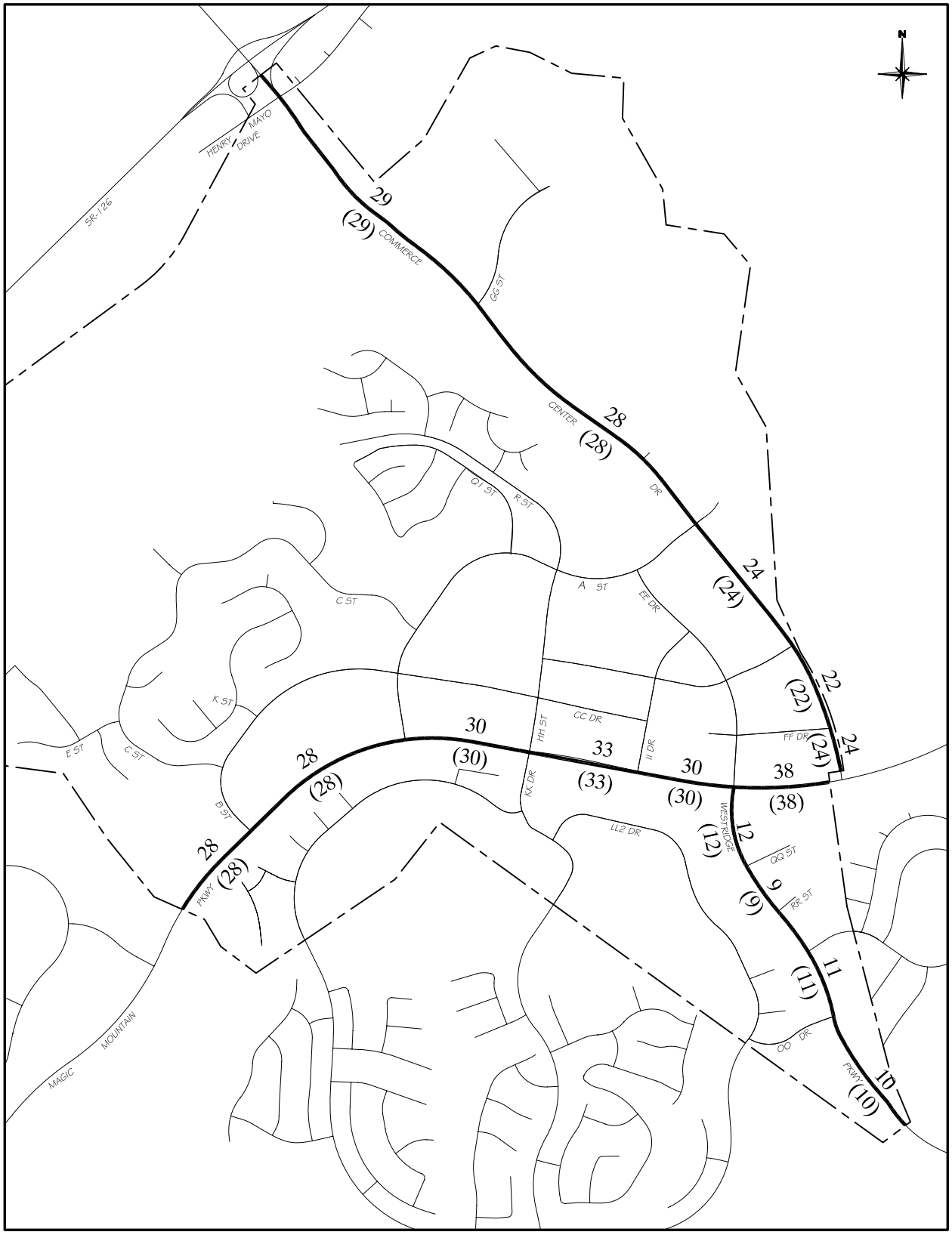
explained below, the analysis determined that under the "No-Bridge" scenario, there are no locations where removal of the Potrero Canyon Road Bridge would result in a new deficiency (i.e., LOS E or F) not identified under the "With-Bridge" scenario, or worsen an otherwise deficient condition (i.e., LOS E to LOS F) identified under the With-Bridge scenario and, therefore, the impact determinations made under the Long-Range (2035) Cumulative impacts analysis presented above would be unaffected by elimination of the bridge.

Under the No-Bridge analysis, long-range cumulative intersection ICUs and freeway V/C ratios were calculated using the SCVCTM, consistent with the methodology utilized for the With-Bridge scenario analysis.

The internal (i.e., on-site) arterial roadways were assessed by comparing SCVCTM model runs for the internal roadways under conditions with and without the bridge. The SCVCTM showed no discernible change to the traffic volumes on the arterial roadways within the project site with the bridge removed, as illustrated on **Figure 4.5-16, ADT Volumes On-Site - With and Without Potrero Canyon Road Bridge**. Local and collector streets within the project site are beyond the level of detail provided by the SCVCTM; however, because there would be no discernible change to the traffic volumes on the arterial roadways, traffic volumes on these local/collector streets would not be affected by removal of the bridge.

As to the off-site roadways, peak hour ICU values under the long-range No-Bridge scenario were calculated and are presented in **Table 4.5-25, ICU and LOS Comparison - Long-Range Buildout Cumulative Conditions (2035) With and Without Potrero Canyon Road Bridge**, which also presents the long-range With-Bridge ICU results presented in **Table 4.5-23** above. As shown on **Table 4.5-25**, there are no locations where removal of the Potrero Canyon Road Bridge would result in a deficiency (i.e., LOS E or F) not identified under the With-Bridge scenario, or worsen an otherwise deficient condition (i.e., LOS E to LOS F) as compared to the With-Bridge scenario.; that is, the impact determinations made under the With-Bridge scenario would be unaffected by elimination of the bridge. In each case where the conditions with the Bridge are LOS E or F, removal of the Bridge either has no effect on the intersection ICU, or in some cases, removal of the Bridge would actually improve conditions due to the resulting changes in travel distribution patterns. (Detailed ICU calculation worksheets are provided in **Final EIR, Appendix F4.5**.)

With respect to the I-5 freeway, **Table 4.5-26, Freeway Volumes and V/C Ratios - Long-Range Buildout Cumulative Conditions (2035) With and Without Potrero Canyon Road Bridge**, provides a comparison between the long-range buildout cumulative conditions for the I-5 freeway under the No-Bridge scenario and the long-range buildout cumulative With-Bridge conditions shown in **Table 4.5-24A**, above. The comparison shows that there are no freeway segments where removal of the Bridge would result in a new deficiency (i.e., V/C > 1.00) or worsen an otherwise deficient location previously identified.



Legend

40	ADT with Potrero Bridge (000s)
(40)	ADT without Potrero Bridge (000s)
———	On-Site Arterial Roadway
— - —	Project Boundary

Figure 1

ADT VOLUMES ON-SITE - WITH AND WITHOUT POTRERO CANYON ROAD BRIDGE

Mission Village
Long-Range Buildout Conditions without Potrero Canyon Road Bridge

Austin-Foust Associates, Inc.
105370_ADT2.dwg

Table 4.5-25
ICU and LOS Comparison – Long-Range Buildout Cumulative Conditions (2035) With and Without Potrero Canyon Road Bridge

Intersection	Long-Range Buildout Cumulative Conditions with Potrero Bridge				Long-Range Buildout Cumulative Conditions without Potrero Bridge				Net Change	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
Freeway Ramp Intersections (County)										
7. I-5 SB Ramps & Henry Mayo Drive (SR-126)	.83	D	.90	D	.84	D	.90	D	.01	.00
9. The Old Road & I-5 SB Ramps	.81	D	1.06	F	.82	D	1.03	F	.01	-.03
10. I-5 SB Ramps & Magic Mountain Parkway	.75	C	.82	D	.76	C	.82	D	.01	.00
12. I-5 SB Ramps & Valencia Boulevard	.65	B	.96	E	.65	B	.96	E	.00	.00
14. I-5 SB Ramps & McBean Parkway	.62	B	.84	D	.62	B	.84	D	.00	.00
16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue	.69	B	1.08	F	.66	B	.99	E	-.03	-.09
Freeway Ramp Intersections (City)										
8. I-5 NB Ramps & Henry Mayo Drive (SR-126)	.60	A	.71	C	.62	B	.71	C	.02	.00
11. I-5 NB Ramps & Magic Mountain Parkway	.76	C	.84	D	.76	C	.85	D	.00	.01
13. I-5 NB Ramps & Valencia Boulevard	.79	C	.84	D	.79	C	.85	D	.00	.01
15. I-5 NB Ramps & McBean Parkway	.62	B	.69	B	.61	B	.69	B	-.01	.00
17. I-5 NB On/Off & Lyons Avenue	.57	A	.79	C	.55	A	.79	C	-.02	.00
County Arterial Intersections										
25. The Old Road & Rye Canyon	.83	D	.89	D	.83	D	.89	D	.00	.00
26. The Old Road & Magic Mountain Parkway	.78	C	.89	D	.79	C	.90	D	.01	.01
27. The Old Road & Valencia Boulevard	.79	C	.89	D	.80	C	.89	D	.01	.00
28. The Old Road & McBean Parkway	.70	B	.89	D	.70	B	.90	D	.00	.01
29. The Old Road & Pico Canyon Road	.91	E	.97	E	.88	D	.95	E	-.03	-.02
81. Commerce Center Drive & Henry Mayo Drive	.71	C	.71	C	.71	C	.69	B	.00	-.02
82. Commerce Center Drive & SR-126 EB Ramps	.42	A	.43	A	.42	A	.43	A	.00	.00
83. Commerce Center Drive & SR-126 WB Ramps	.85	D	.83	D	.83	D	.82	D	-.02	-.01
105. Westridge Parkway & Valencia Boulevard	.59	A	.76	C	.58	A	.75	C	-.01	-.01

Intersection	Long-Range Buildout Cumulative Conditions with Potrero Bridge				Long-Range Buildout Cumulative Conditions without Potrero Bridge				Net Change	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
108. Stevenson Ranch Parkway & Pico Canyon Road	.61	B	.79	C	.54	A	.79	C	-.07	.00
109. Stevenson Ranch Parkway & Poe Parkway/Chase	.48	A	.58	A	.48	A	.58	A	.00	.00
City Arterial Intersections										
30. Avenue Stanford & Rye Canyon Road	.57	A	.78	C	.57	A	.81	D	.00	.03
33. Copper Hill Drive & Newhall Ranch Road	.81	D	.87	D	.81	D	.86	D	.00	-.01
35. Copper Hill Drive & Decoro Drive	.72	C	.81	D	.72	C	.81	D	.00	.00
36. Tourney Road & Valencia Boulevard	.68	B	.88	D	.67	B	.90	D	-.01	.02
37. Tourney Road & Magic Mountain Parkway	.74	C	.82	D	.75	C	.81	D	.01	-.01
44. McBean Parkway & Valencia Boulevard	.70	B	.94	E	.69	B	.94	E	-.01	.00
45. McBean Parkway & Magic Mountain Parkway	.81	D	1.06	F	.83	D	1.06	F	.02	.00
48. McBean Parkway & Newhall Ranch Road	.83	D	.89	D	.83	D	.89	D	.00	.00
49. McBean Parkway & Decoro Drive	.65	B	.66	B	.65	B	.66	B	.00	.00
51. Wiley Canyon Road & Lyons Avenue	.63	B	.96	E	.63	B	.92	E	.00	-.04
54. Orchard Village Road & Wiley Canyon Road	.98	E	1.27	F	.97	E	1.27	F	-.01	.00
55. Orchard Village Road & McBean Parkway	.91	E	1.18	F	.91	E	1.18	F	.00	.00
57. Valencia Boulevard & Magic Mountain Parkway	.93	E	1.12	F	.93	E	1.11	F	.00	-.01
65. Bouquet Canyon Road & Soledad Canyon Road	.79	C	.99	E	.80	C	.99	E	.01	.00
66. Bouquet Canyon Road & Newhall Ranch Road	.95	E	.97	E	.95	E	.96	E	.00	-.01

Note: ICUs include Project Mitigation as identified in the Mission Village TIA.
Level of service ranges: *.00 - .60 A* *.71 - .80 C* *.91 - 1.00 E*
.61 - .70 B *.81 - .90 D* *Above 1.00 F*

Table4.5-26
Freeway Volumes and V/C Ratios – Long-Range Buildout Cumulative Conditions (2035)
with and without Potrero Canyon Road Bridge

				Long-Range Buildout Cumulative Conditions with Bridge				Long-Range Buildout Cumulative Conditions without Bridge				Net Change	
				AM Pk Hr		PM Pk Hr		AM Pk Hr		PM Pk Hr			
Segment		Lanes	Capacity	Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	AM	PM
Northbound													
401	North of Lake Hughes	4M	8,000	3,400	.43	6,400	.80	3,400	.43	6,400	.80	.00	.00
402	Between Lake Hughes & Parker	4M	8,000	3,700	.46	7,500	.94	3,700	.46	7,600	.95	.00	.01
403	Between Parker & Hasley Canyon	4M + 1H	9,600	4,100	.43	9,000	.94	4,100	.43	9,000	.94	.00	.00
404	Between Hasley Canyon & SR-126	4M + 1H + 1A	10,600	5,700	.54	9,300	.88	5,800	.55	9,300	.88	.01	.00
405	Between SR-126 & Rye Canyon	4M + 1H	9,600	6,000	.63	8,100	.84	6,100	.64	8,100	.84	.01	.00
406	Between Rye Canyon & Magic Mtn	4M + 1H	9,600	6,000	.63	8,100	.84	6,100	.64	8,100	.84	.01	.00
407	Between Magic Mtn & Valencia	4M +1H + 1A	10,600	6,900	.65	8,100	.76	7,000	.66	8,100	.76	.01	.00
408	Between Valencia & McBean	4M + 1H	9,600	7,900	.82	8,800	.92	8,100	.84	8,800	.92	.02	.00
409	Between McBean & Pico/Lyons	4M + 1H	9,600	8,000	.83	8,400	.88	8,100	.84	8,400	.88	.01	.00
410	Between Pico/Lyons & Calgrove	4M + 1H + 1A	10,600	7,800	.74	8,400	.79	7,900	.75	8,400	.79	.01	.00
411	Between Calgrove & SR-14	4M + 1H + 1T	10,800	7,800	.72	8,300	.77	7,800	.72	8,300	.77	.00	.00
412	South of SR-14	6M + 2H + 2T	17,600	10,200	.58	17,400	.99	10,200	.58	17,400	.99	.00	.00
Southbound													
401	North of Lake Hughes	4M	8,000	4,700	.59	6,400	.80	4,700	.59	6,400	.80	.00	.00
402	Between Lake Hughes & Parker	4M	8,000	5,700	.71	6,900	.86	5,700	.71	6,900	.86	.00	.00
403	Between Parker & Hasley Canyon	4M + 1H	9,600	7,200	.75	8,000	.83	7,100	.74	8,000	.83	-.01	.00
404	Between Hasley Canyon & SR-126	4M + 1H	9,600	7,500	.78	9,300	.97	7,600	.79	9,300	.97	.01	.00
405	Between SR-126 & Rye Canyon	4M + 1H + 1A	10,600	7,400	.70	9,100	.86	7,500	.71	9,100	.86	.01	.00
406	Between Rye Canyon & Magic Mtn	4M + 1H + 1A	10,600	7,400	.70	10,300	.97	7,400	.70	10,300	.97	.00	.00
407	Between Magic Mtn & Valencia	4M + 1H	9,600	7,500	.78	9,900	1.03	7,500	.78	9,900	1.03	.00	.00

Segment		Lanes	Capacity	Long-Range Buildout Cumulative Conditions with Bridge				Long-Range Buildout Cumulative Conditions without Bridge				Net Change	
				AM Pk Hr		PM Pk Hr		AM Pk Hr		PM Pk Hr			
				Vol	V/C	Vol	V/C	Vol	V/C	Vol	V/C	AM	PM
408	Between Valencia & McBean	4M + 1H + 1A	10,600	8,700	.82	10,500	.99	8,700	.82	10,500	.99	.00	.00
409	Between McBean & Pico/Lyons	4M + 1H	9,600	8,500	.89	10,000	1.04	8,400	.88	10,000	1.04	-.01	.00
410	Between Pico/Lyons & Calgrove	4M + 1H + 1T	10,800	8,200	.76	10,500	.97	8,200	.76	10,500	.97	.00	.00
411	Between Calgrove & SR-14	4M + 1H + 2T	12,000	8,300	.69	10,900	.91	8,300	.69	10,900	.91	.00	.00
412	South of SR-14	6M + 2H + 2T	17,600	16,800	.95	14,000	.80	16,800	.95	14,000	.80	.00	.00

M = Mixed-Flow/General Purpose Lane (Capacity = 2,000 vehicles per hour)
T = Truck Lane (Capacity = 1,200 vehicles per hour)
H = HOV Lane (Capacity = 1,600 vehicles per hour)
A = Auxiliary Lane (Capacity = 1,000 vehicles per hour)
Capacities derived from PeMS data and through discussions with Caltrans staff.

Mitigation measures that would reduce the Project impacts to less than significant for each of the off-site locations significantly impacted under the Long-Range (2035) Buildout Cumulative scenario are identified below in **Subsection 11, Cumulative Mitigation Measures**. As explained above, removal of the Potrero Canyon Road Bridge from the long-range buildout cumulative conditions setting would not result in the creation of new intersection or freeway deficiencies. At locations where the With-Bridge scenario analysis identified deficiencies under the long-range buildout cumulative conditions setting, the analysis presented in this section shows that removal of the Potrero Canyon Road Bridge would not worsen those deficient conditions or result in newly identified deficient conditions. Since the mitigation measures identified in **Subsection 11** would mitigate all significantly impacted deficient locations, and since removal of the Potrero Canyon Road Bridge from the long-range buildout cumulative setting would not result in new or worsened deficient locations, the Section 11 mitigation measures are applicable to the No-Bridge scenario and all identified impacts would be fully mitigated and no further mitigation is necessary.

Thus, buildout of the Specific Plan area, including Mission Village, can occur without the Potrero Canyon Road Bridge in place while maintaining acceptable levels of service. This is due primarily to the fact that the Potrero Canyon Road Bridge was included as part of the Specific Plan for purposes other than maintaining acceptable LOS, such as facilitating access to State Route 126. The Potrero Canyon Road Bridge is not essential to provide acceptable levels of service upon buildout of the Mission Village project and its absence does not affect the results of the traffic impacts analysis, including the identification of significant impacts, as presented in the Draft EIR.

11. CUMULATIVE MITIGATION MEASURES

If all of the cumulative projects are approved, each would be required to construct or finance, through the applicable B&T District or otherwise, its fair share of the improvements necessary to mitigate the affected roadways significantly impacted by the respective project. Additionally, project-specific environmental analysis conducted for other cumulative projects is to comply with the requirements of the CMP, which provides lead agencies with the opportunity to assess each project's improvement program to ensure that it meets its mitigation goal.

Because the Mission Village project would result in significant cumulative impacts to County and City intersections and freeway interchange intersections under the long-range 2035 buildout scenario, the following mitigation is proposed to reduce the traffic-related impacts attributable to the project's share of increased cumulative traffic levels. The project is responsible for the payment of its fair-share of the costs of the recommend improvements, and the timing of these improvements shall be as determined by the then-current *Westside Roadway Phasing Analysis*:

7. I-5 SB Ramps & Henry Mayo Drive (SR-126) – The project's compliance with **mitigation MV 4.5-3** would mitigate the project's contribution to the identified significant impact and no further mitigation is required.

MV 4.5-16~~2~~ 9. The Old Road & I-5 SB Ramps – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to: (i) add a second northbound right-turn lane; (ii) add a second southbound left-turn lane; (iii) add a third southbound through lane; and (iv) convert the shared westbound left/right-turn lane to a second westbound left-turn lane and add a right-turn lane. (Project Share = 1.4 percent. Please refer to EIR **Appendix 4.5**, AFA Traffic Impacts Analysis, Appendix J, for fair-share calculations.)

MV 4.5-17~~3~~ 10. I-5 SB Ramps & Magic Mountain Parkway – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to re-stripe the shared southbound left-turn/through lane to a left-turn lane and the first southbound right-turn lane to a shared through/left-turn lane (Project Share = 19.7 percent)

MV 4.5-18~~4~~ 11. I-5 NB Ramps & Magic Mountain Parkway – ~~Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost~~ The improvement recommended to mitigate the project's identified significant impacts at this intersection is to re-stripe the shared northbound through/right-turn lane to a shared left-turn/through/right-turn lane. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvements and, under such scenario, shall be entitled to reimbursement from the Valencia B&T District for the full cost of the improvements, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis. ~~(Project Share = 17.6 percent)~~

12. I-5 SB Ramps & Valencia Boulevard – The project's compliance with **mitigation MV 4.5-4** would mitigate the project's contribution to the identified significant impact and no further mitigation is required.

MV 4.5-19~~5~~ 14. I-5 SB Ramps & McBean Parkway – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the costs to add a second southbound left-turn lane. (Project Share = 12.6 percent.)

MV 4.5-20~~16~~ 16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the costs to add: (i) a left-turn phase for the westbound left-turn lane (can be protected/permissive configuration); and (ii) right-turn overlap phasing for the northbound right-turn lane. (Project Share = 4.7% percent.)

MV 4.5-21 17. I-5 NB On/Off Ramps & Lyons Avenue – The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) re-stripe the third westbound through lane to a right-turn lane; and (ii) re-stripe the second westbound through lane to a shared through/right-turn lane. These improvements are located within the Via Princessa B&T District and, therefore, it is expected the improvements will be constructed through the Via Princessa B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (7%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. ~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~

MV 4.5-22~~17~~ 25. The Old Road & Rye Canyon Road – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, and in addition to compliance with mitigation MV 4.5-5, the project applicant shall fund its fair share of the costs to: (i) add a third northbound through lane; (ii) add a third southbound through lane; and (iii) add a second and third westbound left-turn lane. (Project Share = 7.1 percent) (Note: This mitigation is supplemental to **mitigation MV 4.5-5**.)

MV 4.5-23~~18~~ 26. The Old Road & Magic Mountain Parkway – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to add right-turn overlap phasing for the southbound right-turn lane. (Project Share = 21.1 percent)

28. The Old Road & McBean Pkwy – The project's compliance with **mitigation MV 4.5-1** would mitigate the project's contribution to the identified significant impact and no further mitigation is required.

MV 4.5-24 37. Tourney & Magic Mountain Parkway – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to stripe a fourth eastbound through lane. This improvement is located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvement and, under such scenario, shall be entitled to reimbursement from the Valencia B&T District for the full cost of the improvement, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis. ~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~

45. McBean Parkway & Magic Mountain Parkway – The project's compliance with mitigation MV 4.5-6 would mitigate the project's contribution to the identified significant impact and no further mitigation is required.~~The improvements recommended to mitigate the project's identified significant impacts at this intersection are to re-stripe for a third eastbound through lane and add a right turn overlap phase for a westbound right turn lane. These improvements are located within and will be constructed through the~~

~~Valencia B&T District. Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~

48. McBean Parkway & Newhall Ranch Road – The project's compliance with mitigation MV 4.5-7 would mitigate the project's contribution to the identified significant impact and no further mitigation is required. ~~The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) Re-stripe for a fourth westbound through lane; and (ii) Reconstruct the northbound approach to remove the pork-chop island and reconfigure as conventional dual right turn lanes. These improvements are located within and will be constructed through the Valencia B&T District. Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~

MV 4.5-25 51. Wiley Canyon & Lyons – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to re-stripe the eastbound right-turn lane to a third through lane (shared through/right-turn lane). This improvement is located within the Via Princessa B&T District and, therefore, it is expected the improvements will be constructed through the Via Princessa B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvement and, under such scenario, shall be entitled to reimbursement from the Via Princessa B&T District for the full cost of the improvement, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis.~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~

MV 4.5-26 54. Orchard Village & Wiley Canyon – The improvement recommended to mitigate the project's identified significant impact at this intersection is to stripe a northbound right-turn lane. This improvement is located within the Via Princessa B&T District and, therefore, it is expected the improvement will be constructed through the Via Princessa B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (2%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. ~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~ (Note: In the event a northbound right-turn lane is striped as part of the Henry Mayo Newhall Memorial Hospital expansion project, the improvement recommended to mitigate the project's identified significant impact at this intersection is to add a second southbound left-turn lane and remove the existing southbound right-turn lane.)

55. Orchard Village & McBean Parkway – The project's compliance with mitigation MV 4.5-8 would mitigate the project's contribution to the identified significant impact and no further mitigation is required.~~The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) add a separate southbound left-turn lane; (ii) add a separate southbound through lane; (iii) add a separate southbound right-turn lane; and (iv) reconfigure the existing southbound right-turn~~

~~lane as a shared left-turn through lane, as identified in the mitigation for the Hospital expansion project. These improvements are located within and will be constructed through the Valencia B&T District. Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~

MV 4.5-27 57. Valencia Boulevard & Magic Mountain Parkway – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to add a second westbound left-turn lane by removing or relocating the existing east leg raised median. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (6%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. ~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~ (Note: In the event a second westbound left-turn lane is added as part of the Henry Mayo Newhall Memorial Hospital expansion project, the improvement recommended to mitigate the project's identified significant impact at this intersection is to reinstate a dedicated westbound right-turn lane (the Hospital project would remove the existing right-turn lane) and add a third eastbound through lane.)

MV 4.5-28 66. Bouquet Canyon Road & Newhall Ranch Road – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to restripe ~~a third~~ the eastbound approach to consist of two ~~through lane while maintaining three~~ eastbound left-turn lanes, four eastbound through lanes, and two eastbound right-turn lanes. This improvement is located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvement as calculated based on project traffic volumes (4%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. ~~Therefore, the project's identified impacts will be reduced to a level below significant through the B&T District and no further mitigation is required.~~ (Note: This mitigation is supplemental to mitigation MV 4.5-9.)

94. Commerce Center Drive & SR-126 – The project's compliance with **mitigation MV 4.5-2** would mitigate the project's contribution to the identified significant impact and no further mitigation is required.

MV 4.5-~~1~~29 State Highways. The applicant shall work cooperatively with Caltrans to determine and provide transportation mitigation needed on State Highway facilities. The applicant shall

construct mitigation improvements or pay an equitable share for mitigation projects to the satisfaction of Caltrans. The applicant shall enter into a traffic mitigation agreement with Caltrans before or within six months of certification of the EIR.

Subsequent to circulation of the Draft EIR, Caltrans and the project applicant worked together to prepare an agreement under which the applicant will pay to Caltrans, at the time of issuance of project building permits, the project's pro-rata share of the I-5 Improvement Project, as determined by an I-5 shares analysis conducted as part of the agreement. Under the agreement, Caltrans acknowledges that the applicant's full payment of its proportionate share amount satisfies its mitigation obligations to Caltrans relative to the project. A copy of the agreement, which has been executed by the project applicant, and the corresponding shares analysis are included in the Final EIR. (See **Appendix F4.5,** Traffic Mitigation Agreement Fair Share Payment, and, Mission Village I-5 Share Calculations, AFA (March 8, 2011).) Should the County certify this EIR as adequate under CEQA and approve the Mission Village project, Caltrans, as a responsible agency, would utilize the certified EIR as the basis for executing the agreement.

a. Post-Mitigation Level of Significance

Table 4.5-25, ICU and LOS Summary - 2035 Cumulative Conditions with Mitigation, depicts the ICU and LOS for each of the cumulatively impacted intersections under with project and mitigation scenario. As shown on **Table 4.5-25**, implementation of the recommended mitigation would reduce the project's contribution to below cumulatively considerable levels.

As noted above, the *Westside Roadway Phasing Analysis* identifies the specific roadway and intersection improvements that are needed to mitigate the cumulative impacts of the Westside projects. Since the individual Westside projects will be developed concurrently, the phasing analysis identifies milestones based on residential unit counts and commercial square footages to specify when the specific improvements shall be in place. As such, the proposed project will be developed in accordance with these milestones and the corresponding specific improvements as identified in the phasing analysis.

b. Condominiums In Place Of Apartments Scenario

As noted on **Table 4.5-10, Mission Village Land Use and Trip Generation Summary**, the proposed project trip generation is based on a housing mix that would include 905 apartments and 2,315 condominium/townhomes; the impacts analysis presented above is based on that housing mix. However, the Specific Plan provides the applicant with certain flexibility relative to the specific type of housing to be built due, in part, to market considerations. For example, if at project buildout the rental market weakened while the for-sale market strengthened, the Specific Plan provides the applicant with the flexibility to adjust the housing mix such that the 905 apartments could be developed as

condominiums. However, under that scenario, the project trip generation would increase because the trip generation rate for townhomes/condominiums is higher (8.0) than is the trip rate for apartments (6.9). See **Table 4.5-10**.

To address the potential traffic-related impacts associated with such shift in housing type, the traffic impacts analysis considered a scenario in which all 905 apartments were developed instead as condominiums. The analysis determined that under this scenario, the proposed project would generate an additional 63 AM peak hour tripends, 100 more PM peak hour tripends, and 996 more daily tripends. (See EIR **Appendix 4.5**, Traffic Impacts Analysis, Table 4-18.)

To determine the impact of the additional trips that would be generated under an all condominium scenario, the net volume of trips external to the project site was distributed throughout the project study area. A summary of the ICU calculations based on this scenario is provided in **Table 4.5-26, ICU and LOS Summary – Existing plus Ambient plus Project With Mitigation (Condominium Scenario); Table 4.5-27, ICU and LOS Summary – Year 2021 Project Cumulative Conditions With Mitigation (Condominium Scenario);** and **Table 4.5-28, ICU and LOS Summary – Long-Range (2035) Project Cumulative Conditions With Mitigation (Condominium Scenario)**. As shown on the tables, with the mitigation measures recommended in this section, no additional project impacts would occur under these scenarios.

12. UNAVOIDABLE SIGNIFICANT IMPACTS

a. Project Impacts

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

b. Cumulative Impacts

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

Table 4.5-25
ICU and LOS Summary – 2035 Cumulative Conditions with Mitigation

Intersection	Buildout Conditions (Year 2035) without Project				Buildout Conditions (Year 2035) with Project with Mitigation				Change	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
Freeway Ramp Intersections (County)										
7. I-5 SB Ramps & Henry Mayo Drive (SR-126)	0.96	E	0.96	E	0.83	D	0.90	D	-0.13	-0.06
9. The Old Road & I-5 SB Ramps	0.84	D	1.34	F	0.81	D	1.06	F	-0.03	-0.28
10. I-5 SB Ramps & Magic Mountain Parkway	0.82	D	0.88	D	0.75	C	0.82	D	-0.07	-0.06
12. I-5 SB Ramps & Valencia Boulevard	0.77	C	1.19	F	0.65	B	0.96	E	-0.12	-0.23
14. I-5 SB Ramps & McBean Parkway	0.72	C	0.94	E	0.62	B	0.84	D	-0.10	-0.10
16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue	0.67	B	1.08	F	0.69	B	1.08	F	0.02	0.00
Freeway Ramp Intersections (City)										
11. I-5 NB Ramps & Magic Mountain	0.78	C	0.86	D	0.76	C	0.84	D	-0.02	-0.02
17. I-5 NB On/Off & Lyons Ave	0.56	A	0.89	D	0.57	A	0.79	C	0.01	-0.10
County Arterial Intersections										
25. The Old Road & Rye Canyon	1.73	F	2.04	F	.83	D[1]	0.89	D[1]	-0.90	-1.15
26. The Old Road & Magic Mountain Parkway	0.66	B	0.79	C	0.78	C	0.89	D	0.12	0.10
28. The Old Road & McBean Parkway	0.63	B	0.94	E	0.70	B	0.89	D	0.07	-0.05
94. Commerce Center Drive & SR-126	1.31	F	1.60	F	n/a (Grade Separated Intersection)					
City Arterial Intersections										
37. Tourney & Magic Mountain	0.67	B	0.86	D	0.74	C	0.82	D	0.07	-0.04
45. McBean & Magic Mountain	0.92	E	1.19	F	0.81	D[1]	1.06	F[1]	-0.11	-0.13
48. McBean & Newhall Ranch	0.81	D	1.11	F	0.83	D	0.89	D	0.02	-0.22
51. Wiley Canyon & Lyons Cyn	0.70	B	1.07	F	0.63	B	0.96	E	-0.07	-0.11
54. Orchard Village & Wiley Cyn	1.06	F	1.42	F	0.98	E[1]	1.27	F[1]	-0.08	-0.15
55. Orchard Village & McBean	0.90	D	1.20	F	0.91	E[1]	1.18	F[1]	-0.01	-0.02
57. Valencia & Magic Mountain	1.10	F	1.24	F	0.93	E	1.12	F	-0.17	-0.12
66. Bouquet & Newhall Ranch[2]	0.93~~9~~	E	~~1.14~~ .95	E~~F~~	0.93~~5~~	E	0.8~~9~~7	D	-0.00~~4~~	-0.08 ~~17~~

Intersection Level of Service Performance Criteria is LOS D, unless otherwise noted.
[1]LOS E is the Level of Service Performance Criteria for this location. See AFA Traffic Impact Study, Section 1.6, Reference 6.
[2] See *Mission Village - Responses to Comments Analysis*, AFA (April 29, 2011), **Final EIR, Appendix F4.5**.
Level of service ranges: 0.00–0.60 = A 0.61–0.70 = B 0.71–0.80 = C 0.81–0.90 = D 0.91–1.00 = E Above 1.00 = F
Source: Austin-Foust Associates, Inc., Traffic Impact Analysis (October 2010), ***Appendix 4.5***

Table 4.5-26
ICU and LOS Summary – Existing plus Ambient plus Project With Mitigation
(Condominium Scenario)

Intersection	Existing plus Ambient without Project				Existing plus Ambient plus Project (Condo Scenario) with Mitigation				Increase	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
Freeway Ramp Intersections (County)										
7. I-5 SB Ramps & Henry Mayo Drive (SR-126)	0.86	D	0.50	A	0.84	D	0.55	A	-0.02	0.05
9. The Old Road & I-5 SB Ramps	0.88	D	1.11	F	0.88	D	1.06	F	0.00	-0.05
10. I-5 SB Ramps & Magic Mountain Parkway	0.43	A	0.44	A	0.52	A	0.49	A	0.09	0.05
12. I-5 SB Ramps & Valencia Boulevard	0.62	B	0.55	A	0.68	B	0.59	A	0.06	0.04
14. I-5 SB Ramps & McBean Parkway	0.45	A	0.58	A	0.46	A	0.60	A	0.01	0.02
16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue	0.69	B	0.73	C	0.69	B	0.74	C	0.00	0.01
County Arterial Intersections										
25. The Old Road & Rye Canyon	0.74	C	0.79	C	0.66	B	0.79	C	-0.08	0.00
26. The Old Road & Magic Mountain Parkway	0.32	A	0.38	A	0.49	A	0.43	A	0.17	0.05
27. The Old Road & Valencia Boulevard	0.80	C	0.53	A	0.82	D	0.59	A	0.02	0.06
28. The Old Road & McBean Parkway	0.70	B	0.92	E	0.67	B	0.91	E	-0.03	-0.01
29. The Old Road & Pico Canyon Road	0.75	C	0.84	D	0.75	C	0.84	D	0.00	0.00
94. Commerce Center Drive & SR-126	0.65	B	0.97	E	n/a (Grade Separated Intersection)					
105. Westridge Parkway & Valencia Boulevard	0.66	B	0.22	A	0.71	C	0.36	A	0.05	0.14
108. Stevenson Ranch Parkway & Pico Canyon Road	0.57	A	0.62	B	0.58	A	0.62	B	0.01	0.00
109. Stevenson Ranch Parkway & Poe Parkway/Chase	0.77	C	0.47	A	0.77	C	0.48	A	0.00	0.01

Level of service ranges: 0.00–0.60 = A 0.61–0.70 = B 0.71–0.80 = C 0.81–0.90 = D 0.91–1.00 = E Above 1.00 = F

Table 4.5-27
ICU and LOS Summary – Year 2021 Project Cumulative Conditions With Mitigation (Condominium Scenario)

Intersection	2021 Cumulative without Project				2021 Cumulative with Project (Condo Scenario) with Mitigation				Increase	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
Freeway Ramp Intersections (County)										
7. I-5 SB Ramps & Henry Mayo Drive (SR-126)	0.83	D	0.70	B	0.73	C	0.66	B	-0.10	-0.04
9. The Old Road & I-5 SB Ramps	0.81	D	1.06	F	0.82	D	1.06	F	0.01	0.00
10. I-5 SB Ramps & Magic Mountain Parkway	0.58	A	0.56	B	0.64	B	0.63	B	0.06	0.07
12. I-5 SB Ramps & Valencia Boulevard	0.72	C	0.81	D	0.62	B	0.67	B	-0.10	-0.14
14. I-5 SB Ramps & McBean Parkway	0.52	A	0.71	C	0.54	A	0.73	C	0.02	0.02
16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue	0.61	B	0.69	B	0.63	B	0.71	C	0.02	0.02
Freeway Ramp Intersections (City)										
8. I-5 NB Ramps & Henry Mayo Drive (SR-126)	0.59	A	0.59	A	0.61	B	0.62	B	0.02	0.03
11. I-5 NB Ramps & Magic Mountain Parkway	0.60	A	0.61	B	0.69	B	0.70	B	0.09	0.09
13. I-5 NB Ramps & Valencia Boulevard	0.67	B	0.62	B	0.68	B	0.64	B	0.01	0.02
15. I-5 NB Ramps & McBean Parkway	0.52	A	0.57	A	0.53	A	0.59	A	0.01	0.02
17. I-5 NB On/Off & Lyons Avenue	0.51	A	0.75	C	0.52	A	0.77	C	0.01	0.02
County Arterial Intersections										
25. The Old Road & Rye Canyon	1.03	F	1.21	F	0.78	C	0.91	E	-0.25	-0.30
26. The Old Road & Magic Mountain Parkway	0.43	A	0.51	A	0.60	A	0.59	A	0.17	0.08
27. The Old Road & Valencia Boulevard	0.68	B	0.60	A	0.71	C	0.73	C	0.03	0.13
28. The Old Road & McBean Parkway	0.53	A	0.85	D	0.54	A	0.86	D	0.01	0.01
29. The Old Road & Pico Canyon Road	0.71	C	0.80	C	0.74	C	0.82	D	0.03	0.02
94. Commerce Center Drive & SR-126	1.04	F	1.17	F	n/a (Grade Separated Intersection)					
105. Westridge Parkway & Valencia Boulevard	0.53	A	0.38	A	0.58	A	0.52	A	0.05	0.14
108. Stevenson Ranch Parkway & Pico Canyon Road	0.60	A	0.55	A	0.60	A	0.56	A	0.00	0.01
109. Stevenson Ranch Parkway & Poe Parkway/Chase	0.57	A	0.46	A	0.57	A	0.46	A	0.00	0.00

Intersection	2021 Cumulative without Project				2021 Cumulative with Project (Condo Scenario) with Mitigation				Increase	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
City Arterial Intersections										
30. Avenue Stanford & Rye Canyon Road	0.57	A	0.66	B	0.60	A	0.68	B	0.03	0.02
33. Copper Hill Drive & Newhall Ranch Road	0.72	C	0.77	C	0.75	C	0.80	C	0.03	0.03
City Arterial Intersections										
35. Copper Hill Drive & Decoro Drive	0.63	B	0.63	B	0.65	B	0.64	B	0.02	0.01
36. Tourney Road & Valencia Boulevard	0.51	A	0.60	A	0.52	A	0.62	B	0.01	0.02
37. Tourney Road & Magic Mountain Parkway	0.52	A	0.56	A	0.56	A	0.62	B	0.04	0.06
44. McBean Parkway & Valencia Boulevard	0.70	B	0.83	D	0.70	B	0.84	D	0.00	0.01
45. McBean Parkway & Magic Mountain Parkway	0.71	C	0.92	E	0.75	C	0.92	E	0.04	0.00
48. McBean Parkway & Newhall Ranch Road	0.78	C	1.01	F	0.70	B	0.81	D	-0.08	-0.20
49. McBean Parkway & Decoro Drive	0.70	B	0.60	A	0.72	C	0.61	B	0.02	0.01
51. Wiley Canyon Road & Lyons Avenue	0.65	B	0.83	D	0.66	B	0.84	D	0.01	0.01
54. Orchard Village Road & Wiley Canyon Road	0.65	B	0.75	C	0.65	B	0.75	C	0.00	0.00
55. Orchard Village Road & McBean Parkway	0.65	B	0.83	D	0.64	B	0.80	C	-0.01	0.03
57. Valencia Boulevard & Magic Mountain Parkway	0.79	C	0.83	D	0.80	C	0.84	D	0.01	0.01
65. Bouquet Canyon Road & Soledad Canyon Road	0.79	C	0.91	E	0.80	C	0.91	E	0.01	0.00
66. Bouquet Canyon Road & Newhall Ranch Road	0.89	D	1.01	F	0.83	D	0.88	D	-0.06	-0.13

Level of service ranges: 0.00–0.60 = A 0.61–0.70 = B 0.71–0.80 = C 0.81–0.90 = D 0.91–1.00 = E Above 1.00 = F

Table 4.5-28
ICU and LOS Summary – Long-Range (2035) Project Cumulative Conditions With Mitigation (Condominium Scenario)

	2035 Cumulative without Project				2035 Cumulative with Project (Condo Scenario) with Mitigation				Increase	
	AM		PM		AM		PM			
Intersection	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
Freeway Ramp Intersections (County)										
7. I-5 SB Ramps & Henry Mayo Drive (SR-126)	0.96	E	0.96	E	0.83	D	0.90	D	-0.13	-0.06
9. The Old Road & I-5 SB Ramps	0.84	D	1.34	F	0.81	D	1.06	F	-0.03	-0.28
10. I-5 SB Ramps & Magic Mountain Parkway	0.82	D	0.88	D	0.76	C	0.82	D	-0.06	-0.06
12. I-5 SB Ramps & Valencia Boulevard	0.77	C	1.19	F	0.65	B	0.96	E	-0.12	-0.23
14. I-5 SB Ramps & McBean Parkway	0.72	C	0.94	E	0.62	B	0.84	D	-0.10	-0.10
16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue	0.67	B	1.08	F	0.69	B	1.08	F	0.02	0.00
Freeway Ramp Intersections (City)										
8. I-5 NB Ramps & SR-126	0.59	A	0.69	B	0.60	A	0.71	C	0.01	0.02
11. I-5 NB Ramps & Magic Mountain	0.78	C	0.86	D	0.76	C	0.84	D	-0.02	-0.02
13. I-5 NB Ramps & Valencia	0.78	C	0.83	D	0.79	C	0.84	D	0.01	0.01
15. I-5 NB Ramps & McBean	0.60	A	0.67	B	0.62	B	0.69	B	0.02	0.02
17. I-5 NB On/Off & Lyons Ave	0.56	A	0.89	D	0.57	A	0.79	C	0.01	-0.10
County Arterial Intersections										
25. The Old Road & Rye Canyon	1.73	F	2.04	F	0.83	D[1]	0.89	D[1]	-0.90	-1.15
26. The Old Road & Magic Mountain Parkway	0.66	B	0.79	C	0.78	C	0.89	D	0.12	0.10
27. The Old Road & Valencia Boulevard	0.72	C	0.83	D	0.79	C[1]	0.89	D[1]	0.07	0.06
28. The Old Road & McBean Parkway	0.63	B	0.94	E	0.70	B	0.89	D	0.07	-0.05
29. The Old Road & Pico Canyon Road	0.89	D	0.96	E	0.91	E[1]	0.97	E[1]	0.02	0.01
94. Commerce Center Drive & SR-126	1.31	F	1.60	F	n/a (Grade Separated Intersection)					
105. Westridge Parkway & Valencia Boulevard	0.58	A	0.62	B	0.59	A	0.76	C	0.01	0.14
108. Stevenson Ranch Parkway & Pico Canyon Road	0.61	B	0.79	D	0.61	B	0.79	C	0.00	0.00
109. Stevenson Ranch Parkway & Poe Parkway/Chase	0.48	A	0.58	A	0.48	A	0.58	A	0.00	0.00

Intersection	2035 Cumulative without Project				2035 Cumulative with Project (Condo Scenario) with Mitigation				Increase	
	AM		PM		AM		PM			
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	AM	PM
City Arterial Intersections										
30. Stanford & Rye Canyon	0.55	A	0.77	C	0.57	A	0.78	C	0.02	0.01
33. Copper Hill & Newhall Ranch	0.78	C	0.84	D	0.81	D	0.87	D	0.03	0.03
35. Copper Hill & Decoro	0.70	B	0.80	C	0.72	C	0.81	D	0.02	0.01
36. Tourney & Valencia	0.67	B	0.87	D	0.68	B	0.88	D	0.01	0.01
37. Tourney & Magic Mountain	0.67	B	0.86	D	0.74	C	0.82	D	0.07	-0.04
44. McBean & Valencia	0.69	B	0.94	E	0.70	B	0.94	E	0.01	0.00
45. McBean & Magic Mountain	0.92	E	1.19	F	0.81	D[1]	1.06	F[1]	-0.11	-0.13
48. McBean & Newhall Ranch	0.81	D	1.11	F	0.83	D	0.89	D	0.02	-0.22
49. McBean & Decoro	0.65	B	0.66	B	0.65	B	0.66	B	0.00	0.00
51. Wiley Canyon & Lyons Cyn	0.70	B	1.07	F	0.63	B	0.96	E	-0.07	-0.11
54. Orchard Village & Wiley Cyn	1.06	F	1.42	F	0.98	E[1]	1.27	F[1]	-0.08	-0.15
55. Orchard Village & McBean	0.90	D	1.20	F	0.91	E[1]	1.18	F[1]	-0.01	-0.02
57. Valencia & Magic Mountain	1.10	F	1.24	F	0.93	E	1.12	F	-0.17	-0.12
65. Bouquet & Soledad	0.78	C	0.99	E	0.79	C	0.99	E	0.01	0.00
66. Bouquet & Newhall Ranch	0.99	E	1.14	F	0.95	E	0.97	E	-0.04	-0.17

Intersection Level of Service Performance Criteria is LOS D, unless noted otherwise.

[1] *LOS E is the Level of Service Performance Criteria for this location (Austin-Foust Associates, Inc., Traffic Impact Analysis (October 2010),* ***Appendix 4.5****).*

Level of service ranges: 0.00–0.60 = A 0.61–0.70 = B 0.71–0.80 = C 0.81–0.90 = D 0.91–1.00 = E Above 1.00 = F

4.6 NOISE

1. SUMMARY

Development of the Mission Village site would occur over an approximate 96-month period, and would involve clearing and grading of the ground surface, grading of approximately 29.5 million cubic yards of earthen material and up to 372,000 cubic yards for the Southern California Edison (SCE) substation in a balanced cut and fill operation, and the building of the proposed improvements. These activities would involve the temporary use of heavy equipment, smaller equipment, and motor vehicles, which generate both steady state and episodic noise. This noise would primarily affect the occupants of on-site residences and other noise-sensitive uses constructed in the earlier phases of the development, as well as residents of the off-site Westridge development, resulting in potentially significant impacts that would be mitigated to a level below significant. While this construction activity noise could be audible to occupants of Travel Village when construction activities would occur on the northwestern portion of the site, the increased noise levels would not exceed the applicable thresholds of significance and, therefore, would not result in significant impacts.

Daytime pile driving in the Santa Clara Riverbed, should it occur during the construction of the proposed Commerce Center Drive Bridge, would be audible to occupants of on-site uses constructed prior to the bridge, and to the occupants of Travel Village and nearby non-residential uses, including visitors and employees of Magic Mountain Theme Park. The potential range of significant noise impacts from this activity for sensitive receptors would be approximately 4,000 feet from the pile driving site for a period of approximately 9–12 months during the later phases of the construction, assuming no attenuation by terrain, structures, or vegetation. Noise-sensitive receptors proposed on the site within this 4,000-foot range could include persons that would reside in apartments, condominiums, and single-family residences constructed prior to the bridge. Off-site sensitive receptors within this 4,000-foot range would include occupants of the eastern half of Travel Village. ~~Although mitigation is proposed, s~~Should pile driving be necessary in connection with bridge construction, the ~~potentially significant~~ noise impacts attributable to pile driving would be significant without mitigation ~~and unavoidable~~. Mitigation is included that would require the project applicant to use pile drilling techniques or a hydrohammer or an equivalent method, which would result in substantially reduced noise levels, in those circumstances in which sensitive receptors are located within 4,000 feet of pile driving activities. With this mitigation, on site and off site pile driving impacts would be reduced to less than significant levels. Pile driving noise impacts on future residents of Landmark Village, should Landmark Village be constructed before the Commerce Center Drive Bridge, would be less than significant.

Although the piles would be driven into alluvial deposits, which tend to have a dampening effect on vibrations, vibration from the pile driving would result in potentially significant impacts to within 500 feet of pile driving activity ~~surrounding inhabitants and to those non-residential uses that may employ vibration-sensitive equipment~~. Mitigation is included that would reduce the identified impacts to a level below significant.

Because project construction activities could cause noise and vibration levels at nearby existing and future receptors to exceed the Noise Ordinance *standards, construction noise and vibration impacts are considered significant without mitigation.*

On-site grading would occur within 100 feet of Tract 45433 (Westridge) and Westridge Parkway would be extended from this tract through Mission Village where it would terminate on site at its intersection with Magic Mountain Parkway. Noise from nearby grading operations and construction of the Westridge Parkway extension would be clearly audible within Westridge and nearby residents of Westridge would be periodically exposed to temporary noise levels that could exceed the County's *Noise Ordinance* limits, which would be a significant impact. Building construction noise within Mission Village would not likely be audible in more easterly portions of Westridge or in Stevenson Ranch because of the distance between the construction and these developments, and because of intervening topography.

Construction of the proposed Commerce Center Drive Bridge may involve pile driving, which is considered a stationary noise source and subject to stationary construction equipment noise source standards of the County *Noise Ordinance* (i.e., 60 and 65 dB(A) for single and multi-family residences, respectively, daily from 7:00 AM to 8:00 PM except Sundays and legal holidays). Pile driving could generate noise levels of approximately 105 dB(A) at 50 feet, as well as ground borne vibration for a period of approximately 9 to 12 months during Phase 4 of the project construction. The bridge is likely to be constructed after residences have been occupied within Mission Village; therefore, noise from the pile driving would be audible at on-site uses constructed during the earlier phases of the project. Noise levels could exceed the County's *Noise Ordinance* for as much as 4,000 feet away from the source assuming no noise attenuation due to intervening terrain or structures. As previously noted, Travel Village is located approximately 1,000 feet from the nearest proposed graded area on the project site (the southern bridge abutment). ~~; h~~ However, the bridge itself is within 300 feet of Travel Village property line at its closest point (the bridge is located over 500 feet from habitable structures at Travel Village). Due to the proximity of Travel Village to the pile driving activities associated with the bridge construction, pile driving would be clearly audible at Travel Village and noise levels from the pile driving would exceed the County *Noise Ordinance* limitations at this location. Therefore, pile driving noise impacts, should they occur, would be significant for single and multi-family residences within a 4,000-foot radius for the duration of the pile driving unless mitigated. The Draft EIR identified these impacts as significant and unavoidable. No other off-site noise-sensitive land uses occur within this 4,000-foot radius.

At the request of the Regional Planning Commission, additional analysis and review has been conducted regarding available mitigation measures to reduce pile driving noise impacts to less than significant levels. The Draft EIR identified pile drilling as an alternate method of pile installation. Under this method, a hole is drilled into the ground down to the required elevations and concrete is then cast into the hole. Pile drilling generally produces noise levels approximately 10 to 15 decibels lower than pile driving. Thus, noise impacts related to pile drilling activities would be less than significant. The Draft EIR included a mitigation measure (MV 4.6-3) requiring that pile drilling (i.e., cast-

in-drilled-hole piles) be utilized in lieu of pile driving, though only to the extent feasible; the contingent nature of the mitigation measure resulted in a significant and unavoidable impact determination. Mitigation measure MV 4.6-3 has been revised to eliminate the feasibility contingency.

In addition to pile drilling, hydrohammer pile driving equipment also is available to reduce impacts to less than significant. Hydrohammers utilize an enclosed hydraulically driven hammer with noise reduction. Use of hydrohammer pile driving equipment would reduce noise levels to less than 80 dB(A) at 25 feet, 70 dB(A) at 80 feet, 65 dB(A) at 150 feet, and 60 dB(A) at 250 feet.[21] As there are no habitable structures located within 250 feet (i.e., within the 60dB(A) contour) of the planned pile driving activities, use of hydrohammer pile driving equipment would reduce potential impacts to a less than significant level. This Final EIR includes mitigation requiring use of cast-in-drilled-hole piles, hydrohammer pile driving, or an alternative method that would achieve equivalent noise level reductions, which would reduce potential impacts to a less than significant level.

Vibration of the ground would be perceptible during pile driving. The machinery used to drive the piles generates vibrations which would travel away from the source in a radial pattern. Transmission of vibrations from a pile-driving source may be annoying to occupants and damaging to nearby structures, and/or may interfere with the operation of sensitive instruments.

Typical pile depths for bridge foundations in the type of alluvium found in the Santa Clara River are on the order of approximately 150 feet and the influence distance from the source will be up to approximately 500 feet. It is expected that, for the duration of pile driving, the vibration threshold set forth in Section 12.08.560 of County's *Noise Ordinance* would be exceeded. This section states,

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21 IHC Merwede, *IHC Hydrohammer Pile Driving Equipment*, 2011. Support documentation is presented in Final EIR **Appendix F4.6**.

> *Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way is prohibited. The perception threshold shall be a motion velocity of 0.01 inches/second over the range of 1 to 199 Hertz. (Ord. 11778 Section 2 [Art. 5 Section 501 (d)], 1978; Ord 11773 Section 2 [Art. 5 Section 501(s)], 1978.)*

Thus, in the event pile driving, rather than pile drilling, is utilized in the construction of the proposed Commerce Center Drive Bridge, ~~B~~because the vibration levels would likely exceed the County's *Noise Ordinance* within 500 feet of ~~the area surrounding~~ the pile driving activity, and because the bridge would be located within 300 feet of the Travel Village property line, the vibration resulting from the pile driving activities may be above the vibration perception threshold on a small portion (approximately 200 feet) of the Travel Village property. However, as previously noted, the bridge would be located over 500 feet from habitable structures at Travel Village and, therefore, there are no habitable structures located on the affected portion of Travel Village. Nonetheless, based on a strict reading of the County's Noise Ordinance, a potentially significant vibration impact would result at the identified portion of Travel Village if pile driving occurs within 500 feet of its boundary and unless mitigated. No on-site uses are proposed within 500 feet of the southern bridge abutment; therefore, no significant pile driving vibration impacts would occur within the project site. No other existing or proposed uses occur within 500 feet of the northern bridge abutment and pile driving vibration associated with construction of the northern abutment would be less than significant.

The Draft EIR identified the potential vibration-related impacts as significant and, ultimately, as unavoidable due to the contingent nature of mitigation measure MV 4.6-4, which provided that in the event uses in the vicinity were adversely affected by vibration, and to the extent feasible, appropriate steps are to be taken to reduce the vibration levels accordingly. Mitigation measure MV 4.6-4 has been revised to eliminate the conditional feasibility requirement and, as revised, would reduce any potential impacts to a level below significant.

No other sources of excessive ground-borne vibration are expected to occur as a result of the proposed project.

In order to reduce the potential impacts associated with construction activities, the County Department of Public Works, Construction Division typically limits construction activities to between the hours of 6:30 AM and 8:00 PM daily and prohibits work on Sundays and legal holidays. The County Department of Health Services has the authority to further restrict construction activities to between the hours of 7:00 AM and 7:00 PM and any time on Sundays or legal holidays if such noise would create a noise

disturbance across a residential or commercial real-property line.[22] These restrictions do not, however, necessarily mitigate construction noise that would be in excess of the *Noise Ordinance*. When the noise is projected to be in excess of the *Noise Ordinance*, further mitigation is required.

(2) Construction Equipment Transport Noise

Heavy-duty construction traffic is expected to access the site via Magic Mountain Parkway from the east. After the Commerce Center Drive Bridge is constructed, construction traffic would also access the site from Commerce Center Drive. No noise-sensitive receptors exist along Magic Mountain Parkway east of the project site; therefore, construction traffic along this roadway would not result in a significant noise impact. After Commerce Center Drive is constructed and construction traffic occurs on that roadway, the construction traffic would be audible to occupants of Travel Village. Heavy-duty trucks that would be used to move construction equipment onto the project site typically have a noise level of approximately

22 *County of Los Angeles Ordinance No. 11743*, section 12.08.440. Noise disturbance is not defined in the noise ordinance. The County Health Officer has the authority to define and determine the extent of a noise disturbance on a case-by-case basis.

(1) Construction Mitigation Measures

MV 4.6-1 The project applicant, or its designee, shall not undertake construction activities that can generate noise levels in excess of the County's *Noise Ordinance* on Sundays or legal holidays.

MV 4.6-2 When construction operations occur in close proximity to on- or off-site occupied residences, and if it is determined by County staff during routine construction site inspections that the construction equipment could generate a noise level at the residences that would be in excess of the *Noise Ordinance*, the project applicant, or its designee, shall implement appropriate additional noise reduction measures. These measures shall include, among other things, changing the location of stationary construction equipment, shutting off idling equipment, notifying residents in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.

MV 4.6-3 ~~To the extent feasible,~~ In lieu of conventional pile driving, t~~T~~he project developer shall utilize cast-in-drilled-hole piles, or hydrohammer pile driving equipment with noise reduction, or an alternative methodology that would achieve equivalent noise level reductions, ~~in lieu of pile driving if residential units are constructed~~ in those circumstances in which pile-driving activities would occur within 4,000 feet of sensitive receptors ~~the Commerce Center Drive Bridge prior to any pile-driving activity~~.

Pile drilling is an alternate method of pile installation where a hole is drilled into the ground up to the required elevations and concrete is then cast into it. The estimated noise level of pile drilling at 50 feet is 80 to 95 dB(A) L_{eq} compared to 90 to 105 dB(A) L_{eq} of conventional pile driving.[33] Therefore, pile drilling generally produces noise levels approximately 10 to 15 decibels lower than pile driving.

Hydrohammer pile driving equipment uses an enclosed hydraulically driven hammer with noise reduction. Noise can be reduced to less than 80 dB(A) at 25 feet, 70 dB(A) at 80 feet, 65 dB(A) at 150 feet, and 60 dB(A) at 250 feet.[34]

MV 4.6-4 If pile driving is ~~necessary~~ utilized for the Commerce Center Drive Bridge construction consistent with the limitations imposed by Mitigation Measure MV 4.6-3, the project applicant shall, to the extent ~~feasible~~necessary, reduce the level of vibration impact by:

- identifying all uses in the vicinity, if any, at which the vibration perception threshold may exceed permissible County limits identified in Section 12.08.560 of the County's *Noise Ordinance* ~~that may be adversely affected by the vibrations, including Travel Village, residences built in earlier phases of Mission Village, non-residential land uses that may use vibration-sensitive equipment, etc.~~; and

- installing seismographs at the aforementioned sensitive locations, if any, to ensure that Section 12.08.560 of the County's *Noise Ordinance* is not exceeded, and/or that the

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33 U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, December 1971.

34 IHC Merwede, *IHC Hydrohammer Pile Driving Equipment*, 2011.

pile driving would not cause structural damage or adversely affect vibration-sensitive equipment; and

- if the seismographs determine the permissible perception threshold is exceeded at any of the uses, adjusting vibration amplitudes of the pile driving on the conditions of the affected structures, the sensitivity of equipment, and/or human tolerance to reduce the vibration level to permissible limits.

(2) Operational Mitigation Measures

MV 4.6-5 To mitigate the noise impacts on Lots 561, 562, 563 and 564 ~~85, 86, and 87~~ (Area A2) (single-family residential) that back onto Commerce Center Drive from traffic on the proposed Commerce Center Drive extension through the site, the project applicant shall, prior to occupancy, construct a 5-foot solid wall along the rear lot lines of these lots. The wall may be constructed of 3/8 or 5/8-inch Plexiglas or other material of similar acoustic performance, and shall be continuous with no breaks or gaps.

~~MV 4.6-6 To mitigate the noise impacts on Lot 468 (Area D1) (apartment/condominium) from traffic on the proposed Commerce Center Drive extension through the site, the project applicant shall, prior to occupancy, construct a 5-foot berm/solid wall along the property line that abuts Commerce Center Drive. Alternatively, the project applicant shall place planned frequent use areas in the interior of the lot and separated from the roadway by structures.~~ Draft EIR Mitigation Measure MV 4.6-6 applied to Lot 468, which previously was designated for apartment/condominium use. When VTTM No. 61105 was revised December 15, 2010, the spineflower preserves were expanded to include Lot 468. Therefore, as Lot 468 no longer includes sensitive receptors and would not be signficantly impacted by project noise, Mitigation Measure MV 4.6-6 is no longer necesary.

MV 4.6-7 To mitigate the noise impacts on Lot 508 (Mixed Use Commercial) from traffic on the proposed Commerce Center Drive extension through the site, the project applicant shall place planned frequent use areas for the residential component, if any, in the interior of the lot and separated from the roadway by structures. Alternatively, if residential uses are proposed, the project applicant shall construct a 5-foot berm/solid wall along the property line that abuts Commerce Center Drive.

MV 4.6-8 To mitigate the noise impacts on Lot 512 (Mixed Use Residential/Commercial) from traffic on the proposed Magic Mountian Parkway extension through the site, the project applicant shall place planned frequent use areas for the residential component in the interior of the lot and separated from the roadway by structures. Alternatively, the project applicant shall construct a 5-foot berm/solid wall along the property line that abuts Commerce Center Drive.

With implementation of **Mitigation Measure MV 4.6-5**, noise impacts on Lots 561, 562, 563 and 564 ~~85, 86, and 87~~ would be reduced to 60 dB(A) CNEL or less, ~~and with implementation of **Mitigation Measure MV 4.6-6** noise impacts on Lot 468 would be reduced to 65 dB(A) CNEL or less with the 5-foot wall in place,~~ and less than significant. Because sound walls for commercial uses are not practical or desirable, noise levels on some of the lots designated for Mixed-Use Residential/Commercial (such as Lot 512) would exceed 65 dB(A) CNEL, which is the maximum acceptable exterior noise level for frequent use areas at multi-family residences. Therefore, the following mitigation measure is recommended to reduce on-site operational noise impacts on multi-family residences that could occur in Mixed-Use lots to less than significant.

MV 4.6-9 When the final plans for the Mixed-use Residential/Commercial lots are complete showing the locations and orientations of the residences within the lots are complete, acoustic analyses shall be conducted by a qualified acoustic consultant to ensure that interior noise levels of any residences within the commercial lots can be feasibly reduced to 45 dB(A).

Although the Mission Village project would not cause significant cumulative noise impacts in Ventura County, Mission Village is required to mitigate noise impacts on specific sensitive receptors in Ventura County under Specific Plan Mitigation Measures 4.9-15 and 4.9-16 through payment of its fair share towards specified noise attenuation measures and programs. Assuming that all future development projects that generate traffic along roadways adjacent to these receptors are required by Ventura County to implement similar mitigation measures, cumulative traffic noise impacts at these receptors would be reduced to less than significant.

10. CUMULATIVE MITIGATION MEASURES

Mitigation for cumulative noise impacts on Travel Village is provided in the Newhall Ranch Specific Plan Program EIR under Mitigation Measure 4.9-14**.** Additionally, the project's incremental contribution to cumulative traffic noise impacts in Ventura County would be mitigated through implementation of the previously adopted Mitigation Measures 4.9-15 and 4.9-16 from the Program EIR. No other cumulative mitigation measures are required.

11. UNAVOIDABLE SIGNIFICANT IMPACTS

a. Project Impacts

Mitigation measures recommended to reduce construction- and operational-related noise impacts would reduce the ~~magnitude of those~~ identified impacts to a level below significant and no significant and unavoidable impacts would result. Specific to pile-driving related impacts, the use of pile drilling or hydrohammer pile driving equipment or an equivalent methodology would reduce on-site and off-site pile driving noise impacts to less than significant levels, and mitigation would reduce related potential vibration impacts to a level below significant. ~~; however, should pile driving be required to construct the Commerce Center Drive Bridge, and should the project applicant not find it feasible to complete the pile driving prior to occupancy of on-site noise-sensitive uses within 4,000 feet of the pile driving, an unavoidable significant construction noise impact would occur. Additionally, although mitigation is proposed to reduce pile driving noise impacts at off-site noise-sensitive uses, should pile driving be required to construct the Commerce Center Drive Bridge, noise impacts from the pile driving would be significant and unavoidable at the Travel Village RV Park and all other off-site noise-sensitive uses located within 4,000 feet of the pile driving for the duration of the pile driving activities~~.

~~Vibration impacts within 500 feet of the pile driving may not be fully mitigable to or below the threshold of significance and would result in an unavoidable significant vibration impact to surrounding inhabitants and to those non-residential uses that may employ vibration-sensitive equipment for the duration of the pile driving.~~

b. Cumulative Impacts

The proposed project would not result in significant and unavoidable cumulative noise impacts.

Specific Plan, including the identification of appropriate candidate land areas for recharge. The report shall be subject to approval by the Department of Public Works (DPW) and other applicable regulatory agencies, as determined by DPW. (The referenced report has been completed and included in **Appendix 4.8**.)

c. Additional Mitigation Measures Proposed by this EIR

~~Implementation of t~~ The above Specific Plan mitigation measures are ~~as~~ part of the Mission Village project by virtue of the County's approval of the Newhall Ranch Specific Plan (May 27, 2003), and would mitigate impacts to water resources to less-than-significant levels. The above Specific Plan mitigation measures also will be incorporated into the County's Mitigation Monitoring Plan for the Mission Village project as applicable. Nonetheless, to ensure that the Mission Village project impacts to water resources remain less than significant, the following mitigation measure was included in the Draft EIR; such mitigation also will be included in the County's Mitigation Monitoring Plan for the Mission Village project to ensure enforcement of the measure: ~~As a result, no additional mitigation measures beyond those identified in the Newhall Ranch Specific Plan Program EIR are required or necessary, because the Mission Village project does not result in any significant water-related impacts after implementation of the above mitigation measures. However, at the request of CLWA, the following mitigation measure has been added to the EIR:~~

MV 4.8-1 Upon the issuance of building permits associated with each subdivision map allowing construction within the Mission Village site, the applicant shall pay Facility Capacity Fees to the Castaic Lake Water Agency (CLWA) in accordance with CLWA policies and procedures.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Impacts

With implementation of the Specific Plan mitigation measures, the proposed project would not result in or contribute to any significant unavoidable impacts on Santa Clarita Valley water resources. No further mitigation measures are required.

b. Cumulative Impacts

Because the proposed project is relying on local independent water supplies (i.e., local groundwater and recycled water from local water reclamation plants), the proposed Mission Village project does not result in or contribute to any significant unavoidable cumulative impacts on Santa Clarita Valley water supplies. Therefore, as stated above, cumulative mitigation measures are not required.

4.9 WASTEWATER DISPOSAL

1. SUMMARY

Construction-related wastewater disposal impacts would be less than significant, as portable, on-site sanitation facilities would be utilized during construction activities.

Once project construction is complete, the proposed Mission Village project would generate a worst-case average total of approximately 0.96~~1.13~~ million gallons per day (mgd) of wastewater. Of the total project wastewater generation, approximately 0.695~~884~~ mgd would be treated by the Newhall Ranch County Sanitation District (NRCSD) at the Newhall Ranch Water Reclamation Plant (WRP) once WRP construction is complete. Due to gravitational limitations, the remaining approximately 0.266~~41~~ mgd would be permanently treated at the Valencia WRP, subject to conditions specified in a Joint Sewerage Services Agreement to be executed between NRCSD and the Santa Clarita Valley Sanitation District (SCVSD). The treatment capacity of the Newhall Ranch WRP would be 6.8 mgd, with a maximum flow of 13.8 mgd. Until the development of the Newhall Ranch WRP is complete, there are three potential scenarios for the interim conveyance and treatment of the portion of wastewater generated by the Mission Village project that ultimately would be permanently treated at the Newhall Ranch WRP. The first scenario is to construct an initial phase of the Newhall Ranch WRP to serve the Mission Village project site, with buildout of the WRP occurring over time as demand for treatment increases. Under this scenario, the initial phase of the WRP would be designed and constructed to accommodate the project's predicted wastewater generation. The second scenario would temporarily direct all wastewater flows from the Mission Village project by pipeline across the Commerce Center Drive Bridge to the Valencia WRP until the first phase of the Newhall Ranch WRP is complete. The third scenario assumes that the Commerce Center Drive Bridge is not constructed until after occupancy of some of the land uses in the Mission Village project, and an interim pump station would be constructed that would direct wastewater to the existing Valencia WRP. Under both the second and third scenarios, wastewater from the Mission Village project would be pumped temporarily to the Valencia WRP until such time as the first phase of the Newhall Ranch WRP is constructed and operational. (Under an agreement with the SCVSD, the Valencia WRP could temporarily treat wastewater from Mission Village (and Landmark Village) until such time as the Newhall Ranch WRP is constructed and operational. Based on the County Sanitation Districts of Los Angeles County (CSDLAC) future wastewater generation estimates and the planned expansion of the Saugus and Valencia WRPs, the Valencia WRP would have sufficient capacity to temporarily accommodate the Mission Village project's total predicted wastewater generation of ~~1.13~~0.96 mgd. For these reasons, wastewater disposal impacts associated with Mission Village would be less than significant.

2. INTRODUCTION

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

Section 4.12 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with wastewater disposal for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation without mitigation would result in significant wastewater disposal impacts, but that construction of the Newhall Ranch WRP and associated waste transmission infrastructure, as well as implementation of the identified mitigation measures, would reduce the impacts to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, adopted May 2003, the County of Los Angeles General Plan, and the Santa Clarita Valley Area Plan as they pertain to wastewater disposal, and applicable County regulations.

This project-level wastewater disposal impact analysis is tiered from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.9** assesses the Mission Village project site's existing conditions relative to wastewater disposal, impacts on wastewater disposal, applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any additional mitigation measures recommended by this EIR for the Mission Village project.

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

The approved Newhall Ranch WRP will be located within the Specific Plan area to treat Specific Plan-generated wastewater. The WRP site is located on the south side of State Route 126 (SR-126) adjoining the Santa Clara River, near the Los Angeles County/Ventura County line. Without construction of the Newhall Ranch WRP and associated waste transmission infrastructure, the increased demand for wastewater treatment associated with buildout of the Specific Plan is considered a significant impact.

Based on the Newhall Ranch Specific Plan Program EIR and record, the County's Board of Supervisors found that the significant wastewater disposal impacts caused by buildout of the Specific Plan were mitigated to below levels of significance with construction of the Newhall Ranch WRP, the associated waste transmission infrastructure and adoption of specified mitigation measures.[1]

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[1] Mitigation Measures 4.12-1 through 4.12-7 in both the certified Newhall Ranch Specific Plan Program EIR and adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). All of these mitigation measures are reiterated in the mitigation measures portion of this EIR.

The project-level wastewater/sewer plan is intended to be consistent with, and implement, the Specific Plan's approved Conceptual Backbone Sewer Plan (Exhibit 2.5-3 of the Specific Plan). This plan set forth a program-level system for wastewater/sewage collection for Newhall Ranch. The Specific Plan also committed that all sewer system facilities would be designed and constructed for maintenance by the County, CSDLAC, or a new County sanitation district in accordance with their manuals, criteria, and requirements. **Figure 1.0-24, Newhall Ranch Specific Plan Backbone Drainage Plan – Mission Village**, depicts the Specific Plan's Conceptual Backbone Sewer Plan, as it relates to Mission Village. In response to the approved Specific Plan, the Los Angeles County Local Area Formation Commission (LAFCO) has approved formation of the Newhall Ranch County Sanitation District, effective July 27, 2006.[2] The new WRP's capacity would be 6.8 mgd, with a maximum flow of 13.8 mgd.

The environmental effects of constructing and operating the WRP were evaluated at the project-level in the certified Newhall Ranch Specific Plan Program EIR. The EIR determined the WRP would have significant unavoidable impacts on the following environmental categories: agricultural resources, air quality, visual quality, and solid waste. Agricultural impacts would result from the conversion of 15 acres of prime agricultural land to an urban use. Air quality impacts associated with site grading would generate quantities of dust exceeding the South Coast Air Quality Management District (SCAQMD) daily threshold of significance, even after application of all available dust controls to reduce the amount of dust by roughly 61 percent. Visual quality impacts were due to the contrast of the WRP site with the vacant land within the river corridor, both during and following construction. Solid waste impacts were a result of project landfill disposal of biosolids produced as a byproduct of the wastewater treatment process. Because such facilities are limited in number and have finite capacity, and because new facilities are expensive and difficult to develop impacts to solid waste are considered significant and unavoidable. Based on the Newhall Ranch Specific Plan Final EIR for the WRP and record, the County's Board of Supervisors found that the significant unavoidable impacts caused by the WRP were offset by overriding economic, legal, social, and public benefits. Consistent with section 15093 of the *California Environmental Quality Act (CEQA) Guidelines*, these benefits were found to outweigh the significant unavoidable impacts and make them acceptable.

4. EXISTING CONDITIONS

Relevant information and the technical studies from the certified Newhall Ranch Specific Plan Program EIR (see Draft EIR, Appendix 4.12) were assessed to determine if there were any wastewater disposal issues that were not examined in the certified Program EIR. It was determined that all significant wastewater disposal effects were identified, adequately addressed and mitigated or avoided at the programmatic level of review in the certified Program EIR and related environmental findings. (*State CEQA Guidelines*, Section 15152). Therefore, at the project level, this EIR incorporates by reference the

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2 CSDLAC comment letter to Daniel Fierros, Department of Regional Planning, dated January 22, 2007.

existing conditions analysis and background information relating to wastewater disposal from the certified Newhall Ranch Specific Plan Program EIR (Section 4.12). This information has been updated as appropriate.

This section is divided into two distinct topics:

- Wastewater treatment facilities
- Wastewater collection system

a. Wastewater Treatment Facilities

Most wastewater generated within the Santa Clarita Valley is treated at two existing WRPs, which are operated by the Santa Clarita Valley Sanitation District (SCVSD). The SCVSD is a member of the CSDLAC and is the wastewater provider for the City of Santa Clarita and some surrounding unincorporated County areas. The existing Saugus WRP is located at 26200 Springbrook Avenue in Saugus. The existing Valencia WRP is located at 28185 The Old Road in Valencia. **Figure 4.9-1**, **Existing Wastewater Treatment Facilities and Sanitation Districts**, shows the existing wastewater facilities and Sanitation Districts within the immediate vicinity of the project site that provide primary, secondary, and tertiary treatment. The SCVSD has a permitted treatment capacity of 28.1 mgd and a treated average of 20.5 mgd.[3] While a small portion of the Newhall Ranch Specific Plan site is within the Sphere of Influence of the SCVSD, virtually the entire Specific Plan site is outside the service area of the SCVSD. Currently, wastewater generated by the few existing buildings located on the Newhall Ranch Specific Plan site is accommodated by on-site septic systems. No wastewater is currently generated from the Mission Village project site.

The mechanism used to fund expansion projects is the SCVSD's Connection Fee Program. Prior to the connection of the local sewer network to the CSDLAC system, all new users are required to pay for their fair share[4] of the SCVSD sewerage system expansion through a "connection fee." The fees fund treatment capacity expansion and trunk lines, while on-site sewer mains are the responsibility of the developer.

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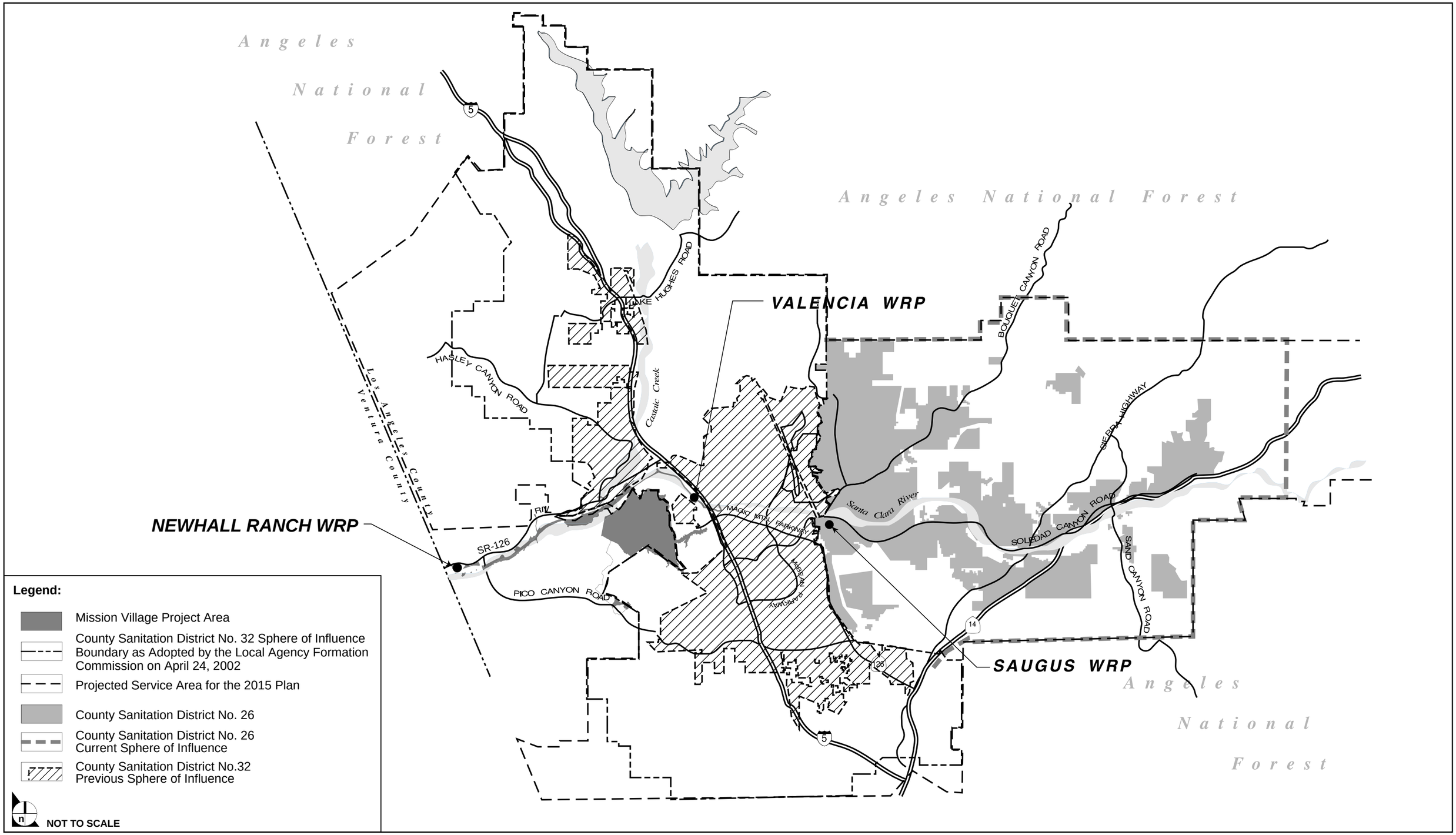
3 County Sanitation Districts of Los Angeles County. *Final 2015 Santa Clarita Valley Joint Sewerage System Facilities EIR*, January 1998.

4 The fair share is equivalent to the cost of expanding the system to accommodate the anticipated sewage flows from the new users.



SOURCE: Impact Sciences, Inc., 2003

FIGURE **4.9-1**

Existing Wastewater Treatment Facilities and Sanitation Districts

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The rate at which connections are made—and revenues accumulate—drives the rate at which periodic expansions of the system will be designed and built. Importantly, it should be noted that connection permits are not issued if there is not sufficient capacity, although this is a rare occurrence as the SCVSD routinely monitors system capacity and anticipated development to ensure sufficient capacity for approved developments. Therefore, the expansion of district facilities, such as trunk lines, may not be immediate if adequate treatment capacity does not exist at the WRP to serve new users, or the expansion may occur in the future if it is determined that there is adequate WRP capacity to serve immediately new users, but inadequate capacity to serve future development within the tributary area(s) of the affected collection/treatment facilities, thereby necessitating future system expansions. In the latter case, the connection fees paid by new users are deposited into a restricted Capital Improvement Fund (CIF) used solely to capitalize the future expansion of affected system facilities.

As stated above, connection permits are only issued if there is sufficient collection and treatment capacity; however, SCVSD routinely monitors system capacity and anticipated development to ensure sufficient capacity for approved developments. Consequently, SCVSD's denial of a connection permit is extremely rare, because expansions are constructed when capacity is needed, not when a threshold amount of connection revenues has been collected. SCVSD anticipates that the new NRCSD would adopt similar connection permit practices.

The cyclical process of building phased expansions and collecting connection fees can continue indefinitely. The only restriction would be when the districts run out of land. Existing facilities can be expanded to handle a daily capacity of 34.2 mgd, which is sufficient to meet demand up until 20~~15~~33.[5] The district does not expect to exceed a daily capacity of 34.2 mgd because connection permits will not be issued that would exceed this amount.

CSDLAC has prepared a Facilities Plan, with a horizon year of 2015, for the SCVSD. The Facilities Plan, approved in January 1998, estimates future wastewater generation for the probable future service area of the SCVSD in order to anticipate future treatment capacity and wastewater conveyance needs. According to CSDLAC estimates, total flows projected from the Santa Clarita Valley in 2015, exclusive of Newhall Ranch, would be 34.2 mgd. This projection is based on Southern California Association of Governments (SCAG) 1996 population projections. As a result of this finding, CSDLAC proposed a phased plan to incrementally expand the treatment facilities at the Saugus and Valencia WRPs to meet future needs to a total of 34.2 mgd.[6] This phased expansion plan, which would increase treatment capacity by

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5 ~~County Sanitation Districts of Los Angeles County. *Final 2015 Santa Clarita Valley Joint Sewerage System Facilities EIR*, January 1998~~CSDLAC comment letter to Carolina Blengini, Los Angeles County Department of Regional Planning, dated November 17, 2010.

6 County Sanitation Districts. *Final 2015 Santa Clarita Valley Joint Sewerage System Facilities EIR*, January 1998.

approximately 15 mgd, has been approved. The most recent phase was completed in May 2005 and expanded treatment capacity by approximately 9 mgd, or approximately 47 percent, to the current total treatment capacity of approximately 28.1 mgd. Based on populations projections published in the most recent SCAG 2004~~8~~ Regional Transportation Plan, the Valencia WRP has adequate capacity through the year 20~~15~~33. ~~Another phase (Stage VI) of treatment facility expansion would increase capacity by 6 mgd, but will not be constructed until flow materializes.~~[7]

According to recent SCVSD flow projections based on SCAG's 2008 Regional Transportation Plan, the previously approved Stage VI expansion at the Valencia WRP is not expected to be needed until approximately 2021 and the site buildout capacity of 34.2 mgd is not expected to be reached until approximately 2033.

b. Wastewater Collection System

The CSDLAC wastewater collection system is composed of service connections that tie in to the local collection network. This local network, composed of secondary and primary collectors, flows into the districts' trunk wastewater mains and the water reclamation plants. The Newhall Ranch Consolidated Sewer District (NRCSD) maintains the wastewater trunk mains that lead to the Saugus and Valencia WRPs, and the local collection network is maintained by the Los Angeles County Department of Public Works' Consolidated Sewer Maintenance District ~~for the City of Santa Clarita (~~CSMD~~)~~.

The Mission Village project site is presently undeveloped and there is no wastewater collection and conveyance system on the property. Existing gravity sewer mains run parallel to The Old Road within the right-of-way and flow to a sewer lift station located near the intersection of The Old Road and Henry Mayo Drive at the east side of The Old Road right-of-way. The existing lift station pumps wastewater through a 16-inch force main to the Valencia WRP. **See Figure 4.9-1.**

Operation and maintenance of local sewer lines within areas of unincorporated Los Angeles County, and the City of Santa Clarita, are the responsibility of the ~~Consolidated Sewer Maintenance District of the Los Angeles County Department of Public Works~~CSMD. The ~~Consolidated Sewer Maintenance District~~CSMD requires that new subdivision wastewater systems connect to the District's existing sanitary wastewater system, and any developer constructing a new wastewater line coordinate the construction and dedication of any such wastewater line with the District for future operation and maintenance. Operation and maintenance of the regional trunk sewer lines is the responsibility of the ~~NRCSD~~Newhall Ranch Consolidated Sewer District. It would then be the responsibility of ~~the NRCSD~~ this district to upgrade the

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7 CSDLAC comment letter to Carolina Blengini, Los Angeles County Department of Regional Planning, dated November 17, 2010.~~County Sanitation Districts. *Final 2015 Santa Clarita Valley Joint Sewerage System Facilities EIR*, January 1998.~~

wastewater collection and treatment systems by providing relief for existing trunk lines nearing capacity and expanding treatment plants to provide sanitation service to outlying areas.[8]

5. PROPOSED PROJECT IMPROVEMENTS

The project proposes to develop a total of 4,412 residential dwelling units consisting of 382 single-family homes and 4,030 multi-family units, including attached and detached condominiums, age qualified, and apartment units, with a total residential population of 10,802.[9] The project would also include 1.555 million square feet of commercial/mixed-uses, a 9.5-acre elementary school, fire station, public library, bus transfer station, parks, public and private recreational facilities, trails, and road improvements.

The project-level wastewater/sewer collection system consists of gravity sewers, forced mains, and pump stations. As noted, the long-range plan is for the Newhall Ranch WRP to be constructed exclusively to serve uses within Newhall Ranch. The new WRP's capacity would be 6.8 mgd, with a maximum flow of 13.8 mgd. LAFCO approved formation of the Newhall Ranch County Sanitation District, effective July 27, 2006. The environmental effects of constructing and operating the WRP were evaluated at the project-level in the certified Newhall Ranch Program EIR.

Until the previously approved Newhall Ranch WRP is constructed and operational, one of several alternative wastewater treatment options will be implemented for the Mission Village project. These alternative treatment options are described below in **subsection 6, Project Impacts**, along with the potential impacts associated with implementation of each option.

As stated above, the NRCSD will provide wastewater services for the Newhall Ranch Specific Plan, including the Mission Village project site. The SCVSD is a member of the County Sanitation Districts of Los Angeles County and is the wastewater service provider for the City of Santa Clarita and some surrounding unincorporated County areas. To coordinate wastewater management services between the SCVSD and the NRCSD, an Interconnection Agreement was signed in 2002 between the SCVSD and the project applicant.

The Interconnection Agreement was developed to establish a logical plan for the development and administration of the new NRCSD and its infrastructure, and it sets conditions under which the first 6,000 homes in Newhall Ranch may temporarily discharge wastewater to the existing Valencia WRP. The

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8 Telephone conversation with Basil Hewitt at the County Sanitation Districts of Los Angeles County, September 1, 2005.

9 Based upon County of Los Angeles estimates of 3.17 persons per single-family household and 2.38 persons per multi-family houeshold.

conditions include payment of the standard connection fee (fair share of the cost of the existing infrastructure) and transfer of title of the 22-acre Newhall Ranch WRP site to the NRCSD. Newhall Ranch residents also would pay the Districts an annual service charge to recover the full cost of treating their wastewater at the Valencia WRP. Temporary treatment of wastewater at the Valencia WRP would not eliminate the need for the developer to construct the Newhall Ranch WRP; instead, the temporary treatment of wastewater at the existing Valencia WRP is a practical engineering decision based on the need to build up an adequate, steady flow of wastewater before starting up the Newhall Ranch WRP. Such an approach would match the slower pace of the development, but would not eliminate the Specific Plan requirement for construction of the Newhall Ranch WRP.

The Interconnection Agreement was considered and approved at the January 9, 2002 meetings of the CSDLAC, which were open to the public. Further, the Interconnection Agreement was referenced in previous County and LAFCO resolutions supporting formation of the new NRCSD. A copy of the Interconnection Agreement is found in **Appendix F4.9** of the Final EIR.[10]

6. PROJECT IMPACTS

The analysis of potential impacts to wastewater disposal associated with construction and operation of the proposed Mission Village project, including the significance criteria applicable to assessing such impacts, is presented below:

a. Significance Threshold Criteria

According to Appendix G of the *State CEQA Guidelines*, a project would result in a significant wastewater disposal impact if the project would

(a) exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board; or

(b) require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or

(c) result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

With respect to criterion (a), the proposed project will comply with all applicable wastewater treatment requirements, including obtaining all necessary permits. Please see **Section 4.8, Water Service**, for further

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10 To the extent required, the SCVSD may utilize the Mission Village EIR or the Landmark Village EIR, as necessary, if one of the above Valencia WRP sewer options is selected and one or both of the project EIRs are certified by the County's Board of Supervisors.

discussion. As to criterion (b), the proposed project will not require the construction of new, or the expansion of existing, wastewater treatment facilities, beyond the Newhall Ranch WRP, the environmental impacts of which, as previously noted, were analyzed in the Newhall Ranch Specific Plan/WRP EIR. Therefore, the focus of the following impact analysis is on criterion (c) and the available treatment capacity to serve the project's projected wastewater demand.

b. Construction-Related Impact Analysis

Construction contractors for the project would provide portable, on-site sanitation facilities that would be serviced at approved disposal facilities and/or treatment plants. The amount of construction-related wastewater that would be generated is not expected to have a significant impact on these disposal/treatment facilities due to expected low volume and temporary nature of the waste generated during construction.

c. Operational Impacts

(1) Demand

As shown in **Table 4.9-1, Mission Village Wastewater Generation**, the proposed project would generate a worst-case average total of approximately 0.~~884~~ 695 mgd of wastewater that would be treated by the NRCSD at the Newhall Ranch WRP, and 0.266~~41~~ mgd that would be permanently treated at the Valencia WRP, subject to conditions specified in a Joint Sewerage Services Agreement to be executed between NRCSD and the SCVSD. Flows from the project site would be lifted and combined for conveyance across the River and collection into a Sanitation District trunk sewer located along the north side of the River. This trunk will either convey the effluent by gravity to the Newhall Ranch WRP or be pumped back to the Valencia WRP under the Interconnection agreement with SCVSD. Flows from a portion of the project site that is the proposed location of 1,239 multi-family units (Sewer System C) and approximately 732,000 square feet of commercial naturally drain towards the current sewer line terminus in Magic Mountain Parkway. Flows from this portion of the project site are proposed to connect to the sewer lines in Magic Mountain Parkway for treatment at the Valencia WRP.

Table 4.9-1
Mission Village Wastewater Generation

Land Use	Units	Quantity	Generation Factor (gpd per designated unit)	Wastewater Generation (gpd)
Treatment at Newhall Ranch WRP (Ultimate Condition)				
Residential				
Single Family	du	382	260.00	99,320
Multi-Family	du	2,791	156~~195~~.00	435,396~~544,245~~
Non-Residential				
Commercial Retail	tsf	823.43~~1,555.1~~	100.00	82,343~~155,510~~
Elementary School	tsf	~~413.82~~375	200.00	75,000~~82,764~~
Library	tsf	60	50.00	3,000
			Subtotal	*695,059~~884,839~~*
Treatment at Valencia WRP (Ultimate Condition)				
Multi-Family	du	1,239	156~~95~~.00	193,284~~241,605~~
Non-Residential				
Commercial Retail	Tsf	732.57	100	73,257
			Subtotal	*266,541~~41,605~~*
			Total	**961,600~~1,126,444~~**

Source: County Sanitation Districts of Los Angeles Loadings and Unit Rates.
du = dwelling units; tsf = thousand square feet

(2) Wastewater Treatment

As previously discussed, the long-range plan is for the Newhall Ranch WRP to be constructed exclusively to serve uses within Newhall Ranch. The new WRP's capacity would be 6.8 mgd, with a maximum flow of 13.8 mgd. A new County sanitation district has been formed and is known as the Newhall Ranch County Sanitation District or NRCSD. Project generated wastewater, 0.695~~884~~ mgd, would be treated by the NRCSD at the Newhall Ranch WRP, although interim treatment at the Valencia WRP would occur under some of the wastewater treatment scenarios as described below. Project generated wastewater of approximately 0.266~~41~~ mgd would be treated at the Valencia WRP permanently. As the planned treatment capacity of the Newhall Ranch WRP would be sufficient to treat wastewater flows from the entire Specific Plan project, no significant long-term operational impacts would result from the treatment of wastewater generated by the Mission Village project.

~~However, u~~Until the Newhall Ranch WRP construction is completed and the plant is operational, on an interim basis, three wastewater disposal options are available to treat the majority of the wastewater

generated by the proposed project. One scenario, as shown in **Figure 1.0-32, Mission Village Wastewater System – Scenario 1**, provides for the construction of an initial phase of the Newhall Ranch WRP to serve the Mission Village ~~subdivision~~project. Under this scenario, buildout of the WRP would occur over time as demand for treatment increases due to subsequent development of the Newhall Ranch Specific Plan. The second scenario, as shown in **Figure 1.0-33, Mission Village Wastewater System – Scenario 2**, provides for an option should the Newhall Ranch WRP not yet be constructed. In this scenario, flows would be piped across the Commerce Center Drive Bridge to an interim pump station north of the Santa Clara River along the utility corridor where wastewater would be pumped back to an existing CSDLAC pump station, then to the existing Valencia WRP, located upstream of the project site along I-5. The pump station would be used until such time as the first phase of the Newhall Ranch WRP is constructed~~.~~ and operational. The third scenario, as shown in **Figure 1.0-34, Mission Village Wastewater System – Scenario 3**, is an interim option that would be implemented in the event that the Commerce Center Drive Bridge is not constructed prior to the occupancy of new land uses on the Mission Village project site. Under this scenario, an interim pump station would be constructed near the intersection of "GG" Street and Commerce Center Drive that would pump effluent to the existing Valencia WRP, which is located approximately 0.5 mile east of the project site along I-5. Under this scenario, a force main from the interim pump station on the project site to the proposed sewer mainline in Magic Mountain Parkway would be constructed. This proposed sewer mainline would connect with an existing line at the intersection of The Old Road and Magic Mountain Parkway. As with Scenario 2 described above, wastewater from the Mission Village project would continue to be pumped temporarily to the Valencia WRP until such time as the first phase of the Newhall Ranch WRP is constructed and operational, consistent with the Interconnection Agreement. The available capacity under each of these three treatment scenarios is discussed below.

(a) Treatment Scenario 1

Project generated wastewater requiring treatment has been calculated at approximately ~~1.13~~0.96 mgd. At buildout, the treatment capacity of the Newhall Ranch WRP would be 6.8 mgd, with a maximum flow of 13.8 mgd. The Newhall Ranch WRP has been designed to serve the buildout of the Newhall Ranch Specific Plan area, of which Mission Village is a part. Under this treatment scenario, the first phase of the WRP would be sufficiently sized to accommodate wastewater from the Mission Village project. The WRP was conditioned by the Board of Supervisors to be designed and constructed to the standards of CSDLAC and state standards and requirements. In addition, the Valencia WRP would be able to accommodate the approximately 0.266 mgd of wastewater from the project that will permanently be treated at this facility. As a result, no significant operational impacts would occur under this scenario.

(b) Treatment Scenario 2

Under this scenario, an interim pump station would be constructed along the utility corridor to pump wastewater via pipeline to the Valencia WRP. As a result of CSDLAC future wastewater generation estimates, CSDLAC proposed a two-phase plan to expand the SCVSD treatment facilities, which include the Valencia WRP, to meet anticipated future wastewater disposal needs of 34.~~1~~2 mgd.[11] The most recent phase was completed in May 2005 and expanded treatment capacity by approximately 9 mgd, or approximately 47 percent, to the current total treatment capacity of approximately 28.1 mgd. Based on population projections ~~published in~~ from the SCAG ~~2004~~ Regional Transportation Plan, 2008, the previously approved Stage VI expansion of the Valencia WRP is not expected to be needed until approximately 2021 and the site build-out capacity of 34.2 mgd is not expected to be reached until 2033.[12] ~~has adequate capacity through the year 2015. Another phase (Stage VI) expansion would increase capacity by 6 mgd, but will not be constructed until flow materializes.[13] According to recent SCVSD flow projections based on the SCAG 2008 Regional Transportation Plan, the previously approved Stage VI expansion at the Valencia WRP is not expected to be needed until approximately 2021 and the site buildout capacity of 34.2 mgd is not expected to be reached until approximately 2033.~~ Consequently, the planned short-term use of the Valencia WRP to treat ~~1.13~~0.96 mgd of the project's wastewater is expected to have no impact on future expansion of the SCVSD facilities. In addition, the Valencia WRP would be able to accommodate the approximately 0.2~~6~~6 mgd of wastewater from the project that will permanently be treated at this facility.

Additionally, as stated earlier, numerous safeguards exist within the County's project approval process to ensure available treatment capacity, including, as noted above, that connection permits for new development are not issued if there is not sufficient capacity. Moreover, mitigation adopted by the County as part of its approval of the Specific Plan provides that prior to recordation of each subdivision permitting construction; the applicant is required to obtain a letter from the new County sanitation district stating that treatment capacity will be adequate for that subdivision (Mitigation Measure SP 4.12-4). As a result, no significant operational impacts would occur under this scenario.

(c) Treatment Scenario 3

Similar to Scenario 2, under this scenario wastewater from the Mission Village project would be conveyed to SCVSD and, as discussed immediately above, the planned short-term use of the Valencia WRP to treat the project's wastewater can be accommodated, as well as the permanent treatment of approximately

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11 Ibid.

12 CSDLAC comment letter to Carolina Blengini, Los Angeles County Department of Regional Planning, dated November 17, 2010.

13 CSDLAC comment letter to Daniel Fierros, Los Angeles County Department of Regional Planning, dated January 22, 2007.

0.266 mgd of project wastewater. For this reason, no significant operational impacts would occur under this scenario.

(3) Collection Facilities

The following analysis is based on the Sewer Area Study for Mission Village prepared by PSOMAS in February 2010 For purposes of designing wastewater collection facilities compatible with local topography, the Mission Village project site was divided into five sewer systems designated as Systems A, B, B1, B2, and C, as shown in **Figure 4.9-2**, **Mission Village Sewer Systems**. In addition to Mission Village wastewater, wastewater flow from two off-site developments would be conveyed through the Mission Village system—the Legacy Village (VTTM 061996), and Homestead (VTTM 061996), located to the south, east, and west of the project site, respectively. Entrada (VTTM 53295) will tie into an off-site line in Magic Mountain Parkway that would be constructed by the Mission Village project.

Mission Village Sewer System "A" would combine a portion of the wastewater flow from the Legacy Village development and a portion of the Homestead project effluent with flow generated within this part of the Mission Village site by gravity flow to a pump station located near Lion Canyon. The wastewater would then be pumped to Mission Village Sewer System B2 and would flow, with effluent generated by uses within System “B2,” to Commerce Center Drive where it would be combined with System “B.” Mission Village Sewer Systems “B” and "B2" would convey wastewater flow via gravity, down Commerce Center Drive. This flow would be combined with that from System “B1”.

System C drains naturally towards the current terminus in Magic Mountain Parkway. This system will be sewered through the extension of sewer lines in Magic Mountain Parkway, with a tie in to an existing trunk sewer in the Old Road that is connected to the Valencia WRP via an existing 30-inch siphon under the Santa Clara River adjacent to the Old Road Bridge.

If the first phase of the Newhall Ranch WRP is used to treat effluent generated by the proposed project, as described in Treatment Scenario 1, the wastewater described above would flow via gravity across the Commerce Center Drive Bridge to a connection with the Newhall Ranch Santa Clara River Interceptor located on the north side of the Santa Clara River and then on to the Newhall Ranch WRP.

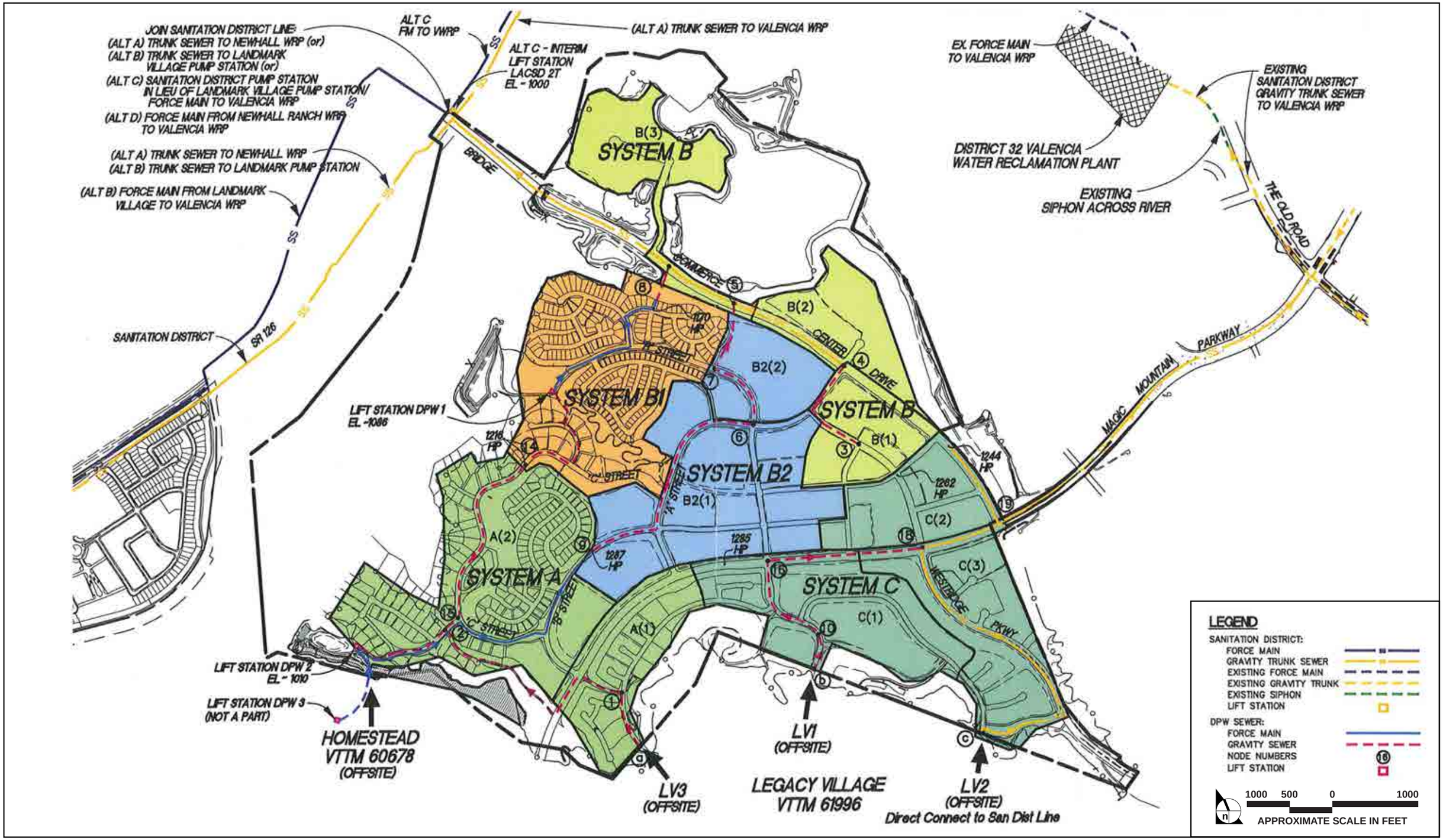
If the project follows Treatment Scenario 2, wastewater flows from Mission Village would be temporarily directed to the Valencia WRP until such time as the first phase of the Newhall Ranch WRP is ~~complete~~ constructed and operational. This alternative would require a temporary off-site Sanitation District lift station equipped with a force main to pump the effluent to an existing pump station at Henry Mayo/The Old Road intersection that pumps directly to the Valencia WRP. Under this scenario, if the Landmark Village project is developed prior to the Mission Village project, a gravity trunk main would be constructed along SR-126 from Commerce Center Drive to the temporary off-site lift station proposed as

part of Landmark Village. This lift station would pump effluent from both Mission Village and Landmark Village through a force main to the existing pump at the Henry Mayo Drive/The Old Road intersection and then on to the Valencia WRP.

Under Treatment Scenario 3, the Commerce Center Drive Bridge would not be constructed prior to occupancy of new land uses in Mission Village. This scenario would require the development and use of an interim pump station near the intersection of "GG" Street and Commerce Center Drive that would pump effluent to the existing Valencia WRP, which is located approximately 0.5 mile east of the project site along I-5. A pipeline from the interim pump station on the project site to the Valencia WRP would be constructed along the Magic Mountain Parkway Extension and would connect with an existing line at the intersection of The Old Road and Magic Mountain Parkway. As with Scenario 2 described above, wastewater from the Mission Village project would be pumped temporarily to the Valencia WRP until such time as the first phase of the Newhall Ranch WRP is constructed and operational.

Under Treatment Scenarios 1, 2, and 3, wastewater flows from Mission Village Sewer System C would be combined with a portion of Legacy Village effluent and wastewater generated from the Entrada development and drained via gravity flow through the sewer under Magic Mountain Parkway. This sewer would connect to an existing 30-inch trunk main that siphons under the Santa Clara River at The Old Road Bridge to the Valencia WRP.

All new lines would be designed and constructed to meet Los Angeles County Department of Public Works, CSDLAC, and state standards and requirements. Therefore, wastewater collection system impacts under any of the three scenarios are considered less than significant.



SOURCE: PSOMAS – February 2010

FIGURE **4.9-2**

Mission Village Sewer Systems

32-99•05/10

7. MITIGATION MEASURES

The County previously adopted mitigation measures required to be implemented as part of the approved Newhall Ranch Specific Plan. These mitigation measures, as they relate to wastewater disposal, are found in the certified Newhall Ranch Specific Plan Program EIR and adopted Mitigation Monitoring Plan (May 2003). The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan to ensure that future development of the project site would not result in wastewater disposal impacts and would not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as Related to the Mission Village Project

The following mitigation measures (**Mitigation Measures SP 4.12-1** through **SP 4.12-7**, below) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented, or have been implemented already, to mitigate the potentially significant wastewater disposal impacts associated with the Specific Plan, including the proposed Mission Village project.

SP 4.12-1 The Specific Plan shall reserve a site of sufficient size to accommodate a water reclamation plant to serve the Newhall Ranch Specific Plan. (*This measure has been implemented by the Board of Supervisors' approval, in May 2003, of the Newhall Ranch WRP within the boundary of the Specific Plan.*)

SP 4.12-2 A 5.8 to 6.9 mgd water reclamation plant shall be constructed on the Specific Plan site, pursuant to County, State, and Federal design standards, to serve the Newhall Ranch Specific Plan. (*This measure will be implemented pursuant to the project-level analysis already completed for the Newhall Ranch WRP in the certified Newhall Ranch Specific Plan EIR.*)

SP 4.12-3 The Conceptual Backbone Sewer Plan shall be implemented pursuant to County, State, and Federal design standards. *(The proposed Mission Village sewer system would implement the previously adopted Conceptual Backbone Sewer Plan relative to the Mission Village portion of the Specific Plan.)*

SP 4.12-4 Prior to recordation of each subdivision permitting construction, the applicant of each subdivision shall obtain a letter from the new County sanitation district stating that treatment capacity will be adequate for that subdivision. *(This mitigation measure, as it applies to Mission Village, will be implemented concurrent with project development.)*

SP 4.12-5 All facilities of the sanitary sewer system will be designed and constructed for maintenance by the County of Los Angeles Department of Public Works and the County Sanitation Districts of Los Angeles County, and/or the new County sanitation district or similar entity in accordance with their manuals, criteria, and requirements. *(This mitigation measure, as it applies to Mission Village, will be implemented concurrent with project development.)*

SP 4.12-6 Pursuant to Los Angeles County Code, Title 20, Division 2, all industrial waste pretreatment facilities shall, prior to the issuance of building permits, be reviewed by the County of Los Angeles Department of Public Works, Industrial Waste Planning and Control Section and/or the new County sanitation district, to determine if they would be subject to an Industrial Wastewater Disposal Permit. *(To the extent this mitigation measure applies to Mission Village, it will be implemented concurrent with project development.)*

SP 4.12-7 Each subdivision permitting construction shall be required to be annexed into the Los Angeles County Consolidated Sewer Maintenance District. *(This mitigation measure, as it applies to Mission Village, will be implemented concurrent with project development.)*

b. Additional Mitigation Measures Proposed by this EIR

No additional mitigation measures beyond those identified in the Newhall Ranch Specific Plan Program EIR are required or necessary because the Mission Village project would not result in any significant wastewater disposal impacts after implementation of the above mitigation measures.

8. CUMULATIVE IMPACTS

The focus of the cumulative impacts analysis is on determining whether the cumulative increase in the residential population from Santa Clarita Valley buildout, in combination with the proposed project, would adversely impact the wastewater disposal service providers that serve the residents of the Santa Clarita Valley. In order to analyze the cumulative impacts of the Mission Village project in combination with other expected future growth, the amount and location of growth expected to occur in the SCVSD sphere of influence was predicted. For this EIR, the following three separate cumulative development scenarios are analyzed to meet Los Angeles County and CEQA requirements (see **Section 3.0**, **Cumulative Impact Analysis Methodology**, for a discussion on these requirements):

Scenario 1 Existing development within the service area for the SCVSD plus Development Monitoring System (DMS) projections plus the proposed project (termed "DMS Buildout Scenario");

Scenario 2 Buildout within the Castaic Lake Water Agency (CLWA) service area based on buildout projections for CLWA service area, plus active pending *General Plan* and *Areawide Plan* amendment requests, plus the proposed project (termed "Santa Clarita Valley Cumulative Buildout Scenario"); and

Scenario 3 Buildout of the CSDLAC Facilities Plan for the Santa Clarita Valley Sanitation District.

a. DMS Buildout Scenario

The County General Plan DMS methodology uses sanitation districts as the area of analysis for wastewater treatment. The ~~Newhall Ranch County Sanitation District~~new NRCSD, which was formed effective July 27, 2006, is generally outside the sphere of influence of any existing district and has

boundaries contiguous with the boundary of the Specific Plan. The County DMS analysis for the district reflects a capacity of 6.8 mgd for the Newhall Ranch Specific Plan, sufficient to accommodate Specific Plan wastewater flows. Should future development occur within the expected tributary area[14] of the Newhall Ranch WRP and request to be annexed to the new sanitation district, the new development projects also would be included in the County's DMS. The formation of a service district does not create any environmental impacts that were not previously analyzed in the certified Newhall Ranch Specific Plan Program EIR. As a result, the proposed project's cumulative impacts under this scenario would be less than significant.

b. Santa Clarita Valley Cumulative Buildout Scenario

The Santa Clarita Valley (SCV) Cumulative Buildout Scenario entails buildout of all lands under the current land use designations indicated in the Los Angeles County Santa Clarita Valley Areawide Plan and the Los Angeles County General Plan, plus the proposed project, plus all known active pending General Plan Amendment requests in the unincorporated area of Santa Clarita Valley and in the City of Santa Clarita. **Table 4.9-2, Cumulative Development Activity – Santa Clarita Valley Cumulative Buildout Scenario**, depicts the projected future development activity in the Valley with and without the proposed project. Utilizing loading factors provided by the CSDLAC, under this buildout scenario, there would be an additional cumulative wastewater generation of 59.3 mgd. See **Table 4.9-3, Wastewater Generation Impact Analysis – SCV Cumulative Buildout Scenario**, for the detailed breakdown of SCV Cumulative Buildout Scenario wastewater calculations.

As previously discussed, the two existing Saugus and Valencia WRPs currently have a combined treatment capacity of 28.1 mgd, and would have a total projected 20~~15~~33 capacity of approximately 34.2 mgd of wastewater. Using CSDLAC loading factors, buildout of the service areas of these two WRPs would increase the amount of wastewater generated in the SCVSD to 56.02 mgd, which is 21.82 mgd more than the proposed 2033~~15~~ SCVSD expansion of 34.2 mgd.

As stated earlier, numerous safeguards exist within the County's project approval process to ensure available treatment capacity for new development within the service areas of CSDLAC, such as connection fees to pay for the full cost of facility expansions (including increasing water reclamation plant capacity). Although some amount of development in the Santa Clarita Valley would utilize on-site septic or package treatment facilities, it is expected that most of the buildout wastewater would be treated at CSDLAC plants. If buildout of the Santa Clarita Valley was permitted to occur without provision of additional treatment capacity at either the Saugus and Valencia WRPs or another site, significant wastewater disposal impacts would occur. However, with the County's safeguards in place that ensure

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14 Areas that flow by gravity to the approved Newhall Ranch WRP and which are outside the spheres of influence of the SCVSD.

no connections permits are issued if capacity is not available, no significant cumulative wastewater treatment impacts would occur.

Table 4.9-2
Cumulative Development Activity – Santa Clarita Valley Cumulative Buildout Scenario (Project Scenario)

Land Use Types	Cumulative Buildout w/o Project[1]	Project	Cumulative Buildout w/ Mission Village[1]
Single-Family	93,412 du	382 du	93,794 du
Multi-Family	47,621 du	4,030 du	51,651 du
Mobile Home	2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	1,555,100 sq. ft.	20,421,130 sq. ft.
Hotel	2,071 room		2,071 room
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	1,156 students	279,529 students
High School	12,843 students	321 students	13,120 students
College	29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.	36,000 sq. ft.	231,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.
Manufact./Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.		6,380,520 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.
Golf Course	1,209.0 ac		1,209.0 ac
Developed Parkland	467.8 ac	25.0 ac	492.8 ac
Undeveloped Parkland	1,000.0 ac		1,000.0 ac
Special Generator[2]	413.0 sg		413.0 sg

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

[1] *Santa Clarita Valley Consolidated Traffic Model (November 2002). Includes existing development, buildout under the existing City of Santa Clarita General Plan, Santa Clarita Valley Area Plan, and active pending General Plan Amendment requests.*

[2] *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Aqua Dulce Airport.*

Table 4.9-3
Wastewater Generation Impact Analysis – SCV Cumulative Buildout Scenario

Land Use	Cumulative Buildout w/ Mission Village[1]	Generation Factor (gpd)	Generation (mgd)
Single Family	93,794 du	260/du	24.386
Multi-Family	51,651 du	195/du	10.072
Mobile Home	2,699 du	195/du	0.526
Commercial Retail	20,421,130 sq. ft.	100/tsf	2.042
Hotel	2,071 room	125/room	0.259
Sit-Down Restaurant	283,790 sq. ft.	1,000/tsf	0.284
Fast Food Restaurant	23,600 sq. ft.	1,000/tsf	0.024
Movie Theater	3,300 seats	3.788/seat[1]	0.013
Health Club	54,000 sq. ft.	600/tsf	0.032
Car Dealership	411,000 sq. ft.	100/tsf	0.041
Elem./Middle School	279,529 students	20/student	5.591
High School	13,120 students	20/student	0.262
College	29,948 students	20/student	0.599
Hospital	247,460 sq. ft.	250/tsf[2]	0.062
Library	231,790 sq. ft.	50/tsf[3]	0.012
Church	501,190 sq. ft.	50/tsf	0.025
Day Care	785,000 sq. ft.	200/tsf	0.157
Industrial Park	41,743,950 sq. ft.	25/tsf	1.044
Business Park	8,424,330 sq. ft.	200/tsf	1.685
Manufact./Warehouse	3,932,470 sq. ft.	25/tsf	0.098
Utilities	1,150,240 sq. ft.	25/tsf	0.029
Commercial Office	6,380,520 sq. ft.	200/tsf	1.276
Medical Office	133,730 sq. ft.	300/tsf	0.040
Golf Course	1,209.0 ac	4,356/ac	5.266
Developed Parkland	503.5 ac	4,356/ac	2.193
Undeveloped Parkland	1,000.0 ac	N/A	0
Special Generator	413.0 sg	N/A	0
Total			**56.018**

Source: Impact Sciences, Inc.
Notes:
du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator; tsf = thousand square feet
[1] *Assumes 30 square feet per seat.*
[2] *Assumes 500 square feet per hospital bed.*
[3] *Uses same number as Church.*

c. County Sanitation Districts of Los Angeles County Facilities Plan for the Santa Clarita Valley Sanitation District

CSDLAC has prepared a Facilities Plan, with a horizon year of 2015, for the SCVSD that was approved in January 1998. The Facilities Plan will estimate future wastewater generation for the probable future service area of the SCVSD in order to anticipate future treatment capacity and wastewater conveyance needs. Unlike this EIR, which estimates future wastewater generation based on the buildout of land uses within the Santa Clarita Valley Area Plan and City of Santa Clarita General Plan, plus known active pending General Plan Amendments, the CSDLAC Facilities Plan bases its projections for wastewater generation on the SCAG 1996 Regional Transportation Plan. The Facilities Plan uses a residential and commercial wastewater generation rate of 101 gallons per capita per day, plus projected industrial wastewater and contracted entitlement flow. The Facilities Plan, which was approved prior to the County's approval of the Specific Plan, also assumes that if the Specific Plan is approved, its wastewater would be treated at the Newhall Ranch WRP, rather than by the SCVSD. According to CSDLAC estimates, total flows projected from the Santa Clarita Valley in 20~~15~~33, exclusive of the Specific Plan, would be 34.2 mgd.[15] ~~The projected site capacity of the Saugus and Valencia WRPs will be a total of 34.2 mgd by the year 2015.[16]~~ In addition, SCVSD does not expect to exceed a daily capacity of 34.2 mgd because connection permits will not be issued that would exceed this amount. According to recent SCVSD flow projects based on the SCAG 2008 Regional Transportation Plan, the previously approved Stage VI expansion at the Valencia WRP is not expected to be needed until approximately 2021 and the site buildout capacity of 34.2 mgd is not expected to be reached until approximately 2033. Consequently, the planned short-term use of the Valencia WRP to treat ~~1.13~~0.96 mgd of the project's wastewater is expected to have no impact on future expansion of the SCVSD facilities. In addition, as describe under "Project Impacts" above, the Valencia WRP would be able to accommodate the approximately 0.266 mgd of wastewater from the project that will permanently be treated at this facility. Because future project flows will be directed to the Newhall Ranch WRP, and because safeguards are in place that ensure no SCVSD connection permits are issued if capacity is not available, the proposed project would not result in significant cumulative impacts on the SCVSD under this scenario.

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15 CSDLAC comment letter to Carolina Blengini, Los Angeles County Department of Regional Planning, dated November 17, 2010.~~CSDLAC comment letter to Daniel Fierros, Department of Regional Planning, dated January 22, 2007.~~

16 Preliminary WRP Site Capacity Evaluations for the SCVSD, County Sanitation Districts of Los Angeles County, 1996.

9. CUMULATIVE MITIGATION MEASURES

Cumulative development would be required to implement similar mitigation as the proposed project, if necessary, determined on a project specific basis. Therefore, no additional mitigation is recommended or required in the context of this project.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

Provided that proposed mitigation measures are properly implemented, no significant unavoidable impacts are expected to result from implementation of the proposed project.

b. Cumulative Impacts

Provided that mitigation measures are properly implemented, no significant unavoidable cumulative impacts are expected to result from implementation of the proposed project.

5.0 MITIGATION MONITORING PLAN

PURPOSE

The Mitigation Monitoring Program (MMP) has been prepared in conformance with Section 21081.6 of the California Environmental Quality Act. It is the intent of this program to (1) verify satisfaction of the required mitigation measures of the EIR; (2) provide a methodology to document implementation of the required mitigation; (3) provide a record of the Monitoring Program; (4) identify monitoring responsibility; (5) establish administrative procedures for the clearance of mitigation measures; (6) establish the frequency and duration of monitoring; and (7) utilize existing review processes wherever feasible.

INTRODUCTION

The Mitigation Monitoring Program describes the procedures the applicant and others will use to implement the mitigation measures adopted in connection with the approval of the Mission Village project and the methods of monitoring such actions. A Monitoring Program is necessary only for impacts which would be significant if not mitigated. The following consists of a monitoring program table noting the responsible agency for mitigation monitoring, the schedule and a list of all project-related mitigation measures.

Mission Village Mitigation Monitoring Plan - May 2011			
Mitigation Measures/Conditions of Approval	**Party Responsible for Implementing Mitigation**	**Monitoring Action**	**1. Enforcement Agency** **2. Monitoring Agency** **3. Monitoring Phase**
4.1 GEOTECHNICAL AND SOIL RESOURCES			
SP 4.1-1 The standard building setbacks from ascending and descending man-made slopes are to be followed in accordance with Section 1806.4 of the Los Angeles County Building Code, unless superseded by specific geologic and/or soils engineering evaluations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)	Applicant (Civil Engineer, Geotechnical Engineer, Engineering Geologist)	Building and Grading Plan Check	1. LACDPW, Geology/Soils Section, and Building and Safety 2. LACDPW, Building and Safety and Geology/Soils Section 3. Prior to Issuance of Building Permits
SP 4.1-2 The existing Grading Ordinance for planting and irrigation of cut-slopes and fill slopes is to be adhered to for grading operations within the project site. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)	Applicant (Civil Engineer)	Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permits
SP 4.1-3 In order to safeguard against major seismic-related structural failures, all buildings within the project boundaries are to be constructed in conformance with the Los Angeles County Uniform Building Code, as applicable.	Applicant (Project Structural Engineer)	Building Plan Check	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permits
SP 4.1-4 The location and dimensions of the exploratory trenches and borings undertaken by Allan E. Seward Engineering Geology, Inc. and R.T. Frankian & Associates are to be noted on all grading plans relative to future building plans, unless the trenches and/or borings are removed by future grading operations. If future foundations traverse the trenches or borings, they are to be reviewed and approved by the project Geotechnical Engineer. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45.)	Applicant (Geotechnical Engineer)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Approval of Final Grading Plans; grading
SP 4.1-5 Wherever the Pacoima Formation is exposed, it may be potentially expansive; therefore, it is to be tested by the project soils engineer at the grading plan stage to determine its engineering characteristics and mitigation requirements, as necessary. (*This mitigation measure is not applicable because there is no Pacoima Formation on the tract map site or the borrow sites.*)	Not applicable.		

SP 4.1-6 Should any expansive soils be encountered during grading operations, they are not to be placed nearer the finished surface than 8 feet below the bottom of the subgrade elevation. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Investigation	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. During Grading
SP 4.1-7 If expansive materials are encountered at subgrade elevation in cut areas, the soils are to be removed to a depth of 8 feet below the "finished" or "subgrade" surface and the excavated area backfilled with non-expansive, properly compacted soils. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Investigation	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. During Grading
SP 4.1-8 At the time of subdivision, which allows construction, areas subject to liquefaction are to be mitigated to the satisfaction of the project Geotechnical Engineer prior to site development. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Issuance of Grading Permit(s)
SP 4.1-9 Subdrains are to be placed in areas of high ground water conditions or wherever extensive irrigation is planned. The systems are to be designed to the specifications of the Newhall Ranch Specific Plan Geotechnical Engineer.	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Issuance of Grading Permit and Verify During Grading
SP 4.1-10 Subdrains are to be placed in the major and minor canyon fills, behind stabilization blankets, buttress fills, and retaining walls, and as required by the Geotechnical Engineer during grading operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Issuance of Grading Permit and Verify During Grading
SP 4.1-11 Canyon subdrains may be installed in "V"-ditches or in a rectangular trench excavated to expose competent material or bedrock as approved by the Geotechnical Engineer.	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Issuance of Grading Permit and Verify During Grading

SP 4.1-12 The vertical spacing of subdrains behind buttress fills, stabilization blankets, etc., are to be a maximum of 15 feet. The gradient is to be at least 2 percent to the discharge end. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Issuance of Grading Permit and Verify During Grading
SP 4.1-13 Geological materials subject to hydroconsolidation (containing significant void space) are to be removed prior to the placement of fill. Specific recommendations relative to hydroconsolidation are to be provided by the Newhall Ranch Specific Plan Geotechnical Engineer at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)	Applicant (Geotechnical Engineer and Engineering Geologist)	Receipt of Specific Hydro-consolidation Recommend-ations	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Approval of Final Grading Plans and Verify During Grading
SP 4.1-14 Proposed structures on ridgelines will have a minimum 20 foot horizontal setback from the margin of the bedrocks to prevent perched or ground water levels where relatively impermeable materials can block downward migration.	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Issuance of Grading Permit and Verify During Grading
SP 4.1-15 Subsurface exploration is required to delineate the depth and lateral extent of the landslides shown on the geologic map. This work shall be undertaken at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15) Landslides must be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan Geotechnical Engineer, and to the satisfaction of the Los Angeles County Department of Public Works.	Applicant (Geotechnical Engineer and Engineering Geologist)	Receipt of Exploratory Data and Mitigation	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Approval of Final Grading Plan and Verify During Grading
SP 4.1-16 At the subdivision stage, the existence of landslides designated with "3" on Figure 4.1-2, Existing Landslide Areas (of the Newhall Ranch EIR), and within or adjacent to the development area is to be confirmed. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15) If landslides are confirmed in these areas, they are to be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan Geotechnical Engineer.	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Approval of Final Grading Plan and Verify During Grading
SP 4.1-17. The existence, or lack thereof, of landslides on or adjacent to the roadway alignments for the extension of Magic Mountain Parkway and Valencia Boulevard will be evaluated by subsurface investigations at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11) If landslides are confirmed in these areas, they are to be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan Geotechnical Engineer.	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Approval of Final Grading Plan and Verify During Grading

SP 4.1-18 The potential hazards associated with debris flow scars and other possible surficial failures located in proximity to the roadway alignments for the extension of Magic Mountain Parkway and Valencia Boulevard will be evaluated at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11) These areas are to be mitigated as determined by the Newhall Ranch Specific Plan Geotechnical Engineer.	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
			3. Prior to Approval of Final Grading Plan and Verify During Grading
SP 4.1-19. Remove debris from surficial failures during grading operations prior to the placement of fill. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 16)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
			3. During Grading Operations
SP 4.1-20. All soils and/or unconsolidated slopewash and landslide debris is to be removed prior to the placement of compacted fills. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to approval of Final Grading Plan and During Grading
SP 4.1-21 Cut-slopes, which will expose landslide material, are to undergo geologic and geotechnical evaluation at the subdivision stage to determine their stability and degree of consolidation. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15) Several options are available to mitigate potential landslide failure in the proposed cut-slopes. Landslides may be stabilized with buttress fills or shear keys designed by the Newhall Ranch Specific Plan Geotechnical Engineer; landslide material can be entirely removed and replaced with a stability fill; or the slope can be redesigned to avoid the landslide. Landslides underlying cut pad or road areas may be removed or partially removed if the Newhall Ranch Specific Plan Geologist and Geotechnical Engineer conclude that the landslide is stable and sufficiently consolidated to build on. Landslides located on ascending natural slopes above proposed graded areas will also require evaluation for stability. Unstable landslides on natural slopes above graded areas will either require stabilization, removal, or building setbacks to mitigate potential hazards.	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Approval of Final Grading Plan and Verify During Grading
SP 4.1-22 Not applicable.			
SP 4.1-23 Prior to construction of the road embankment located within landslide Qls II, a compacted fill shear key will be constructed at the property boundary. (R.T. Frankian & Associates, 19 September 1994, p. 6)	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section, and Building and Safety
			2. LACDPW, Building and Safety
		Field Verification	3. Prior to Construction of the Road Embankment and Verify During Grading

SP 4.1-24 Landslides which will not affect the proposed grading concept are to be placed in Restricted Use Areas on the Final Maps. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 43)	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
			3. Prior to Approval of Final Maps
SP 4.1-25 Surficial stability of cut-slopes designated with a "G" are to be fully evaluated at the subdivision stage, due to the possibility of wedge failures or surficial material in the slope. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43) (The focused geotechnical studies prepared for the Mission Village project included the analysis of areas previously identified with a "G" in the Newhall Ranch Specific Plan Certified EIR. All proposed cuts were evaluated and, where necessary, focused mitigation measures were identified and included in the list of measures presented below to mitigate potential impacts).	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Approval of Final Grading Plan and During Grading
SP 4.1-26 Cut slopes designated as "P" are potentially unstable and are to be fully evaluated at the subdivision stage to ascertain whether they are stable as designed. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43) (The focused geotechnical studies prepared for the Mission Village project included the analysis of areas previously identified with a "P" in the Newhall Ranch Specific Plan Certified EIR. All proposed cuts were evaluated and, where necessary, focused mitigation measures were identified and included in the list of measures presented below to mitigate potential impacts).	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Approval of Final Grading Plan and During Grading
SP 4.1-27 Cut-slopes designated with a "U" are to be further investigated at the subdivision stage to confirm underlying geologic conditions and slope stability. Corrective grading measures are to be presented in detail as mitigation at both the subdivision and Grading Plan stages of development. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, pp. 17, 43) (The focused geotechnical studies prepared for the Mission Village project included the analysis of areas previously identified with a "U" in the Newhall Ranch Specific Plan Certified EIR. All proposed cuts were evaluated and, where necessary, focused mitigation measures were identified and included in the list of measures presented below to mitigate potential impacts).	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Approval of Final Grading Plan and During Grading
SP 4.1-28 Cut-slopes associated with the construction of the proposed extensions of Magic Mountain Parkway and Valencia Boulevard are to be further investigated at the subdivision stage to confirm the underlying geologic conditions and slope stability. Corrective measures are to be required if it is determined that the cut-slopes will not be stable. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, pp. 11 & 12)	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
According to Allan E. Seward Engineering Geology, Inc., unstable cut-slopes can either be redesigned or stabilized using various corrective grading techniques. Redesign options for unstable cut-slopes include reorientation, relocation and reducing the proposed slope gradient. Options for corrective grading include the construction of buttress fills, stability fills, shear keys, and complete removal of the landslide material.			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Approval of Final Grading Plan and During Grading
SP 4.1-29 Orientations of the bedrock attitudes are to be evaluated by the Newhall Ranch Specific Plan Engineering Geologist to identify locations of required buttress fills. Buttress fill design and recommendations, if necessary, are to be presented as mitigation during the grading plan stage. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section
			2. LACDPW, Geology/Soils Section
		Field Verification	3. Prior to Approval of Final Grading Plans

SP 4.1-30. All fills, unless otherwise specifically designed, are to be compacted to at least 90 percent of the maximum dry unit weight as determined by ASTM Designation D 1557-91 Method of Soil Compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. During Grading
SP 4.1-31. No fill is to be placed until the area to receive the fill has been adequately prepared and approved by the Geotechnical Engineer. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-32. Fill soils are to be kept free of all debris and organic material. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-33. Rocks or hard fragments larger than 8 inches are not to be placed in the fill without approval of the Geotechnical Engineer, and in a manner specified for each occurrence. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-34. Rock fragments larger than 8 inches are not to be placed within 10 feet of finished pad grade or the subgrade of roadways or within 15 feet of a slope face. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-35. Rock fragments larger than 8 inches may be placed in windrows, below the limits given above, provided the windrows are spaced at least 5 feet vertically and 15 feet horizontally. Granular soil must be flooded around windrows to fill voids between the rock fragments. The granular soil is to be wheel rolled to assure compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

SP 4.1-36. The fill material is to be placed in layers which, when compacted, is not to exceed 8 inches per layer. Each layer is to be spread evenly and is to be thoroughly mixed during the spreading to insure uniformity of material and moisture. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-37. When moisture content of the fill material is too low to obtain adequate compaction, water is to be added and thoroughly dispersed until the soil is approximately 2 percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-38. When the moisture content of the fill material is too high to obtain adequate compaction, the fill material is to be aerated by blading or other satisfactory methods until the soil is approximately two percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-39. Where fills toe out on a natural slope or surface, a keyway, with a minimum width of 16 feet and extending at least 3 feet into firm, natural soil, is to be cut at the toe of the fill. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-40. Where the fills toe out on a natural or cut slope and the natural or cut slope is steeper than 5 horizontal to 1 vertical, a drainage bench with a width of at least 8 feet is to be established at the toe of the fill. Fills may be placed over cut slopes if the visible contact between the fill and cut is steeper than 45 degrees. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

SP 4.1-41. When placing fills over slopes, sidewall benching is to extend into competent material, approved by the Geotechnical Engineer, with vertical benches not less than 4 feet. (R.T. Frankian & Associates, 19 September 1994, Appendix I) Competent material is defined as being free of loose soil, heavy fracturing or compressive soils.	Applicant (Geotechnical Engineer and Engineering Geologist)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
SP 4.1-42. When constructing fill slopes, the grading contractor is to avoid spillage of loose material down the face of the slope during the dumping and compacting operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
SP 4.1-43. The outer faces of fill slopes are to be compacted by backing a sheepsfoot compactor over the top of the slope, and thoroughly covering all of the slope surface with overlapping passes of the compactor. Compaction of the slope is to be repeated after each 4 feet of fill has been placed. The required compaction must be obtained prior to placement of additional fill. As an alternate, the slope can be overbuilt and cut back to expose a compacted core. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
SP 4.1-44. All artificial fill associated with past petroleum activities as well as other existing artificial fill, are to be evaluated by the Newhall Ranch Specific Plan Geotechnical Engineer at the subdivision and/or Grading Plan Stage. (Allan E. Seward Engineering Geology, 19 September 1994, Inc., p. 45) Unstable fills are to be mitigated through removal, stabilization, or other means as determined by the Newhall Ranch Specific Plan Geotechnical Engineer.	Applicant (Geotechnical Engineer and Engineering Geologist)	Receipt of Geotechnical Evaluation	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
		Field Verification	3. Prior to Approval of Final Subdivision Maps or Grading Plans, and Verify During Grading
SP 4.1-45. Surface runoff from the future graded areas is not to run over any natural, cut, or fill slopes. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)	Applicant (Civil Engineer and Construction Superintendent)	Include this Measure in Specifications	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
		Field Verification	3. During Grading

SP 4.1-46. Runoff from future pads and structures is to be collected and channeled to the street and/or natural drainage courses via non-erosive drainage devices. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)	Applicant (Civil Engineer and Construction Superintendent)	Include this Measure in Specifications	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
		Field Verification	3. During Grading
SP 4.1-47. Water is not to stand or pond anywhere on the graded pads. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)	Applicant (Civil Engineer and Construction Superintendent)	Include this Measure in Specifications	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
		Field Verification	3. During Grading
SP 4.1-48. Oil and water wells that might occur on site are to be abandoned in accordance with State and local regulations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)	Applicant (Well abandonment Specialist)	Receipt of Confirmation of Abandonment	1. California Department of Conservation, Division of Oil and Gas, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Grading Permits
SP 4.1-49. If any leaking or undocumented oil wells are encountered during grading operations, their locations are to be surveyed and the current well conditions evaluated immediately. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 21) Measures are to be taken to document the wells, abandonment, and remediate the well sites (if necessary) in accordance with State and local regulations.)	Applicant	Include Measure in Specifications	1. California Department of Conservation, Division of Oil and Gas, Building and Safety
	(Civil Engineer and Well Abandonment Specialist)		2. California Department of Conservation, Division of Oil and Gas, Building and Safety
		Field Documentation	3. During Grading

SP 4.1-50. The exact status and location of the Exxon (Newhall Land & Farming) oil well #31 will be evaluated at the subdivision stage. If necessary, the well will be abandoned in accordance with State and local regulations. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 12)	Applicant	Locate Well #31 on Tract Map	1. California Department of Conservation, Division of Oil and Gas, Building and Safety
	(Civil Engineer and Well Abandonment Specialist)		2. California Department of Conservation, Division of Oil and Gas, Building and Safety
		Documentation of Abandonment, if applicable	3. Prior to Issuance of Grading Permit
SP 4.1-51. Survey control will be required to precisely locate the Salt Creek and Del Valle Faults at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 33)	Applicant (Civil Engineer and Engineering Geologist)	Receipt of Geotechnical Documentation	1. LACDPW, Geology Section
			2. LACDPW, Geology Section
			3. Prior to Tract Map/Site Plan Approvals as Applicable
SP 4.1-52. Additional subsurface trenching will be performed within the Holser Structural Zone on Newhall Ranch during the subdivision stage to evaluate its existence. Within Potrero Canyon, additional subsurface evaluation will be performed during the subdivision stage to confirm that nontectonic alluvial movement was the cause of surface ground cracking during the January 17, 1994 earthquake, and to evaluate the potential for shallow-depth faults. (Allan E. Seward Engineering Geology, Inc. 19 September 1994, p. 42, as revised above)(*Additional subsurface evaluations pertaining to Holzer Fault are not applicable for the Mission Village project site. This is due to the fact that the Holzer Fault is not located on the project site.*)	Applicant (Engineering Geologist)	Receipt of Geotechnical Documentation	1. LACDPW, Geology Section
			2. LACDPW, Geology Section
			3. Prior to Tract Map/Site Plan Approvals as Applicable
No distinct evidence for Holocene activity on any of the faults traversing the Newhall Ranch Specific Plan site was observed during Allan E. Seward Engineering Geology, Inc.'s investigation; however, based on the distinct nature of faulting, the possible association of minor seismic activity, and compatible orientation of the faulting in relation to the current stress regime of the Transverse Ranges, preliminary Building Setback Zones have been designated around the mapped fault zones (see **Figure 4.1-4)**.			
SP 4.1-53. Precise Building Setback Zones for the Newhall Ranch Specific Plan site are to be defined at the subdivision stage.	Applicant (Civil Engineer and Engineering Geologist)	Setback Zones Identified on Tract Maps/Site Plans	1. LACDPW, Geology Section, and Building and Safety
			2. LACDPW, Geology Section, and Building and Safety
			3. Prior to Tract Map and Site Plan and Final Map Approvals, as Applicable

SP 4.1-54. Due to the potential activity of the Salt Creek and Del Valle Faults, site development is to remain outside of Building Setback Zones around fault traces, and the possible fault zone connecting them (see **Figure 4.1-4**). (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 42)	Applicant (Civil Engineer and Engineering Geologist)	Setback Zones Identified on Tract Maps/Site Plans	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Approval of Final Subdivision Maps or Grading Plans, and Verify During Grading
The zone shown around the possible fault connecting the Del Valle and Salt Creek Faults may be deleted if future work shows that this fault segment does not exist.			
SP 4.1-55. To minimize potential hazards from shattered ridge effects, structures and storage tanks proposed on ridgelines are to have a minimum 20 foot setback from the margins of the bedrock. Designation of specific building setbacks will require evaluation at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 40) Building setback zones are to be identified on all site plans and tract maps for the site.	Applicant (Engineering Geologist)	Setback Zones Identified on Tract Maps/Site Plans	1. LACDPW, Geology Section, and Building and Safety 2. LACDPW, Geology Section, and Building and Safety 3. Prior to Tract Map/Site Plan Approvals, as Applicable
SP 4.1-56. The potential for ground motion and ground failure associated with a seismic event in proximity to the planned roadway alignments of Magic Mountain Parkway and Valencia Boulevard will be evaluated at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 11) Mitigation to reduce associated significant impacts will also be identified at that time.	Applicant (Engineering Geologist)	Receipt of Geotechnical Report and Mitigation	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Final Map Approval
MV 4.1-1 Future structures shall be designed according to standards applicable to Seismic Zone 4 of the Uniform Building Code.	Applicant	Building Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Building Permits

MV 4.1-2 Lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.) shall be over-excavated 5 feet to minimize potential adverse impacts associated with differential materials response.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-3 Over-excavation of clay-rich bedding planes of the Saugus Formation or Pico Formation and subsequent placement of a certified fill cap shall be conducted to mitigate potential hazards from expansive material, and to reduce potential hazards from potential secondary seismogenic movement along bedding planes.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-4 Due to the potential for primary ground surface rupture along the Airport Mesa and/or Saddle Faults, Fault Building Setback zones have been designated for the area within 50 feet of the map trace of the two faults. To reduce potential public heath and safety impacts to a less than significant level, the following restrictions shall be applicable to these areas: • No construction of habitable structures as defined in Appendix B of CDMG Special Publication 42, are allowed within the Fault Building Setback zone. • Pipelines, including gas, water, storm drain, and sewer, shall be constructed to allow for some flexure and emergency shut off valves shall be required for gas and water lines within these zones in case of possible ground deformation during an earthquake. • Site-specific recommendations shall be provided at the Grading Plan or Building Plan stages.	Applicant (Geotechnical Engineer and Engineering Geologist)	Locate setback zones on Improvement Plans and/or Final Tract Map	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Approval of Final Subdivision Maps or Grading Plans, and Verify During Grading
MV 4.1-5 If critical facilities or essential services buildings (e.g., hospitals, schools, fire stations, etc.) are to be developed within the area of the Airport Mesa or Saddle faults, a Building Setback of at least 50 feet from each side of the Airport Mesa or Saddle faults shall be maintained.	Applicant (Geotechnical Engineer and Engineering Geologist)	Locate setback zones on Improvement Plans and/or Final Tract Map	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Approval of Final Subdivision Maps or Grading Plans, and Verify During Grading
MV 4.1-6 The project shall be designed in accordance will all applicable building codes and standards utilizing the appropriate geotechnical parameters as presented in the "Seismicity" section of the R.T. Frankian & Associates report entitled Response to County of Los Angeles Review Sheets and Geotechnical Plan Review, Revised Vesting Tentative Tract Map No. 61105, (April 29, 2010) to reduce seismic risk to an acceptable level as defined by CGS in Chapter 2 of SP 117a (CGS, 2008).	Applicant (Geotechnical Engineer and Engineering Geologist)	Building Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to issuance of Building Permit

MV 4.1-7 The mitigation for liquefaction at the site will consist of a combination of ground motion and structural to reduce the risk to an acceptable level as defined by CGS in chapter 2 of SR 117a (CGS, 2008). The ground modification will consist of the removal of some of the soil material subject to liquefaction and/or elevating the site grades.	Applicant (Geotechnical Engineer and Engineering Geologist)	Building Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to issuance of Building Permit
MV 4.1-8 The recommendations identified in Table I, Response to County of Los Angeles Review Sheets and Geotechnical Plan Review, Revised Vesting Tentative Tract Map No. 61105 (April 29, 2010) prepared by R.T. Frankian & Associates, shall be incorporated into the project such that the analyzed cut-slopes, proposed grades, remedial grades and compacted fill slopes comply with Los Angeles County minimum requirements for gross stability under static and pseudostatic loading conditions and for surficial stability, as applicable.	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to issuance of Grading Permit
MV 4.1-9 All landslide removal bottoms shall be observed by the project engineering geologist and surveyed by the supervising civil engineer prior to the placement of engineered fill.	Applicant (Geotechnical Engineer and Engineering Geologist)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
MV 4.1-10 Where proposed pad grades occur near the basal Qt contact of the mesas and the basal Qt layer contains a high percentage of oversized (>8 inches) clasts, the Qt shall be removed (over excavated) and replaced with suitable engineered fill. Stability fills are recommended for all proposed cut slopes that expose Qt deposits in the slope face.	Applicant (Geotechnical Engineer and Engineering Geologist)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
MV 4.1-11 All slopewash in areas of proposed development shall be completely removed prior to the placement of engineered fill.	Applicant (Geotechnical Engineer and Engineering Geologist)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading

MV 4.1-12 In proposed fill areas, all artificial fill impacting the proposed development shall be entirely removed prior to placement of compacted/certified fill material. If artificial fill is present below proposed cut grade elevations, it shall be completely removed and replaced with certified engineered fill.	Applicant (Geotechnical Engineer and Engineering Geologist)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-13 Review of the tentative tract map design, the topographic base map and field mapping of the site indicates that where potential debris flow hazard exists the following mitigation measures shall be implemented (but not limited to) to mitigate the potential for debris flow hazard at these locations: • Remove loose surficial material; • Construct diverter slough walls; • Construct impact walls; • Construct debris basins; • Control run off; • Plant selective deep rooted vegetation; and • Construct stability fills.	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to issuance of Grading Permit
MV 4.1-14 As part of the project site grading, 48 of the landslides will be completely removed as part of the site grading. Of the remaining four landslides (Qls-XXXV, Qls-XXXVII, Qls-XLIII, and Qls-XLIV), three of the landslides (Qls-XXXV, Qls-XLIII, and Qls-XLIV) shall be partially removed until a stable configuration is achieved. The southern portion of the fourth landslide (Qls-XXXVII) shall be completely removed below the proposed building pad, and the northern portion (within the spineflower preserve) shall remain in place and be stabilized by a shear key and buttress fill slope. The remaining portion of this landslide will be placed within a Restricted Use Area.	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check, Field Verification and/or Final Tract Map	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to issuance of Grading Permit and/or Final Map Approval
MV 4.1-15 All cut slopes shall be graded in accordance with the recommendations of the Project Geotechnical Consultant, as described in the Vesting Tentative Tract Map plan review reports.	Applicant (Geotechnical Engineer and Engineering Geologist)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-16 The proposed fill slopes shall be graded in accordance with the recommendations of Project Geotechnical Consultant as described in the Vesting Tentative Tract Map plan review reports.	Applicant (Geotechnical Engineer and Engineering Geologist)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

MV 4.1-17 The grading adjacent to natural slopes shall be performed in accordance with the recommendations of the Project Geotechnical Consultant, as described in the Vesting Tentative Tract Map plan review reports. Where warranted for gross stability, Building Setbacks recommended in the plan review reports that exceed the setback standards set forth in the Los Angeles County/California Building Code shall be adhered to. The standard setbacks from grossly stable ascending and descending natural slopes provided in the Los Angeles County/California Building Code shall also be followed, where not superseded by the recommended Building Setbacks.	Applicant (Geotechnical Engineer and Engineering Geologist)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-18 The debris flow hazard shall be further evaluated once a 40 scale rough grading plan has been developed for the project site. Appropriate mitigation measures, such as avoidance, debris basins, impact walls, etc., shall be provided for any additional debris flow areas identified on the rough grading plan.	Applicant (Geotechnical Engineer and Engineering Geologist)	Review of rough grading plan	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to issuance of Grading Permit
MV 4.1-19 Prior to placing compacted fill, the ground surface shall be prepared by removing non-compacted artificial fill (af), disturbed compacted fill soils (caf), loose alluvium, and other unsuitable materials. Areas that are to receive compacted fill shall be inspected by the project geologist/geotechnical engineer prior to the placement of fill.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-20 All drainage devices shall be properly installed and inspected by the project geologist/geotechnical engineer and/or owner's representative(s) prior to placement of backfill.	Applicant (Geotechnical Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-21 Fill soils shall consist of imported soils or on-site soils free of organics, cobbles, and deleterious material provided each material is approved by the project geologist/geotechnical engineer. The project geologist/geotechnical engineer shall evaluate and/or test the import material for its conformance with the report recommendations prior to its delivery to the site. The contractor shall notify the project geologist/geotechnical engineer prior to importing material to the site.	Applicant (Geotechnical Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-22 Fill shall be placed in controlled layers (lifts), the thickness of which is compatible with the type of compaction equipment used. The fill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in layers with a thickness (loose) not exceeding 8 inches. Each layer shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test. Density testing shall be performed by the project geologist/geotechnical engineer to verify relative compaction. The contractor shall provide proper access and level areas for testing.	Applicant (Geotechnical Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

MV 4.1-23 Rocks or rock fragments less than 8 inches in the largest dimension may be utilized in the fill, provided they are not placed in concentrated pockets. Rocks larger than 4 inches shall not be placed within 3 feet of finish grade.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-24 Rocks greater than 8 inches in largest dimension shall be taken off site, or placed in accordance with the recommendation of the Soils Engineer in areas designated as suitable for rock disposal.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-25 Where space limitations do not allow for conventional fill compaction operations, special backfill materials and procedures may be required. Pea gravel or other select fill can be used in areas of limited space. A sand and Portland cement slurry (2 sacks per cubic yard mix) shall be used in limited space areas for shallow backfill near final pad grade, and pea gravel shall be placed in deeper backfill near drainage systems.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-26 The project geologist/geotechnical engineer shall observe the placement of fill and conduct in place field density tests on the compacted fill to check for adequate moisture content and the required relative compaction. Where less than specified relative compaction is indicated, additional compacting effort shall be applied and the soil moisture conditioned as necessary until adequate relative compaction is attained.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-27 The contractor shall comply with the minimum relative compaction out to the finish slope face of fill slopes, buttresses, and stabilization fills as set forth in the specifications for compacted fill. This may be achieved by either overbuilding the slope and cutting back as necessary, or by direct compaction of the slope face with suitable equipment, or by any other procedure that produces the required result.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-28 Any abandoned underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipelines or others not discovered prior to grading are to be removed or treated to the satisfaction of the Soils Engineer and/or the controlling agency for the project.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

MV 4.1-29 The contractor shall have suitable and sufficient equipment during a particular operation to handle the volume of fill being placed. When necessary, fill placement equipment shall be shut down temporarily in order to permit proper compaction of fills, correction of deficient areas, or to facilitate required field-testing.	Applicant (Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-30 The contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-31 Final reports shall be submitted after completion of earthwork and after the Soils Engineer and Engineering Geologist have finished their observations of the work. No additional excavation or filling shall be performed without prior notification to the Soils Engineer and/or Engineering Geologist.	Applicant (Geotechnial Engineer)	Review of Final Grading Reports	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Following Completion of Grading
MV 4.1-32 Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials prior to backfill placement, and shall be inspected by the project geologist/geotechnical engineer.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-33 Soils obtained from the excavation may be used as backfill if they are essentially free of organics and deleterious materials, unless otherwise indicated in the applicable geotechnical report.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-34 Rocks generated from the trench excavation not exceeding 3 inches in largest dimension may be used as backfill material. However, such material may not be placed within 12 inches of the top of the pipeline. No more than 30 percent of the backfill volume shall contain particles larger than 1.5 inches in diameter, and rocks shall be well mixed with finer soil.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

MV 4.1-35 Soils (other than aggregates) with a Sand Equivalent (SE) greater than or equal to 30, as determined by ASTM D 2419 Standard Test Method or at the discretion of the engineer or representative in the field, may be used for bedding and shading material in the pipe zone areas. These soils are considered satisfactory for compaction by jetting procedures.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-36 No jetting shall be permitted in utility trenches within the top 2 feet of the subgrade of concrete slabs on grade.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-37 Trench backfill other than bedding and shading shall be compacted by mechanical methods as tamping sheepsfoot, vibrating or pneumatic rollers, or other mechanical tampers to achieve the density specified herein. The backfill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in horizontal layers with a thickness (loose) not exceeding 8 inches. Trench backfills shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-38 The contractor shall select the equipment and process to be used to achieve the specified density without damage to the pipeline, the adjacent ground, existing improvements or completed work.	Applicant (Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-39 Observations and field tests shall be carried on during construction by the project geologist/geotechnical engineer to confirm that the required degree of compaction has been obtained. Where compaction is less than that specified, additional compaction effort shall be made with adjustment of the moisture content as necessary until the specified compaction is obtained. Field density tests may be omitted at the discretion of the engineer or his representative in the field.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-40 Whenever, in the opinion of the project geologist/geotechnical engineer or the owner's Representative(s), an unstable condition is being created, either by cutting or filling, the work shall not proceed until an investigation has been made and the excavation plan revised, if deemed necessary.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

MV 4.1-41 Fill material within a trench shall not be placed, spread, or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the project geologist/geotechnical engineer indicate the moisture content and density of the fill are as specified.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-42 In order to provide a uniform firm bottom prior to placing fill, all unconsolidated alluvium, slopewash, colluvial soils and severely weathered terrace deposits and bedrock shall be removed from areas to receive fill. The estimated depths of removals (excluding landslides) are 5 to 22 feet, as shown on the Geologic Remediation Maps (Plates G7 to G11) contained in Geologic and Geotechnical Report, Vesting Tentative Tract Map 61105 (July 22, 2004), as revised by Plates ES8-ES13 contained in the Geologic and Geotechnical Report, Review of Revised Vesting Tentative Tract Map (December 22, 2004), prepared by Seward, which is included in Appendix 4.1. The exact depth and extent of necessary removals will be determined in the field during the grading operations when observations and more location specific evaluations can be performed. Removal depths for these areas are based on subsurface investigations, laboratory testing, proposed fill, depth use intended and analyses (including liquefaction and cyclic settlement analyses) as well as the geotechnical engineer's geologic and geotechnical judgment.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-43 All existing uncertified fill (i.e., artificial fill) is considered unsuitable for support of proposed engineered fills and/or structures and must be removed and replaced with compacted fill. It is estimated that a maximum thickness of approximately 25 feet of artificial fill currently exists in the vicinity of proposed Lots 782 and 783 on the project site.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-44 To protect against potential landslide activity, colluvium/slopewash present within the canyon swales and on drainage sideslopes shall be removed to depths ranging from 10 to 60 feet. Removals at the locations of exploratory trenches shall be extended to the bottom of the trench backfill if the adjacent removal depths are shallower than the trench.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-45 In areas to receive compacted fill where the surface gradient is steeper than 5:1, the soil mantle, colluvium and unsuitable material shall be removed and such areas benched horizontally into competent material in conjunction with fill placement.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

MV 4.1-46 After the ground surface to receive fill has been exposed, it shall be ripped to a minimum depth of 6 inches, brought to optimum moisture content or above and thoroughly mixed to obtain a near uniform moisture condition and uniform blend of materials, and then compacted to the required relative compaction per the latest ASTM D 1557 laboratory maximum density.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-47 Ground water is not expected to impede the grading operations over the project site. Where recommended removals encounter groundwater, water levels will need to be controlled by providing an adequate excavation bottom slope and sumps for pumping water out as the excavation proceeds, or groundwater may be lowered by installing shallow dewatering well points prior to grading. Partial removals of soils above the water table and soil improvement below the water table (e.g., shallow compaction grouting) may be another option. Dewatering may be needed depending on the season when the removals are performed.	Applicant (Geotechnical Engineer and Civil Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-48 A minimum 5- to 8-foot-thick over excavation shall be performed on all cut lots, and transitional lots (transitions between bedrock, fill, terrace deposits and alluvium) and a minimum 3 foot-thick over excavation on streets. This over excavation will provide a uniform base for structural support of buildings and traffic loads. If on a cut/fill transition lot the maximum depth of fill exceeds 15 feet, then the thickness of the fill cap shall be one third of the deepest fill thickness below any proposed structure. If excavation of the native soils (i.e., bedrock) exposes high expansive materials, then the lot over excavation shall be deepened to 8 feet. Cut and transition lots located in areas of steeply dipping bedrock will need to be over excavated to a depth of 8 feet. If these lots are underlain by weak sheared bedding planes or shears they may require a deeper over excavation and need to be evaluated on a case-by-case basis during the grading operations. Lots potentially affected by the requirements have been identified in the Geologic Remediation Maps (Plates G7 to G11) included in the Geologic and Geotechnical Report, Vesting Tentative Tract Map 61105 (July 22, 2004), as revised by Plates ES8-ES13 contained in the Geologic and Geotechnical Report, Review of Revised Vesting Tentative Tract Map (December 22, 2004), prepared by Seward, which is included in EIR Appendix 4.1.	Applicant (Geotechnical Engineer and Civil Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-49 All fill material shall be placed in uniform lifts not exceeding 8 inches in its loose state and compacted to a minimum of 90 percent relative compaction as determined based on the latest ASTM Test Designation D 1557.	Applicant (Geotechnical Engineer and Civil Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-50 For fills deeper than 40 feet, the portion of fill below 40 feet depth shall be compacted to a minimum of 93 percent relative compaction. To ensure compliance with this requirement, these areas shall be delineated at the Grading Plan stage.	Applicant (Geotechnical Engineer and Civil Engineer)	Delineate on grading plan and verify in field	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Grading plan review and during grading

MV 4.1-51 Fill slope inclination shall not be steeper than 2:1. The fill material within approximately one equipment width (typically 15 feet) of the slope face shall be constructed with cohesive material obtained from on site soils. The finished fill slope face shall be constructed by over building the slope and cutting back to the compacted fill material. Stability Fills are recommended where cut slope faces will expose fill over bedrock, alluvium over bedrock, or Quaternary Terrace Deposits over bedrock conditions. These fills shall be constructed with a keyway at the toe of the fill slope with a minimum equipment width but not less than 15 feet, and a minimum depth of 3 feet into the firm undisturbed earth. Following completion of the keyway excavations, the project engineering geologist shall observe and approve the keyway bottom prior to backfilling with Certified Engineered Fill.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-52 Where fill slopes are constructed above natural ground with a gradient of 5:1 or steeper, all topsoil, colluvium, and unsuitable material shall be removed and a keyway shall be constructed at the toe of the fill slope with a minimum width of 15 feet, and a minimum depth of 3 feet into firm undisturbed earth. Following completion of the keyway excavations, the project Engineering Geologist/Geotechnical Engineer or his representative shall observe and approve the keyway bottom prior to backfilling with compacted fill.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-53 Where fill slopes toe out on relatively level natural ground, the removals shall be performed to a minimum 1:1 projection from the toe of slope to the recommended removal depth. Where sliver fill slopes are proposed, it is recommended that the slope be constructed with a minimum 15 foot-width Stability Fill throughout, which is keyed in at the toe of slope.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-54 Excavations deeper than 3 feet shall conform to safety requirements for excavations as set forth in the State Construction Safety Orders enforced by the State Division of Industrial Safety, CAL OSHA. Temporary excavations 12 feet or lower shall be no steeper than 1:1. For excavations to 20 feet in height, the bottom 3.5 feet may be vertical and the upper portion shall be no steeper than 1.5:1. Excavations not complying with these requirements shall be shored.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-55 Excavation walls in sands and dry soils shall be kept moist, but not saturated at all times.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

MV 4.1-56 The bases of excavations or trenches shall be firm and unyielding prior to foundations or utility construction. On site materials other than topsoil or soils with roots or deleterious materials may be used for backfilling excavations. Densification (compaction) by jetting may be used for on-site clean sands or imported equivalent of coarser sand provided they have a Sand Equivalent greater than or equal to 30 as determined by ASTM D2419 test method.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
MV 4.1-57 Parameters for design of cantilever and braced shoring shall be provided at the grading plan stage.	Applicant (Geotechnical Engineer)	Grading Plan Check or Field Verification as Applicable	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit or During Grading Activities
MV 4.1-58 If any leaking or undocumented oil wells are encountered during grading operations, their locations shall be surveyed and the current well conditions evaluated immediately. If potentially hazardous materials relating to operation of the oil wells are encountered during future grading operations, they shall be assessed and mitigated to the satisfaction of DOGGR before grading is permitted to continue.	Applicant (Civil Engineer and Pipeline Abandonment Specialist)	Receipt of Confirmation of Reabandon-ment Receipt and Review of Test Results or Verification of Remediation	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. During Grading Operations
MV 4.1-59 To maintain appropriate long term drainage and erosion control, the following points shall be adhered to in slope protection, landscaping, irrigation and modifications to slopes, pads and structures: • All interceptor ditches, drainage terraces, down drains, and any other drainage devices shall be maintained and kept clear of debris. A qualified Engineer shall review any proposed additions or revisions to these systems, to evaluate their impact on slope erosion. • Retaining walls shall have adequate freeboard to provide a catchment area for minor slope erosion. Periodic inspection, and if necessary, cleanout of deposited soil and debris shall be performed, particularly during and after periods of rainfall. • Slope surficial soils may be subject to water induced mass erosion. Therefore, a suitable proportion of slope planting shall have root systems, which will develop well below 3 feet. Intervening areas can then be planted with lightweight surface plants with shallower root systems. All plants shall be lightweight and require low moisture. Any loose slough generated during the process of planting shall be properly removed from the slope face(s). • Construction delays, climate/weather conditions, and plant growth rates may be such that additional short term erosion control measures may be needed; examples would be matting, netting, plastic sheets, deep (5 feet) staking, etc.	Applicant (Civil Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Following Completion of Grading

MV 4.1-60 All possible precautions shall be taken to maintain moderate and uniform soil moisture. Slope irrigation systems shall be properly operated and maintained and system controls shall be placed under strict control.	Applicant (Landscape Architect)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Occupancy Permits
MV 4.1-61 Surface drainage control design shall include provisions for positive surface gradients to ensure that surface runoff is not permitted to pond, particularly above slopes or adjacent to building foundations or slabs. Surface runoff shall be directed away from slopes and foundations and collected in lined ditches or drainage swales, via non-erodible drainage devices, which shall discharge to paved roadways, or existing watercourses. If these facilities discharge onto natural ground, means shall be provided for control erosion and to create sheet flow.	Applicant (Civil Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Occupancy Permit
MV 4.1-62 Site grading shall be observed, particularly after heavy, prolonged rainfall, to identify erosion areas at an early stage. Maintenance work shall be done as soon as practical to repair these areas and prevent their enlargement.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
MV 4.1-63 Fill slopes, Buttress Fill and Stability Fills, as applicable, shall be provided with subsurface drainage as necessary for stability. Subdrains along the bottom of canyon fills shall be constructed.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Grading
MV 4.1-64 Water should not be allowed to pond on future graded areas, or allowed to flow uncontrolled over natural or graded slopes. Surface drainage should be directed to terrace drains or debris basins. Debris material generated from erosion should be contained within site boundaries. All slope terrace drains should be kept clear of all debris to limit impounding or surface water. Graded slopes should be seeded with a deep-rooting, drought-resistant vegetation to minimize erosion.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During and immediately following grading

MV 4.1-65 All final grades shall be sloped away from the building foundations to allow rapid removal of surface water runoff. No ponding of water shall be allowed adjacent to the foundations. Plants and other landscaped vegetation requiring excessive watering shall be avoided adjacent to the building foundations. If such landscaping is installed, an effective water tight barrier shall be provided to prevent water from affecting the building foundations.	Applicant (Civil Engineer, Construction Superintendent and Landscape Architect)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. During Fine Grading and Landscape Installation
MV 4.1-66 Additional testing for expansive soils shall be performed at the grading plan stage and during finish grading so that appropriate foundation design recommendations for expansive soils, if applicable, can be made.	Applicant (Geotechnical Engineer)	Fine Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
		Field Verification	3. Prior to Issuance of Fine Grading Permit
MV 4.1-67 Pending additional testing, either Type I or II cement shall be used in concrete placed in contact with the ground. Mitigating recommendations against soil corrosivity shall be revised/expanded based on additional confirmatory tests that shall be performed at the Grading Plan stage. Final recommendations for concrete will be in accordance with the latest UBC requirements, and a corrosion specialist shall provide mitigating recommendations for potential corrosion of metals in contact with on site soils.	Applicant (Geotechnical Engineer)	Receipt of Test Results	1. LACDPW, Geology/Soils Section, Building and Safety
			2. LACDPW, Geology/Soils Section, Building and Safety
			3. Prior to Issuance of Building Permit
4.2 HYDROLOGY			
SP 4.2-1 All on- and off-site flood control improvements necessary to serve the Newhall Ranch Specific Plan are to be constructed to the satisfaction of the LACDPW, Flood Control Division.	Applicant (Civil Engineer)	Approval of Drainage Plans	1. LACDPW, FCD
			2. LACDPW, FCD
		Field Verification	3. Prior to Issuance of Occupancy Permit(s)
SP 4.2-2 All necessary permits or letters of exemption from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the Regional Water Quality Control Board for Specific Plan-related development are to be obtained prior to construction of drainage improvements. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, **Mitigation Measures 4.6-1** through **4.6-10** (restoration) and **4.6-11** through **4.6-16** (enhancement) (of the Newhall Ranch Specific Plan Program EIR).	Applicant	Receipt of Necessary Documents	1. ACOE, USFWS, CDFG, RWQCBLAR
			2. ACOE, USFWS, CDFG, RWQCBLAR
			3. Prior to Grading
SP 4.2-3 All necessary streambed agreement(s) are to be obtained from the California Department of Fish and Game wherever grading activities alter the flow of streams under CDFG jurisdiction. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, **Mitigation Measures 4.6-1** through **4.6-10** (restoration) and **4.6-11** through **4.6-16** (enhancement) (of the Newhall Ranch Specific Plan Program EIR).	Applicant	Receipt of Streambed Agreements	1. CDFG
			2. LACDPW, FCD
			3. Prior to Grading

SP 4.2-4 Conditional Letters of Map Revision (CLOMR) relative to adjustments to the 100-year FIA floodplain are to be obtained by the applicant before the proposed drainage facilities are constructed. (*The proposed project has complied with this requirement. See* ***Appendix 4.2***)	Applicant (Civil Engineer)	Receipt of CLOMR(s)	1. Federal Insurance Administration
			2. LACDPW
			3. Upon Completion of Facilities
SP 4.2-5 Prior to the approval and recordation of each subdivision map, a Hydrology Plan, Drainage Plan, and Grading Plan (including an Erosion Control Plan if required) for each subdivision must be prepared by the applicant of the subdivision map to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after site development. These plans shall be prepared to the satisfaction of the LACDPW.	Applicant (Project Engineer)	Approval of Final Hydrology Plan, Final Drainage Plan, and Final Grading Plan	1. LACDPW, FCD and Geology/Soils Section
			2. LACDPW, FCD and Geology/Soils Section
			3. Prior to Recording of Each Subdivision Map
SP 4.2-6 Install permanent erosion control measures, such as desilting and debris basins, drainage swales, slope drains, storm drain inlet/outlet protection, and sediment traps in order to prevent sediment and debris from the upper reaches of the drainage areas which occur on the Newhall Ranch site from entering storm drainage improvements. These erosion control measures shall be installed to the satisfaction of the LACDPW.	Applicant (Project Engineer)	Field Verification	1. LACDPW, FCD
			2. LACDPW, FCD
			3. Prior to Issuance of Occupancy Permits
SP 4.2-7 The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the LACDPW. These requirements currently include preparation of an Urban Storm Water Mitigation Plan (USWMP) containing design features and Best Management Practices (BMPs) appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of a Storm Water Management Pollution Prevention Plan (SWPPP) containing design features and BMPs appropriate and applicable to the subdivision. The LACDPW shall monitor compliance with those NPDES requirements.	Applicant (Construction Superintendent)	Submittal of USWMP and SWPPP to RWQCBLAR	1. RWQCBLAR
			2. LACDPW, Building and Safety
		Field Verification	3. Prior to Grading and During Grading Operations
MV 4.2-1 The on-site storm drains (pipes and reinforced concrete boxes) and open channels shall be designed and constructed to meet the storm flows, as required by the LACDPW.	Applicant (Civil Engineer)	Approval of Drainage Plans	1. LACDPW, Flood Control District (FCD)
			2. LACDPW, FCD
		Field Verification	3. Prior to Approval of Storm Drain Plans
MV 4.2-2 Debris basins shall be constructed pursuant to LACDPW requirements to intercept storm flows from undeveloped areas before they discharge into the developed portions of the Mission Village tract map site.	Applicant (Civil Engineer)	Approval of Drainage Plans	1. LACDPW, FCD
			2. LACDPW, FCD
		Field Verification	3. Prior to Approval of Storm Drain Plans
MV 4.2-3 Energy dissipaters consisting of either riprap or larger standard impact type energy dissipaters shall be installed along the Santa Clara River as required by LACDPW at outlet locations to reduce velocities of runoff into the channel to prevent erosion.	Applicant (Civil Engineer)	Approval of Drainage Plans	1. LACDPW, FCD
			2. LACDPW, FCD
		Field Verification	3. Prior to Approval of Storm Drain Plans
MV 4.2-4 The project is required to comply with the RWQCB Municipal Permit (General MS4 Permit) Order No. 01-182, NPDES No. CAS004001 (amended September 14, 2006), and with the state's General Construction Activity Storm Water Permit, California State Water Resources Control Board Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) No. CAS000002, reissued on August 19, 1999, as amended and further modified by Resolution No. 2001-046 on April 26, 2001.	Applicant (Civil Engineer)	Approval of NPDES Consistent Drainage	1. LACDPW, FCD
			2. LACDPW, FCD
		Field Verification	3. Prior to Issuance of Grading Permit(s)

MV 4.2-5 During all construction phases, temporary erosion control shall be implemented to retain soil and sediment on the tract map site as follows: • Re-vegetate exposed areas as quickly as possible; • Minimize disturbed areas; • Divert runoff from downstream drainages with earth dikes, temporary drains, slope drains, etc.;	Applicant (Construction Superintendent)	Field Verification	1. LACDPW, FCD
• Reduce velocity through outlet protection, check dams, and slope roughening/terracing; • Implement dust control measures, such as sand fences, watering, etc.; • Stabilize all disturbed areas with blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, and/or other erosion resistant soil coverings or treatments; • Stabilize construction entrances/exits with aggregate underdrains with filter cloth or other comparable method;			2. LACDPW, FCD
• Place sediment control BMPs at appropriate locations along the site perimeter and at all operational internal inlets to the storm drain system at all times during the rainy season (sediment control BMPs may include filtration devices and barriers, such as fiber rolls, silt fence, straw bale barriers, and gravel inlet filters, and/or with settling devices, such as sediment traps or basins; and/or • Eliminate or reduce, to the extent feasible, non-storm water discharges (e.g., pipe flushing, fire hydrant flushing, over-watering during dust control, vehicle and equipment wash down, etc.) from the construction site through the use of appropriate sediment control BMPs.			3. During grading and construction
MV 4.2-6 All necessary permits, agreements, and/or letters of exemption from the USACE and/or CDFG for project-related development within their respective jurisdictions must be obtained prior to issuance of grading permits.	Applicant (Civil Engineer)	Approval of 404 and 1600 Permits	1. LACDPW, FCD
			2. LACDPW, FCD
		Field Verification	3. Prior to Issuance of Grading Permit(s)
MV 4.2-7 By October 1st of each year, a separate erosion control plan for construction activities shall be submitted to the local municipality describing the erosion control measures that will be implemented during the rainy season (October 1 through April 15).	Applicant (Construction Superintendent)	Receipt and Review of Annual Erosion Control Plan	1. LACDPW, FCD
			2. LACDPW, FCD
			3. By October 1 of Each Year During Construction Activities
MV 4.2-8 A final developed condition hydrology analysis (LACDPW Drainage Concept Report [DCR] and Final Design Report [FDR]) shall be prepared in conjunction with final project design when precise engineering occurs. This final analysis shall confirm that the final project design is consistent with this analysis. This final developed condition hydrology analysis shall confirm that the sizing and design of the water quality and hydrologic control BMPs control hydromodification impacts in accordance with the Newhall Ranch Sub-Regional Stormwater Mitigation Plan. All elements of the storm drain system shall conform to the policies and standards of the LACDPW, Flood Control Division, as applicable.	Applicant (Project Hydrologist)	Receipt and Review of Final Hydrology Analysis	1. LACDPW, FCD
			2. LACDPW, FCD
			3. Prior to Approval of Storm Drain Plans
MV 4.2-9 Ultimate project hydrology and debris production calculations shall be prepared by a project engineer to verify the requirements for debris basins and/or desilting inlets.	Applicant (Civil Engineer)	Review of Calculations	1. LACDPW, FCD
			2. LACDPW, FCD
			3. Prior to Approval of Storm Drain Plans

MV 4.2-10 To reduce debris being discharged from the site, debris basins shall be designed and constructed pursuant to LACDPW Flood Control requirements to intercept flows from undeveloped areas entering into the developed portions of the site.	Applicant (Civil Engineer)	Approval of Drainage Plans Field Verification	1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Approval of Storm Drain Plans
4.3 BIOTA			
SP 4.6-1 The restoration mitigation areas located within the River Corridor SMA shall be in areas that have been disturbed by previous uses or activities. Mitigation shall be conducted only on sites where soils, hydrology, and microclimate conditions are suitable for riparian habitat. First priority will be given to those restorable areas that occur adjacent to existing patches (areas) of native habitat that support sensitive species, particularly Endangered or Threatened species. The goal is to increase habitat patch size and connectivity with other existing habitat patches while restoring habitat values that will benefit sensitive species. *(This measure is implemented primarily through MV4.3-23 and the development of a Comprehensive Mitigation Implementation Plan (CMIP) for the Newhall Ranch Specific Plan, of which the Mission Village project is the second subdivision. Mitigation measure MV 4.3-31 provides the replacement ratios for vegetation restoration and measure MV4.3-32 designates the location priorities for revegetation efforts.)*	Applicant (Project Biologist)	Field Verification	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plans
SP 4.6-2 A qualified biologist shall prepare or review revegetation plans. The biologist shall also monitor the restoration effort from its inception through the establishment phase. (*This measure will be implemented through the applicant contracting with a biological consulting company acceptable to the County to prepare the revegetation plans for the Mission Village project.*)	Applicant (Project Biologist)	Revegetation Plan Comments and Documentation of Restoration Monitoring from Qualified Biologist	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plans and Monitor During Restoration Effort
SP 4.6-3 Revegetation Plans may be prepared as part of a California Department of Fish and Game 1603 Streambed Alteration Agreement and/or an U.S. Army Corps of Engineers Section 404 Permit, and shall include: • Input from both the Project proponent and resource agencies to assure that the Project objectives applicable to the River Corridor SMA and the criteria of this RMP are met. • The identification of restoration/mitigation sites to be used. This effort shall involve an analysis of the suitability of potential sites to support the desired habitat, including a description of the existing conditions at the site(s) and such base line data information deemed necessary by the permitting agency. (*This measure will be implemented for the Mission Village project through compliance with the master 1602 Streambed Alteration Agreement and the Section 404 Permit processed by the Newhall Ranch Company associated with the 2009 EIS/EIR.*)	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-4 The revegetation effort shall involve an analysis of the site conditions such as soils and hydrology so that site preparation needs can be evaluated. The revegetation plan shall include the details and procedures required to prepare the restoration site for planting (i.e., grading, soil preparation, soil stockpiling, soil amendments, etc.), including the need for a supplemental irrigation system, if any. (*This measure will be implemented through the detailed revegetation plan requirements provided within the Mission Village mitigation measure MV4.3-23.*)	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-5 Restoration of riparian habitats within the River Corridor SMA shall use plant species native to the Santa Clara River. Cuttings or seeds of native plants shall be gathered within the River Corridor SMA or purchased from nurseries with local supplies to provide good genetic stock for the replacement habitats. Plant species used in the restoration of riparian habitat shall be listed on the approved project plant palette (Specific Plan Table 2.6-1, Recommended Plant Species for Habitat Restoration in the River Corridor SMA) or as approved by the permitting state and federal agencies. (*This measure will be implemented through the CMIP of measure MV4.3-23 for the Mission Village project.*)	Applicant (Project Biologist)	Revegetation Plan Review Field Verification	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan and Monitor During Restoration Effort

SP 4.6-6 The final revegetation plans shall include notes that outline the methods and procedures for the installation of the plant materials. Plant protection measures identified by the project biologist shall be incorporated into the planting design/layout. (*This measure will be implemented through the CMIP of measure MV 4.3-23 and measure MV 4.3-34 for the Mission Village project* .)	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-7 The revegetation plan shall include guidelines for the maintenance of the mitigation site during the establishment phase of the plantings. The maintenance program shall contain guidelines for the control of non-native plant species, the maintenance of the irrigation system, and the replacement of plant species. (*This measure will be implemented through compliance with the measures MV4.3-36 and MV4.3-39 for the Mission Village project.*)	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-8 The revegetation plan shall provide for monitoring to evaluate the growth of the developing habitat. Specific performance goals for the restored habitat shall be defined by qualitative and quantitative characteristics of similar habitats on the river (e.g., density, cover, species composition, structural development). The monitoring effort shall include an evaluation of not only the plant material installed, but the use of the site by wildlife. The length of the monitoring period shall be determined by the permitting State and/or Federal agency. (*This measure will be implemented through measures MV4.3-33 and MV4.3-36 for the Mission Village project.*)	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-9 Monitoring reports for the mitigation site shall be reviewed by the permitting State and/or Federal agency. (*This measure will be implemented through the measures MV4.3-42 and MV4.3-43 for the Mission Village project.*)	Applicant (Project Biologist)	Review of Monitoring Reports	1. ACOE and CDFG 2. ACOE and CDFG 3. During Revegetation Activities
SP 4.6-10 Contingency plans and appropriate remedial measures shall also be outlined in the revegetation plan. (*This measure will be implemented through measures MV4.3-35 and MV 4.3-36 for the Mission Village project* .)	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-11 Habitat enhancement as referred to in this document means the rehabilitation of areas of native habitat that have been moderately disturbed by past activities (e.g., grazing, roads, oil and natural gas operations, etc.) or have been invaded by non-native plant species such as giant cane (Arundo donax) and tamarisk (*Tamarix* sp.). (*This measure will be implemented through measures MV4.3-38 and MV 4.3-39 for the Mission Village project* .)	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-12 Removal of grazing is an important means of enhancement of habitat values. Without ongoing disturbance from cattle, many riparian areas will recover naturally. Grazing except as permitted as a long-term resource management activity will be removed from the River Corridor SMA pursuant to the Long-Term Management Plan set forth in Section 4.6 of the Specific Plan EIR. (*This measure will be implemented in accordance with the conditions of approval for the Mission Village project* .)	Land Owner/SMA Manager	Mitigation Monitoring Reports	1. LACDRP 2. LACDRP 3. Mitigation Monitoring Reports under Conditional Use Permit (CUP) Condition No. 8
SP 4.6-13 To provide guidelines for the installation of supplemental plantings of native species within enhancement areas, a revegetation plan shall be prepared prior to implementation of mitigation (see guidelines for revegetation plans above). These supplemental plantings will be composed of plant species similar to those growing in the existing habitat patch (see Specific Plan Table 2.6-1). (*This measure will be implemented through measures MV4.3-23 and MV 43-36 for the Mission Village project.*)	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan

SP 4.6-14 Not all enhancement areas will necessarily require supplemental plantings of native species. Some areas may support conditions conducive for rapid "natural" reestablishment of native species. The revegetation plan may incorporate means of enhancement to areas of compacted soils, poor soil fertility, trash or flood debris, and roads as a way of enhancing riparian habitat values. (*This measure will be implemented through the CMIP of measure MV4.3-23 for the Mission Village project* .)	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-15 Removal of non-native species such as giant cane (*Arundo donax*), salt cedar or tamarisk (*Tamarix* sp.), tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), if included in a revegetation plan to mitigate impacts, shall be subject to the following standards: • First priority shall be given to those habitat patches that support or have a high potential for supporting sensitive species, particularly Endangered or Threatened species. • All non-native species removals shall be conducted according to a resource agency approved exotics removal program. • Removal of non-native species in patches of native habitat shall be conducted in such a way as to minimize impacts to the existing native riparian plant species. (*This measure will be implemented through measures MV4.3-38 and MV 4.3-39 for the Mission Village project.*)	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-16 Mitigation banking activities for riparian habitats will be subject to State and Federal regulations and permits. Mitigation banking for oak resources shall be conducted pursuant to the Oak Resources Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. (*This measure is implemented through mitigation measure MV 4.3-23 and the development of a CMIP* .)	Applicant (Project Biologist)	State and Federal Permits; Submittal of Permits Oak Resources;	1. ACOE, CDFG 2. ACOE, CDFG, 3. Prior to Approval of Mitigation Banking Program
SP 4.6-17 Access to the River Corridor SMA for hiking and biking shall be limited to the river trail system (including the Regional River Trail and various Local Trails) as set forth in this Specific Plan. • The River trail system shall be designed to avoid impacts to existing native riparian habitat, especially habitat areas known to support sensitive species. Where impacts to riparian habitat are unavoidable, disturbance shall be minimized and mitigated as outlined above under **Mitigation Measures SP 4.6-1** through **SP 4.6-8**. • Access to the River Corridor SMA will be limited to daytime use of the designated trail system. • Signs indicating that no pets of any kind will be allowed within the River Corridor SMA, with the exception that equestrian use is permitted on established trails, shall be posted along the River Corridor SMA. • No hunting, fishing, or motor or off-trail bike riding shall be permitted. • The trail system shall be designed and constructed to minimize impacts on native habitats.	Applicant (Design)	Review of Trails Plans, Tract Maps, and/or Site Plans (Design)	1. LA County Department of Parks and Recreation 2. LA County Department of Parks and Recreation 3. Prior to Approval of Trails Plans, Tract Maps, and/or Site Plans, as applicable.
	SMA Manager (Access)	Field Verification (Access)	1. LACDRP 2. LACDRP 3. Upon Complaint
SP 4.6-18 Where development lies adjacent to the boundary of the River Corridor SMA a transition area shall be designed to lessen the impact of the development on the conserved area. Transition areas may be comprised of Open Area, natural or revegetated manufactured slopes, other planted areas, bank areas, and trails. Exhibits 2.6-4, 2.6-5, and 2.6-6 indicate the relationship between the River Corridor SMA and the development (disturbed) areas of the Specific Plan. The SMAs and the Open Area as well as the undisturbed portions of the development areas are shown in green. As indicated on the exhibits, on the south side of the river the River Corridor SMA is separated from development by the river bluffs, except in one location. The Regional River Trail will serve as transition area on the north side of the river where development areas adjoin the River Corridor SMA (excluding Travel Village).	Applicant	Review of Trails Plans, Tract Maps, and/or Site Plans	1. LACDRP 2. LACDRP 3. Prior to Approval of Trails Plans, Tract Maps, and/or Site Plans, as applicable.

SP 4.6-19 The following are the standards for design of transition areas: • In all locations where there is no steep grade separation between the River Corridor SMA and development, a trail shall be provided along this edge. • Native riparian plants shall be incorporated into the landscaping of the transition areas between the River Corridor SMA and adjacent development areas where feasible for their long-term survival. Plants used in these areas shall be those listed on the approved plant palette (Specific Plan Table 2.6-2 of the Resource Management Plan [Recommended Plants for Transition Areas Adjacent to the River Corridor SMA]). • Roads and bridges that cross the River Corridor SMA shall have adequate barriers at their perimeters to discourage access to the River Corridor SMA adjacent to the structures.	Applicant	Review of Trails Plans, Tract Maps, and/or Site Plans	1. LACDRP and LACDPW for Bank Stabilization
• Where bank stabilization is required to protect development areas, it shall be composed of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other locations where public health and safety requirements necessitate concrete or other bank protection.			2. LACDRP and LACDPW for Bank Stabilization
• A minimum 100-foot-wide buffer adjacent to the Santa Clara River should be required between the top river side of bank stabilization and development within the Land Use Designations Residential Low Medium, Residential Medium, Mixed-Use and Business Park unless, through Planning Director review in consultation with the staff biologist, it is determined that a lesser buffer would adequately protect the riparian resources within the River Corridor, or that a 100-foot-wide buffer is infeasible for physical infrastructure planning. The buffer area may be used for public infrastructure, such as flood control access; sewer, water, and utility easements; abutments; trails and parks, subject to findings of consistency with the Specific Plan and applicable County policies.			3. Prior to Approval of Trails Plans, Tract Maps, and/or Site Plans, as applicable
SP 4.6-20 The following guidelines shall be followed during any grading activities that take place within the River Corridor SMA: • Grading perimeters shall be clearly marked and inspected by the project biologist prior to grading occurring within or immediately adjacent to the River Corridor SMA. • The project biologist shall work with the grading contractor to avoid inadvertent impacts to riparian resources. (*This measure will be implemented through measures MV4.3-2 through MV4.3-19* .)	Applicant (Project Biologist)	Field Verification	1. LACDPW 2. LACDPW 3. Prior to and During Grading Activities
SP 4.6-21 Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the River Corridor SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3 of the Specific Plan. (*This measure was implemented with the approval of the Newhall Ranch Specific Plan. The Mission Village project was designed in compliance with the development standards of the Special management Areas and the Significant Ecological Areas compatibility criteria.*)	Los Angeles County	None Required	1. Los Angeles County 2. Los Angeles County 3. Upon Effective Date of Zoning Ordinance
SP 4.6-22 Upon completion of development of all land uses, utilities, roads, flood control improvements, bridges, trails, and other improvements necessary for implementation of the Specific Plan within the River Corridor in each subdivision allowing construction within or adjacent to the River Corridor, a permanent, non-revocable *conservation and public access easement* shall be offered to the County of Los Angeles pursuant to **Mitigation Measure 4.6-23**, below, over the portion of the River Corridor SMA within that subdivision.	Land Owner	Offer of Dedication of Easement	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Submittal of Monitoring Report(s) Under CUP Condition No. 8

SP 4.6-23 The River Corridor SMA *Conservation and Public Access Easement* shall be offered to the County of Los Angeles prior to the transfer of the River Corridor SMA ownership, or portion thereof to the management entity described in **Mitigation Measure 4.6-26**, below. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project.*)	Land Owner	Offer of Dedication of Easement	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Transfer of River Corridor Ownership Under 4.6-26
SP 4.6-24 The River Corridor SMA Conservation and Public Access Easement shall prohibit grazing, except as a long-term resource management activity, and agriculture within the River Corridor and shall restrict recreation use to the established trail system. Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended in the event of the filing of any legal action against Los Angeles County challenging final approval of the Newhall Ranch Specific Plan and any related project approvals or certification of the Final EIR for Newhall Ranch. Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended by the time period between the filing of any such legal action and the entry of a final judgment by a court with appropriate jurisdiction, after exhausting all rights of appeal, or execution of a final settlement agreement between all parties to the legal action, whichever occurs first. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project.*)	Land Owner	Review of Easement Document	1. LACDRP 2. LACDRP 3. Prior to Acceptance of Easement by County
SP 4.6-25 The River Corridor SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project.*)	Land Owner	Review of Conservation Easement /and Resource Permits	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Recordation of River Corridor SMA Conservation Easement
SP 4.6-26 Prior to the recordation of the River Corridor SMA Conservation and Public Access Easement as specified in Mitigation Measure 4.6-23, above, the land owner shall provide a plan to the County for the permanent ownership and management of the River Corridor SMA, including any necessary financing. This plan shall include the transfer of ownership of the River Corridor SMA to the Center for Natural Lands Management, or if the Center for Natural Lands Management is declared bankrupt or dissolved, ownership will transfer or revert to a joint powers authority consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). (*This measure is implemented in accordance with the conditions of approval for the Mission Village project.*)	Land Owner	Approval of Management Plan by County	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Recordation of River Corridor SMA Conservation Easement
SP 4.6-26a Two types of habitat restoration may occur in the High Country SMA: (1) riparian revegetation activities principally in Salt Creek Canyon; and (2) oak tree replacement in, or adjacent to, existing oak woodlands and savannahs. • Mitigation requirements for riparian revegetation activities within the High Country SMA are the same as those for the River Corridor SMA and are set forth in **Mitigation Measures 4.6-1** through **4.6-11** and **4.6-13** through **4.6-16**, above. • Mitigation requirements for oak tree replacement are set forth in **Mitigation Measure 4.6-48**, below. (*This measure is implemented through mitigation measure MV4.3-23 and the development of a CMIP* .)	Land Owner (Project Biologist)	Field Verification	1. ACOE, CDFG (Riparian) 2. ACOE, CDFG (Riparian) 3. Approval of Revegetation Plans

SP 4.6-27 Removal of grazing from the High Country SMA except for those grazing activities associated with long-term resource management programs, is a principal means of enhancing habitat values in the creeks, brushland, and woodland areas of the SMA. The removal of grazing in the High Country SMA is discussed below under (b)4 Long Term Management. All enhancement activities for riparian habitat within the High Country SMA shall be governed by the same provisions as set forth for enhancement in the River Corridor SMA. Specific Plan Table 2.6-3 of the Resource Management Plan provides a list of appropriate plant species for use in enhancement areas in the High Country SMA. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project and the Newhall Ranch Specific Plan.*)	Land Owner/Center for Natural land Management (CNLM)	Enhancement Plans and Field Verification	1. LACDRP 2. CNLM 3. During Enhancement Activities
SP 4.6-28. Mitigation banking activities for riparian habitats will be subject to state and federal regulations and permits. Mitigation banking for oak resources, shall be conducted pursuant to the Oak Resource Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. *(This measure is implemented through mitigation measure MV4.3-23 and the development of a CMIP.)*	Applicant (Project Biologist)	State and Federal Permits; Submittal of Permits	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Mitigation Banking Program
		Oak Resources; Review of Oak Tree Permit	1. LACDRP 2. LACDRP 3. Approval of Oak Tree Permit
		Elderberry Scrub; Review of Initial Study	1. LACDRP 2. LACDRP 3. Prior to Grading
SP 4.6-29 Not applicable.			
SP 4.6-30 Not applicable.			
SP 4.6-31 Not applicable.			
SP 4.6-32 Not applicable.			
SP 4.6-33 Not applicable.			
SP 4.6-34 Grading perimeters shall be clearly marked and inspected by the project biologist prior to impacts occurring within or adjacent to the High Country SMA. (*This measure will be implemented through measures MV4.3-2 through MV4.3-19* .)	Applicant (Project Biologist)	Field Verification	1. LACDPW 2. LACDPW 3. Prior To and During Grading
SP 4.6-35 The project biologist shall work with the grading contractor to avoid inadvertent impacts to biological resources outside of the grading area.	Applicant (Project Biologist)	Field Verification	1. LACDPW 2. LACDPW 3. During Grading
SP 4.6-36. Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the High Country SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3.	Los Angeles County	None Required	1. Los Angeles County 2. Los Angeles County 3. Upon Effective Date of Zoning Ordinance

SP 4.6-37 The High Country SMA shall be offered for dedication in three approximately equal phases of approximately 1,400 acres each proceeding from north to south, as follows: 1. The first offer of dedication will take place with the issuance of the 2,000th residential building permit of Newhall Ranch; 2. The second offer of dedication will take place with the issuance of the 6,000th residential building permit of Newhall Ranch; and 3. The remaining offer of dedication will be completed by the 11,000th residential building permit of Newhall Ranch. 4. The Specific Plan applicant shall provide a quarterly report to the Departments of Public Works and Regional Planning, which indicates the number of residential building permits issued in the Specific Plan area by subdivision map number. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project and the provision of the Newhall Ranch Specific Plan.*)	Land Owner	Offer of Dedication	1. LA County Department of Regional Planning 2. LA County Department of Building and Safety 3. Upon Issuance of Building Permits
SP 4.6-38 Prior to dedication of the High Country SMA, a conservation and public access easement shall be offered to the County of Los Angeles and a conservation and management easement offered to the Center for Natural Lands Management. The High Country SMA Conservation and Public Access Easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies, which may have been granted as part of mitigation or mitigation banking activities. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project and the provision of the Newhall Ranch Specific Plan.*)	Land Owner	Review of Easement Document	1. LA County Department of Regional Planning 2. LA County Department of Building and Safety 3. Upon Issuance of Building Permits
SP 4.6-39 The High Country SMA conservation and public access easement shall prohibit grazing within the High Country, except for those grazing activities associated with the long-term resource management programs, and shall restrict recreation to the established trail system. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project and the provision of the Newhall Ranch Specific Plan.*)	Land Owner	Review of Easement Document	1. LACDRP 2. LACDRP 3. Prior to Acceptance of Easement by Los Angeles County
SP 4.6-40 The High Country SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project and the provision of the Newhall Ranch Specific Plan.*)	Land Owner	Review of Conservation Easement and Resource Permits	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Recordation of High Country SMA Conservation Easement
SP 4.6-41 The High Country SMA shall be offered for dedication in fee to a joint powers authority consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). The *joint powers authority* will have overall responsibility for recreation within and conservation of the High Country. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project and the provision of the Newhall Ranch Specific Plan.*)	Land Owner	Offer of Dedication	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of Building Permits

SP 4.6-42 An appropriate type of service or assessment district shall be formed under the authority of the Los Angeles County Board of Supervisors for the collection of up to $24 per single family detached dwelling unit per year and $15 per single family attached dwelling unit per year, excluding any units designated as Low and Very Low affordable housing units pursuant to Section 3.10, Affordable Housing Program of the Specific Plan. This revenue would be assessed to the homeowner beginning with the occupancy of each dwelling unit and distributed to the joint powers authority for the purposes of recreation, maintenance, construction, conservation and related activities within the *High Country Special Management Area. (This measure is implemented in accordance with the conditions of approval for the Mission Village project and the provision of the Newhall Ranch Specific Plan.)*	Land Owner	Approval of Assessment District Report by County	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of First Residential Occupancy Permit
SP 4.6-43 Suitable portions of Open Area may be used for mitigation of riparian, oak resources, or elderberry scrub. Mitigation activities within Open Area shall be subject to the following requirements, as applicable. • River Corridor SMA Mitigation Requirements, including: **Mitigation Measures 4.6-1** through **4.6-11** and **4.6-13** through **4.6-16**; and • High Country SMA Mitigation Requirements, including: **Mitigation Measures 4.6-27**, **4.6-29** through **4.6-42**, and • Mitigation Banking — **Mitigation Measure 4.6-16**. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project and the provision of the Newhall Ranch Specific Plan.*)	Manager of Open Area	Review of Mitigation Plans/Field Verification	1. ACOE; CDFG or Los Angeles County as applicable 2. ACOE; CDFG or Los Angeles County as applicable 3. During Mitigation
SP 4.6-44. Drainages with flows greater than 2,000 cubic feet per second (cfs) will have soft bottoms. Bank protection will be of ungrouted rock, or buried bank stabilization as described in Section 2.5.2.a, except at bridge crossings and other areas where public health and safety considerations require concrete or other stabilization. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project and the provision of the Newhall Ranch Specific Plan* .)	Applicant (Civil Engineer)	Review Drainage Plans	1. LACDPW FCD 2. LACDPW FCD 3. Prior to Approval of Final Drainage Plans
SP 4.6-45. The precise alignments and widths of major drainages will be established through the preparation of drainage studies to be approved by the County at the time of subdivision maps which permit construction. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project and the provision of the Newhall Ranch Specific Plan.*)	Applicant (Civil Engineer)	Review Drainage Plans	1. LACDPW FCD 2. LACDPW FCD 3. Prior to Approval of Tract Maps
SP 4.6-46 While Open Area is generally intended to remain in a natural state, some grading may take place, especially for parks, major drainages, trails, and roadways. Trails are also planned to be within Open Area. (*This measure is implemented through the Los Angeles County Subdivision Committee review process and conditions of approval.*)	Land Owner	Review of Mitigation Plans/Field Verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of Building Permits
SP 4.6-47 At the time that final subdivision maps permitting construction are recorded, the Open Area within the map will be offered for dedication to the Center for Natural Lands Management. Community Parks within Open Area are intended to be public parks. Prior to the offer of dedication of Open Area to the Center for Natural Lands Management, all necessary conservation and public access easements, as well as easements for infrastructure shall be offered to the County. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project and the provision of the Newhall Ranch Specific Plan.*)	Land Owner	Review of Conservation Easement	1. LA County Department of Regional Planning 2. Center for Natural Lands Management 3. Prior to Recordation of Maps Permitting Construction

SP 4.6-47a Mitigation Banking will be permitted within the River Corridor SMA, the High Country SMA, and the Open Area land use designations, subject to the following requirements: • Mitigation banking activities for riparian habitats will be subject to state and federal regulations, and shall be conducted pursuant to the mitigation requirements set forth in **Mitigation Measure 4.6-1** through **4.6-15** above. • Mitigation banking for oak resources shall be conducted pursuant to **4.6-48**, below. • Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester. (*This measure is implemented in accordance with the conditions of approval for the Mission Village project and the provision of the Newhall Ranch Specific Plan .*)	Applicant (Project Biologist)	State and Federal Permits; Submittal of Permits	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Mitigation Banking Program
SP 4.6-48 Standards for the restoration and enhancement of oak resources within the High Country SMA and the Open Area include the following (oak resources include oak trees of the sizes regulated under the County Oak Tree Ordinance, Southern California black walnut trees, and mainland cherry trees/shrubs): • To mitigate the impacts to oak resources that may be removed as development occurs in the Specific Plan Area, replacement trees shall be planted in conformance with the oak tree ordinance in effect at that time. • Oak resource species obtained from the local gene pool shall be used in restoration or enhancement. • Prior to recordation of construction-level final subdivision maps, an oak resource replacement plan shall be prepared that provides the guidelines for the oak tree planting and/or replanting. The Plan shall be reviewed by the Los Angeles Department of Regional Planning and the County Forester and shall include the following: site selection and preparation, selection of proper species including sizes and planting densities, protection from herbivores, site maintenance, performance standards, remedial actions, and a monitoring program. • All plans and specifications shall follow County oak tree guidelines, as specified in the County Oak Tree Ordinance. (*This measure will be implemented through Mission Village mitigation measures MV4.3-22, MV4.3-28, and MV4.3-50.*)	Applicant (Project Biologist)	Oak Tree Permit(s)	1. LA County Forester 2. LA County Forester 3. Prior to Final Subdivision Map Recordation
SP 4.6-49 To minimize the potential exposure of the development areas, Open Area, and the SMAs to fire hazards, the Specific Plan is subject to the requirements of the Los Angeles County Fire Protection District (LACFPD), which provides fire protection for the area. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a wildfire fuel modification plan shall be prepared in accordance with the fuel modification ordinance standards in effect at that time and shall be submitted for approval to the County Fire Department.	Applicant	Review of Wildfire Fuel Modification Plan	1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps
SP 4.6-50 The wildfire fuel modification plan shall depict a fuel modification zone the size of which shall be consistent with the County fuel modification ordinance requirements. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the fuel modification ordinance. (*This measure is implemented through the Los Angeles County Fire Department review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval.*)	Applicant (Project Biologist)	Review of Wildfire Fuel Modification Plan	1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps
SP 4.6-51 In order to enhance the habitat value of plant communities that require fuel modification, fire retardant plant species containing habitat value may be planted within the fuel modification zone. Typical plant species suitable for Fuel Modification Zones are indicated in Specific Plan Table 2.6-5 of the Resource Management Plan. Fuel modification zones adjacent to SMAs and Open Areas containing habitat of high value such as oak woodland and savannas shall utilize a more restrictive plant list, which shall be reviewed by the County Forester. (*This measure is implemented through the Los Angeles County Fire Department review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval.*)	Applicant (Project Biologist)	Review of Wildfire Fuel Modification Plan	1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps

SP 4.6-52 The wildfire fuel modification plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to the County Fire Department requirements. (*This measure is implemented through the Los Angeles County Fire Department review of the project design during the Subdivision Committee review process and conditions of approval, including fuel modification plan approval* .)	Applicant (Project Biologist)	Review of Wildfire Fuel Modification Plan	1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps
SP 4.6-53 If, at the time any subdivision map proposing construction is submitted, the County determines through an Initial Study, or otherwise, that there may be Rare, Threatened or Endangered, plant or animal species on the property to be subdivided, then, in addition to the prior surveys conducted on the Specific Plan site to define the presence or absence of sensitive habitat and associated species, current, updated site-specific surveys for all such animal or plant species shall be conducted in accordance with the consultation requirements set forth in **Mitigation Measure 4.6-59** within those areas of the Specific Plan where such animal or plant species occur or are likely to occur. The site-specific surveys shall include the unarmored three spine stickleback, the arroyo toad, the Southwestern pond turtle, the California red-legged frog, the southwestern willow flycatcher, the least Bell's vireo, the San Fernando Valley spineflower and any other Rare, Sensitive, Threatened, or Endangered plant or animal species occurring, or likely to occur, on the property to be subdivided.	Applicant (Project Biologist)	Review of Initial Study	1. LACDRP
All site-specific surveys shall be conducted during appropriate seasons by qualified botanists or qualified wildlife biologists in a manner that will locate any Rare, Sensitive, Threatened, or Endangered animal or plant species that may be present. To the extent there are applicable protocols published by either the United States Fish and Wildlife Service or the California Department of Fish and Game, all such protocols shall be followed in preparing the updated site-specific surveys. All site-specific survey work shall be documented in a separate report containing at least the following information: (a) project description, including a detailed map of the project location and study area; (b) a description of the biological setting, including references to the nomenclature used and updated vegetation mapping; (c) detailed description of survey methodologies;			2. LACDRP
(d) dates of field surveys and total person-hours spent on the field surveys; (e) results of field surveys, including detailed maps and location data; (f) an assessment of potential impacts; (g) discussion of the significance of the Rare, Threatened or Endangered animal or plant populations found in the project area, with consideration given to nearby populations and species distribution; (h) mitigation measures, including avoiding impacts altogether, minimizing or reducing impacts, rectifying or reducing impacts through habitat restoration, replacement or enhancement, or compensating for impacts by replacing or providing substitute resources or environments, consistent with CEQA (State CEQA Guidelines Section 15370); (i) references cited and persons contacted; and (j) other pertinent information, which is designed to disclose impacts and mitigate for such impacts." (*This measure is implemented through the Mission Village mitigation measures MV4.3-2, MV4.3-3, MV4.3-4, MV4.3-5, MV4.3-6, MV4.3-7, MV4.3-16, MV4.3-17, MV4.3-18, MV4.3-20, MV4.3-25, MV4.3-27, MV4.3-49, and MV4.3-75.*)			3. Prior to Approval of Subdivision Maps
SP 4.6-54 Prior to development within or disturbance to occupied unarmored threespine stickleback habitat, a formal consultation with the USFWS shall occur. (*This measure was implemented through the Section 7 Consultation under the Federal Endangered Species and the issuance of the USFWS Biological Opinion during the processing of the 404 Permit by the USACE* .)	Applicant (Project Biologist)	Section 7 Consultation	1. USFWS 2. USFWS 3. Prior to Grading

SP 4.6-55 Prior to development or disturbance within wetlands or other sensitive habitats, permits shall be obtained from pertinent federal and state agencies and the Specific Plan shall conform to the specific provisions of said permits. Performance criteria shall include that described in **Mitigation Measures 4.6-1** through **4.6-16** and **4.6-42** through **4.6-47** for wetlands, and **Mitigation Measures 4.6-27, 4.6-28**, and **4.6-42** through **4.6-48** for other sensitive habitats. (*This measure was implemented through the issuance to the applicant CDFG 2081 Incidental Take Permit and the issuance of the 404 Permit by the USACE, incorporating the USFWS Biological Opinion.*)	Applicant (Project Biologist)	Receipt of Appropriate Permit applications	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Grading
SP 4.6-56 All lighting along the perimeter of natural areas shall be downcast luminaries with light patterns directed away from natural areas. (*This measure is implemented through the Los Angeles County Department of Regional Planning review of the project design during the Subdivision Committee review process and conditions of approval.*)	Applicant	Building Permit Plot Plan Review	1. LACDRP 2. LACDRP 3. Prior to Issuance of Building Permits
SP 4.6-57 Where bridge construction is proposed and water flow would be diverted, blocking nets and seines shall be used to control and remove fish from the area of activity. All fish captured during this operation would be stored in tubs and returned unharmed back to the river after construction activities were complete. (*This measure is implemented through the Mission Village mitigation measures MV4.3-9 through MV4.3-13, and MV4.3-8* .)	Applicant (Project Biologist)	Field Verification	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Construction
SP 4.6-58 To limit impacts to water quality the Specific Plan shall conform with all provisions of required NPDES permits and water quality permits that would be required by the State of California Regional Water Quality Control Board. (*This measure is implemented through the Mission Village mitigation measures MV4.3-13 and the issuance of and compliance with the 401 Certificate by the Regional Water Quality Control Board.*)	Project Engineer	Approval of a Storm Water Management Plan (SWMP)	1. LACDPW 2. LACDPW 3. Prior to Issuance of Grading Permit(s)

SP 4.6-59 Consultation shall occur with the County of Los Angeles (County) and California Department of Fish and Game (CDFG) at each of the following milestones: 1. Before Surveys. Prior to conducting sensitive plant or animal surveys at the Newhall Ranch subdivision map level, the applicant, or its designee, shall consult with the County and CDFG for purposes of establishing and/or confirming the appropriate survey methodology to be used. 2. After Surveys. After completion of sensitive plant or animal surveys at the subdivision map level, draft survey results shall be made available to the County and CDFG within sixty (60) calendar days after completion of the field survey work.	Applicant (Project Biologist)	Section 2081 Permit	1. USFWS and CDFG
3. Subdivision Map Submittal. Within thirty (30) calendar days after the applicant, or its designee, submits its application to the County for processing of a subdivision map in the Mesas Village or Riverwood Village, a copy of the submittal shall be provided to CDFG. In addition, the applicant, or its designee, shall schedule a consultation meeting with the County and CDFG for purposes of obtaining comments and input on the proposed subdivision map submittal. The consultation meeting shall take place at least thirty (30) days prior to the submittal of the proposed subdivision map to the County.			2. USFWS and CDFG
4. Development/Disturbance and Further Mitigation. Prior to any development within, or disturbance to, habitat occupied by Rare, Threatened, or Endangered plant or animal species, or to any portion of the Spineflower Mitigation Area Overlay, as defined below, all required permits shall be obtained from both USFWS and CDFG, as applicable. It is further anticipated that the Federal and State permits will impose conditions and mitigation measures required by federal and state law that are beyond those identified in the Newhall Ranch Final EIR (March 1999), the Newhall Ranch DAA (April 2001) and the Newhall Ranch Revised DAA (2002). It is also anticipated that conditions and mitigation measures required by federal and state law for project-related impacts on Endangered, Rare or Threatened species and their habitat will likely require changes and revisions to Specific Plan development footprints, roadway alignments, and the limits, patterns, and techniques associated with project-specific grading at the subdivision map level.			3. Prior to Grading
SP 4.6-60 If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be elderberry scrub vegetation on the property being subdivided, then a site-specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied. (*This measure is implemented through the Mission Village mitigation measures MV4.3-1, MV4.3-23, MV4.3-30, and MV4.3-31 through MV4.3-43.*)	Applicant (Project Biologist)	Review of Initial Study	1. LACDRP 2. LACDRP 3. Prior to Approval of Subdivision Maps
SP 4.6-61. If at the time subdivisions permitting construction are processed, the County determines through and Initial Study that there may be mainland cherry trees and/or mainland cherry shrubs on the property being subdivided, then a site specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied. (*This measure is implemented through the Mission Village mitigation measures MV4.3-1, MV4.3-23, MV4.3-24, MV4.3-26, MV4.3-28, MV4.3-31 through MV4.3-43, and MV4.3-50* .)	Applicant (Project Biologist)	Review of Initial Study	1. LACDRP 2. LACDRP 3. Prior to Approval of Subdivision Maps
SP 4.6-62 Not Applicable.			
SP 4.6-63 Riparian resources that are impacted by buildout of the Newhall Ranch Specific Plan shall be restored with similar habitat at the rate of 1 acre replaced for each acre lost. (*This measure has been addressed by project-specific Mitigation Measure MV 4.3-23.*)	Applicant (Project Biologist)	ACOE 404 Permit	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Grading

SP 4.6-64 Not Applicable.			
SP 4.6-65 In order to facilitate the conservation of the spineflower on the Newhall Ranch Specific Plan site, the applicant, or its designee, shall, concurrent with Specific Plan approval, agree to the identified special study areas shown below in **Figure 2.6-8, Spineflower Mitigation Area Overlay**. The applicant, or its designee, further acknowledges that, within and around the Spineflower Mitigation Area Overlay (**Figure 2.6-8**), changes will likely occur to Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading at the subdivision map level. The applicant, or its designee, shall design subdivision maps that are responsive to the characteristics of the spineflower and all other Endangered plant species that may be found on the Specific Plan site. (*This measure is implemented through the Mission Village mitigation measures MV4.3-58 through MV4.3-64, MV4.3-66 through MV4.3-72, and MV4.3-48.*)	Applicant	Review of Initial Study and subdivision	1. LACDRP 2. LACDRP 3. Initial study for Tract Map
SP 4.6-66 Direct impacts to known spineflower populations within the Newhall Ranch Specific Plan area shall be avoided or minimized through the establishment of one or more on-site preserves that are configured to ensure the continued existence of the species in perpetuity. Preserve(s) shall be delineated in consultation with the County and CDFG, and will likely require changes and revisions to Specific Plan development footprints for lands within and around the Spineflower Mitigation Area Overlay (Figure 2.6 8). Delineation of the boundaries of Newhall Ranch spineflower preserve(s) for the entire Specific Plan area shall be completed in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesas Village, or that portion of Riverwood Village in which the San Martinez spineflower population occurs.	Applicant	Review of Initial Study and subdivision	1. LACDRP
A sufficient number of known spineflower populations shall be included within the Newhall Ranch spineflower preserve(s) in order to ensure the continued existence of the species in perpetuity. The conservation of known spineflower populations shall be established in consultation with the County and CDFG, and as consistent with standards governing issuance of an incidental take permit for spineflower pursuant to Fish and Game Code Section 2081, subdivision (b). In addition to conservation of known populations, spineflower shall be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s). The creation of introduced populations shall require seed collection and/or top soil at impacted spineflower locations and nursery propagation to increase seed and sowing of seed. The seed collection activities, and the maintenance of the bulk seed repository, shall be approved in advance by the County and CDFG.			2. LACDRP
Once the boundaries of the Newhall Ranch spineflower preserve(s) are delineated, the project applicant, or its designee, shall be responsible for conducting a spineflower population census within the Newhall Ranch spineflower preserve(s) annually for 10 years. (These census surveys shall be in addition to the surveys required by **Mitigation Measure 4.6-53**, above.) The yearly spineflower population census documentation shall be submitted to the County and CDFG, and maintained by the project applicant, or its designee. If there are any persistent population declines documented in the annual population census reports, the project applicant, or its designee, shall be responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. In no event, however, shall project-related activities jeopardize the continued existence of the Newhall Ranch spineflower populations.			3. To be completed in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesas Village, or that portion of Riverwood Village in which the San Martinez spineflower population occurs.

If a persistent population decline is documented, such as a trend in steady population decline that persists for a period of 5 consecutive years, or a substantial drop in population is detected over a 10-year period, spineflower may be introduced in consultation with CDFG in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the bulk spineflower seed repository, together with other required management activity or activities. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County and CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, including monitoring, as approved by the County and CDFG. Annual viability reports shall be submitted to the County and CDFG for 10 years following delineation of the Newhall Ranch spineflower preserve(s) to ensure long-term documentation of the spineflower population status within the Newhall Ranch preserve(s).			
In the event annual status reports indicate the spineflower population within the Newhall Ranch preserve(s) is not stable and viable 10 years following delineation of the spineflower preserve(s), the project applicant, or its designee, shall continue to submit annual status reports to the County and CDFG for a period of no less than an additional five years. (*This measure is implemented through the Mission Village mitigation measures MV4.3-58 through MV4.3-74, and MV4.3-65 through MV4.3-80.*)			
P 4.6-67 Indirect impacts associated with the interface between the preserved spineflower populations and planned development within the Newhall Ranch Specific Plan shall be avoided or minimized by establishing open space connections with Open Area, River Corridor, or High Country land use designations. In addition, buffers (i.e., setbacks from developed, landscaped, or other use areas) shall be established around portions of the delineated preserve(s) not connected to Open Area, the River Corridor or the High Country land use designations. The open space connections and buffer configurations shall take into account local hydrology, soils, existing and proposed adjacent land uses, the presence of non-native invasive plant species, and seed dispersal vectors. Open space connections shall be configured such that the spineflower preserves are connected to Open Area, River Corridor, or High Country land use designations to the extent practicable. Open space connections shall be of adequate size and configuration to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s).	Applicant	Review of Initial Study and Subdivision	1. LACDRP/CDFG
Open space connections for the spineflower preserve(s) shall be configured in consultation with the County and CDFG. Open space connections for the spineflower preserve(s) shall be established for the entire Specific Plan area in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs. For preserves and/or those portions of preserves not connected to Open Area, River Corridor, or High Country land use designations, buffers shall be established at variable distances of between 80 and 200 feet from the edge of development to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s).			2. LACDRP/CDFG

The buffer size/configuration shall be guided by the analysis set forth in the "*Review of Potential Edge Effects on the San Fernando Valley Spineflower* ," prepared by Conservation Biology Institute, January 19, 2000, and other sources of scientific information and analysis, which are available at the time the preserve(s) and buffers are established. Buffers for the spineflower preserve(s) shall be configured in consultation with the County and CDFG for the entire Specific Plan area. Buffers for the spineflower preserve(s) shall be established in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs.			3. Prior to Approval of Subdivision Maps
Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. No other development or disturbance of native habitat shall be allowed within the spineflower preserve(s) or buffer(s). The project applicant, or its designee, shall be responsible for revegetating open space connections and buffer areas of the Newhall Ranch spineflower preserve(s) to mitigate temporary impacts due to grading that will occur within portions of those open space connections and buffer areas. The impacted areas shall be reseeded with a native seed mix to prevent erosion, reduce the potential for invasive non-native plants, and maintain functioning habitat areas within the buffer area. Revegetation seed mix shall be reviewed and approved by the County and CDFG. (*This measure is implemented by the Mission Village mitigation measure MV4.3-23 and MV4.3-58 through MV4.3-80* .)			
SP 4.6-68 To protect the preserved Newhall Ranch spineflower populations, and to further reduce potential direct impacts to such populations due to unrestricted access, the project applicant, or its designee, shall erect and maintain temporary orange fencing and prohibitive signage around the Newhall Ranch preserve(s), open space connections and buffer areas, which are adjacent to areas impacted by proposed development prior to and during all phases of construction. The areas behind the temporary fencing shall not be used for the storage of any equipment, materials, construction debris, or anything associated with construction activities.	Applicant (Project Biologist)	Review of Initial Study, subdivision, and grading permit application	1. LACDRP/CDFG
Following the final phase of construction of any Newhall Ranch subdivision map adjacent to the Newhall Ranch spineflower preserve(s), the project applicant, or its designee, shall install and maintain permanent fencing along the subdivision tract bordering the preserve(s). Permanent signage shall be installed on the fencing along the preservation boundary to indicate that the fenced area is a biological preserve, which contains protected species and habitat, that access is restricted, and that trespassing and fuel modification are prohibited within the area. The permanent fencing shall be designed to allow wildlife movement.			2. LACDRP/CDFG
The plans and specifications for the permanent fencing and signage shall be approved by the County and CDFG prior to the final phase of construction of any Newhall Ranch subdivision map adjacent to a Newhall Ranch spineflower preserve(s). (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80* .)			3. Prior to Grading and Occupancy.

SP 4.6-69 Indirect impacts resulting from changes to hydrology (i.e., increased water runoff from surrounding development) at the interface between spineflower preserve(s) and planned development within the Newhall Ranch Specific Plan shall be avoided or mitigated to below a level of significance.	Applicant (Project Biologist)	Review of map subdivision	1. LACDPW
Achievement of this standard will be met through the documented demonstration by the project applicant, or its designee, that the storm drain system achieves pre development hydrological conditions for the Newhall Ranch spineflower preserve(s). To document such a condition, the project applicant, or its designee, shall prepare a study of the pre- and post-development hydrology, in conjunction with Newhall Ranch subdivision maps adjacent to spineflower preserve(s). The study shall be used in the design and engineering of a storm drain system that achieves pre development hydrological conditions. The study must conclude that proposed grade changes in development areas beyond the buffers will maintain pre-development hydrology conditions within the preserve(s). The study shall be approved by the Planning Director of the County, and the resulting conditions confirmed by CDFG.			2. LACDPW/CDFG
The storm drain system for Newhall Ranch subdivision maps adjacent to any spineflower preserves must be approved by the County prior to the initiation of any grading activities. (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80* .)			3. Prior to Approval of Subdivision Maps
SP 4.6-70 Consistent with the Spineflower Mitigation Area Overlay reflected in **Mitigation Measure 4.6-65**, direct impacts to known Newhall Ranch spineflower populations associated with proposed road construction or modifications to existing roadways shall be further assessed for proposed road construction at the Newhall Ranch subdivision map level, in conjunction with the tiered EIR required for each subdivision map. To avoid or substantially lessen direct impacts to known spineflower populations, Specific Plan roadways shall be redesigned or realigned, to the extent practicable, to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in **Mitigation Measures 4.6-66** and **4.6-67**. The project applicant, or its designee, acknowledges that that road redesign and realignment is a feasible means to avoid or substantially lessen potentially significant impacts on the now known Newhall Ranch spineflower populations. Road redesign or alignments to be considered at the subdivision map level include:	Applicant (Project Biologist)	Review of Initial Study and Subdivision	1. LACDRP
(a) Commerce Center Drive; (b) Magic Mountain Parkway; (c) Chiquito Canyon Road; (d) Long Canyon Road; (e) San Martinez Grande Road; (f) Potrero Valley Road; (g) Valencia Boulevard; and (h) Any other or additional roadways that have the potential to significantly impact known Newhall Ranch spineflower populations.			2. LACDRP/CDFG
Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch, unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80* .)			3. Prior to Approval of Subdivision Map

SP 4.6-71 Consistent with the Spineflower Mitigation Area Overlay reflected in **Mitigation Measure 4.6-65,** direct impacts to known Newhall Ranch spineflower populations shall be further assessed at the Newhall Ranch subdivision map level, in conjunction with the required tiered EIR process. To avoid or substantially lessen impacts to known spineflower populations at the subdivision map level, the project applicant, or its designee, may be required to adjust Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading to achieve the spineflower preserve and connectivity/preserve design/buffer standards set forth in **Mitigation Measures 4.6-66** and **4.6-67** for all future Newhall Ranch subdivision maps that encompass identified spineflower populations. (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80* .)	Applicant (Project Biologist)	Review of Initial Study and Subdivision	1. LACDRP 2. LACDRP/CDFG 3. Prior to Approval of Subdivision Maps
SP 4.6-72 A Fire Management Plan shall be developed to avoid and minimize direct and indirect impacts to the spineflower, in accordance with the adopted Newhall Ranch Resource Management Plan (RMP), to protect and manage the Newhall Ranch spineflower preserve(s) and buffers. The Fire Management Plan shall be completed by the project applicant, or its designee, in conjunction with approval of any Newhall Ranch subdivision map adjacent to a spineflower preserve. The final Fire Management Plan shall be approved by the County of Los Angeles Fire Department through the processing of subdivision maps.	Applicant (Project Biologist)	Review of Initial Study and Subdivision	1. LACFD
Under the final Fire Management Plan, limited fuel modification activities within the spineflower preserves will be restricted to selective thinning with hand tools to allow the maximum preservation of Newhall Ranch spineflower populations. No other fuel modification or clearance activities shall be allowed in the Newhall Ranch spineflower preserve(s). Controlled burning may be allowed in the future within the Newhall Ranch preserve(s) and buffers, provided that it is based upon a burn plan approved by the County of Los Angeles Fire Department and CDFG. The project applicant, or its designee, shall also be responsible for annual maintenance of fuel modification zones, including, but not limited to, removal of undesirable non-native plants, revegetation with acceptable locally indigenous plants and clearing of trash and other debris in accordance with the County of Los Angeles Fire Department. (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80* .)			2. LACFD/CDFG
			3. Prior to Approval of Subdivision Map

SP 4.6-73 At the subdivision map level, the project applicant, or its designee, shall design and implement project-specific design measures to minimize changes in surface water flows to the Newhall Ranch spineflower preserve(s) for all Newhall Ranch subdivision maps adjacent to the preserve(s) and buffers, and avoid and minimize indirect impacts to the spineflower. Prior to issuance of a grading permit for each such subdivision map, the project applicant, or its designee, shall submit for approval to the County plans and specifications that ensure implementation of the following design measures: (a) During construction activities, drainage ditches, piping or other approaches will be put in place to convey excess storm water and other surface water flows away from the Newhall Ranch spineflower preserve(s) and connectivity/preserve design/buffers, identified in **Mitigation Measures 4.6-66** and **4.6-67**;	Applicant (Project Biologist)	Review of Initial Study and subdivision	1. LACDRP/LACDPW
(b) Final grading and drainage design will be developed that does not change the current surface and subsurface hydrological conditions within the preserve(s); (c) French drains will be installed along the edge of any roadways and fill slopes that drain toward the preserve(s); (d) Roadways will be constructed with slopes that convey water flows within the roadway easements and away from the preserve(s); (e) Where manufactured slopes drain toward the preserve(s), a temporary irrigation system would be installed to the satisfaction of the County in order to establish the vegetation on the slope area(s). This system shall continue only until the slope vegetation is established and self sustaining;			2. LACDRP/LACDPW/CDFG
(f) Underground utilities will not be located within or through the preserve(s). Drainage pipes installed within the preserve(s) away from spineflower populations to convey surface or subsurface water away from the populations will be aligned to avoid the preserve(s) to the maximum extent practicable; and (g) Fencing or other structural type barriers that will be installed to reduce intrusion of people or domestic animals into the preserve(s) shall incorporate footing designs that minimize moisture collection. (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80* .)			3. Prior toApproval of Subdivision Maps
SP 4.6-74 A knowledgeable, experienced botanist/biologist, subject to approval by the County and CDFG, shall be required to monitor the grading and fence/utility installation activities that involve earth movement adjacent to the Newhall Ranch spineflower preserve(s) to avoid the incidental take through direct impacts of conserved plant species, and to avoid disturbance of the preserve(s). The biological monitor will conduct biweekly inspections of the project site during such grading activities to ensure that the mitigation measures provided in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section) are implemented and adhered to.	Monitoring Biologist	Bi-weekly site inspections and monthly monitoring reports as needed	1. LACDRP/LACDPW
Monthly monitoring reports, as needed, shall be submitted to the County verifying compliance with the mitigation measures specified in the adopted Newhall Ranch Mitigation Monitoring Program (Biota section).			2. LACDRP/LACDPW/CDFG
The biological monitor will have authority to immediately stop any such grading activity that is not in compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section), and to take reasonable steps to avoid the take of, and minimize the disturbance to, spineflower populations within the preserve(s). (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80.*)			3. Prior to Issuance of Construction Permit(s)

SP 4.6-75 The following measures shall be implemented to avoid and minimize indirect impacts to Newhall Ranch spineflower populations during all phases of project construction: (a) Water Control. Watering of the grading areas would be controlled to prevent discharge of construction water into the Newhall Ranch preserve(s) or on ground sloping toward the preserve(s). Prior to the initiation of grading operations, the project applicant, or its designee, shall submit for approval to the County an irrigation plan describing watering control procedures necessary to prevent discharge of construction water into the Newhall Ranch preserve(s) and on ground sloping toward the preserve(s).	Monitoring Biologist	Bi-weekly site inspections and monthly monitoring reports as needed	1. LACDRP/LACDPW
(b) Storm Water Flow Redirection. Diversion ditches would be constructed to redirect storm water flows from graded areas away from the Newhall Ranch preserve(s). To the extent practicable, grading of areas adjacent to the preserve(s) would be limited to spring and summer months (May through September) when the probability of rainfall is lower. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County a storm water flow redirection plan that demonstrates the flow of storm water away from the Newhall Ranch spineflower preserve(s).			2. LACDRP/LACDPW/CDFG
(c) Treatment of Exposed Graded Slopes. Graded slope areas would be trimmed and finished as grading proceeds. Slopes would be treated with soil stabilization measures to minimize erosion. Such measures may include seeding and planting, mulching, use of geotextiles and use of stabilization mats. Prior to the initiation of grading operations, the project applicant, or its designee, would submit for approval to the County the treatments to be applied to exposed graded slopes that would ensure minimization of erosion. (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80* .)			3. Prior to Issuance of Occupancy Permit(s)
SP 4.6-76 In conjunction with submission of the first Newhall Ranch subdivision map in either Mesas Village or that portion of Riverwood Village in which the San Martinez spineflower location occurs, the project applicant, or its designee, shall reassess project impacts, both direct and indirect, to the spineflower populations using subdivision mapping data, baseline data from the Newhall Ranch Final EIR and data from the updated plant surveys (see, Specific Plan EIR **Mitigation Measure 4.6-53**). This reassessment shall take place during preparation of the required tiered EIR for each subdivision map. If the reassessment results in the identification of new or additional impacts to Newhall Ranch spineflower populations, which were not previously known or identified, the mitigation measures set forth in this program, or a Fish and Game Code Section 2081 permit(s) issued by CDFG, shall be required, along with any additional mitigation required at that time. (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80* .)	Applicant (Project Biologist)	In conjunction with submission of the first subdivision map in either Mesas Village or that portion of Riverwood Village in which the San Martinez spineflower location occurs	1. LACDRP 2. LACDRP 3.Prior to Subdivision Map Approval

SP 4.6-77 Direct and indirect impacts to the preserved Newhall Ranch spineflower populations shall require a monitoring and management plan, subject to the approval of the County. The applicant shall consult with CDFG with respect to preparation of the Newhall Ranch spineflower monitoring/management plan. This plan shall be in place when the preserve(s) and connectivity/preserve design/buffers are established (see **Mitigation Measures 4.6-66** and **4.6-67**). The criteria set forth below shall be included in the plan. **Monitoring**. The purpose of the monitoring component of the plan is to track the viability of the Newhall Ranch spineflower preserve(s) and its populations, and to ensure compliance with the adopted Newhall Ranch Mitigation Monitoring Program (Biota section).	Applicant (Project Biologist)	Site surveys and annual reports as directed by this measure	1. LACDRP
The monitoring component of the plan shall investigate and monitor factors such as population size, growth or decline, general condition, new impacts, changes in associated vegetation species, pollinators, seed dispersal vectors, and seasonal responses. Necessary management measures will be identified. The report results will be sent annually to the County, along with photo documentation of the assessed site conditions.			2. LACDRP/CDFG
The project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, with the concurrence of CDFG, to conduct quantitative monitoring over the life of the Newhall Ranch Specific Plan. The botanist/biologist shall have a minimum of three years experience with established monitoring techniques and familiarity with Southern California flora and target taxa. Field surveys of the Newhall Ranch spineflower preserve(s) will be conducted each spring. Information to be obtained will include: (a) an estimate of the numbers of spineflowers in each population within the preserve(s); (b) a map of the extent of occupied habitat at each population; (c) establishment of photo monitoring points to aid in documenting long-term trends in habitat; (d) aerial photographs of the preserved areas at five year intervals; (e) identification of significant impacts that may have occurred or problems that need attention, including invasive plant problems, weed problems and fencing or signage repair; and (f) overall compliance with the adopted mitigation measures.		The length of the active management components set forth above shall be governed by attainment of successful management criteria	3. As necessary per the guidelines set forth in the measure
For a period of three years from Specific Plan re-approval, all areas of potential habitat on the Newhall Ranch site will be surveyed annually in the spring with the goal of identifying previously unrecorded spineflower populations. Because population size and distribution limits are known to vary depending on rainfall, annual surveys shall be conducted for those areas proposed for development in order to establish a database appropriate for analysis at the project-specific subdivision map level (rather than waiting to survey immediately prior to proceeding with the project-specific subdivision map process). In this way, survey results gathered over time (across years of varying rainfall) will provide information on ranges in population size and occupation. New populations, if they are found, will be mapped and assessed for inclusion in the preserve program to avoid impacts to the species.			
Monitoring/Reporting. An annual report will be submitted to the County and CDFG by December 31st of each year. The report will include a description of the monitoring methods, an analysis of the findings, effectiveness of the mitigation program, site photographs, and adoptive management measures, based on the findings. Any significant adverse impacts, signage, fencing or compliance problems identified during monitoring visits will be reported to the County and CDFG for corrective action by the project applicant, or its designee.			

Management. Based on the outcome of ongoing monitoring and additional project-specific surveys addressing the status and habitat requirements of the spineflower, active management of the Newhall Ranch spineflower preserve(s) will be required in perpetuity. Active management activities will be triggered by a downward population decline over 5 consecutive years, or a substantial drop in population over a 10-year period following County re-approval of the Specific Plan. Examples of management issues that may need to be addressed in the future include, but are not limited to, control of exotic competitive non-native plant species, herbivory predation, weed control, periodic controlled burns, or fuel modification compliance.			
After any population decline documented in the annual populations census following County re-approval of the Specific Plan, the project applicant, or its designee, shall be responsible for conducting an assessment of the ecological factor(s) that are likely responsible for the decline, and implement management activity or activities to address these factors where feasible. If a persistent population decline is documented, such as a trend in steady population decline persistent for a period of 5 consecutive years, or a substantial drop in population detected over a 10-year period, spineflower may be introduced in appropriate habitat and soils in the Newhall Ranch preserve(s), utilizing the bulk spineflower seed repository, together with other required management activity or activities. In connection with this monitoring component, the project applicant, or its designee, shall contract with a qualified botanist/biologist, approved by the County, to complete: (a) a study of the breeding and pollination biology of the spineflower, including investigation into seed physiology to assess parameters that may be important as			
management tools to guarantee self-sustainability of populations, which may otherwise have limited opportunity for germination; and (b) a population genetics study to document the genetic diversity of the Newhall Ranch spineflower population. The criteria for these studies shall be to develop data to make the Newhall Ranch spineflower management program as effective as possible. These studies shall be subject to approval by the County's biologist, with the concurrence of CDFG. These activities shall be undertaken by a qualified botanist/biologist, subject to approval by the County with the concurrence of CDFG. The project applicant, or its designee, shall be responsible for the funding and implementation of the necessary management activity or activities, as approved by the County and CDFG. The length of the active management components set forth above shall be governed by attainment of successful management criteria set forth in the plan rather than by a set number of years. (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80* .)			

SP 4.6-78 To the extent project-related direct and indirect significant impacts on spineflower cannot be avoided or substantially lessened through establishment of the Newhall Ranch spineflower preserve(s), and other avoidance, minimization, or other compensatory mitigation measures, a translocation and reintroduction program may be implemented in consultation with CDFG to further mitigate such impacts. Direct impacts (i.e., take) to occupied spineflower areas shall be fully mitigated at a 4:1 ratio. Impacts to occupied spineflower areas caused by significant indirect effects shall be mitigated at a 1:1 ratio.	Applicant (Project Biologist)	Review of Initial Study and subdivision	1. LACDRP/CDFG
Introduction of new spineflower areas will be achieved through a combination of direct seeding and translocation of the existing soil seed bank that would be impacted by grading. Prior to any development within, or disturbance to, spineflower populations, on-site and off-site mitigation areas shall be identified and seed and top soil shall be collected. One-third of the collected seed shall be sent to the Rancho Santa Ana Botanical Garden for storage. One third of the seed shall be sent to the USDA National Seed Storage Lab in Fort Collins, Colorado for storage. One third shall be used for direct seeding of the on-site and off-site mitigation areas.			2. LACDRP/CDFG
Direct seeding. Prior to the initiation of grading, the project applicant, or its designee, shall submit to the County a program for the reintroduction of spineflower on Newhall Ranch. The reintroduction program shall include, among other information: (a) location map with scale; (b) size of each introduction polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for seed collection and application; and (f) monitoring and reporting. The program shall be submitted to CDFG for input and coordination. The project applicant, or its designee, shall implement the reintroduction program prior to the initiation of grading. At least two candidate spineflower reintroduction areas will be created within Newhall Ranch and one candidate spineflower reintroduction area will be identified off site. Both on-site and off-site reintroduction areas will be suitable for the spineflower in both plant community and soils, and be located within the historic range of the taxon.			3. Prior to Issuance of Occupancy Permit(s)
Success criteria shall be included in the monitoring/management plan, with criteria for the germination, growth, and production of viable seeds of individual plants for a specified period. Although the reintroduction program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the reintroduction program.			
Translocation. Prior to the initiation of grading, the project applicant, or its designee, shall submit to the County a translocation program for the spineflower. Translocation would salvage the topsoil of spineflower areas to be impacted due to grading. Salvaged spineflower soil seed bank would be translocated to the candidate spineflower reintroduction areas. The translocation program shall include, among other information: (a) location map with scale; (b) size of each translocation polygon; (c) plans and specifications for site preparation, including selective clearing of competing vegetation; (d) site characteristics; (e) protocol for topsoil collection and application; and (f) monitoring and reporting. The translocation program shall be submitted to CDFG for input and coordination. Translocation shall occur within the candidate spineflower reintroduction areas on site and off site. Successful criteria for each site shall be included in the monitoring/management plan/with criteria for the germination and growth to reproduction of individual plants for the first year a specified period.			
Although the translocation program is experimental at this stage, the County considers such a program to be a feasible form of mitigation at this juncture based upon available studies. Botanists/biologists familiar with the ecology and biology of the spineflower would prepare and oversee the translocation program. (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80* .)			

SP 4.6-79. The project applicant, or its designee, shall engage in regular and ongoing consultation with the County and CDFG in connection with its ongoing agricultural operations in order to avoid or minimize significant direct impacts to the spineflower.	Applicant	Thirty (30) days advance written notice of proposed conversion to more intensive agricultural uses	1. LACDRP/CDFG
In addition, the project applicant, or its designee, shall provide 30 days advance written notice to the County and CDFG of the proposed conversion of its ongoing rangeland operations on Newhall Ranch to more intensive agricultural uses. The purpose of the advance notice requirement is to allow the applicant, or its designee, to coordinate with the County and CDFG to avoid or minimize significant impacts to the spineflower prior to the applicant's proposed conversion of its ongoing rangeland operations to more intensive agricultural uses. This coordination component will be implemented by or through the County's Department of Regional Planning and/or the Regional Manager of CDFG.			2. LACDRP/CDFG
Implementation will consist of the County and/or CDFG conducting a site visit of the proposed conversion area(s) within the 30-day period, and making a determination of whether the proposed conversion area(s) would destroy or significantly impact spineflower population in or adjacent to those areas. If it is determined that the conversion area(s) do not destroy or significantly impact spineflower populations, then the County and/or CDFG will authorize such conversion activities in the proposed conversion area(s). However, if it is determined that the conversion area(s) may destroy or significantly impact spineflower populations, then the County and/or CDFG will issue a stop work order to the applicant, or its designee.			
If such an order is issued, the applicant, or its designee, shall not proceed with any conversion activities in the proposed conversion area(s). However, the applicant, or the designee, may take steps to relocate the proposed conversion activities in an alternate conversion area(s). In doing so, the applicant, or its designee, shall follow the same notice and coordination provisions identified above. This conversion shall not include ordinary pasture maintenance and renovation or dry land farming operations consistent with rangeland management. (*This measure is implemented by the Mission Village mitigation measures MV4.3-58 through MV4.3-80* .)			3. As necessary
SP 4.6-80 Not applicable.			
MV 4.3-1 Temporary impacts from construction activities in the riverbed shall be restricted to the following areas of disturbance: (1) an 85-foot-wide zone that extends into the river from the base of the riprap or gunite bank protection where it intercepts the river bottom; (2) 100 feet on either side of the outer edge of a new bridge or bridge to be modified; (3) a 60-foot-wide corridor for utility lines; (4) 20-foot-wide temporary access ramps; and (5) 60-foot roadway width temporary construction haul routes. The locations of these temporary construction sites and the routes of all access roads shall be shown on maps submitted with the sub-notification letter submitted to the Corps and CDFG for individual project approval. Any variation from these limits shall be submitted, with a justification for a variation for Corps and CDFG approval.	Applicant (Project Biologist)	Construction Plan Review Field Verification	1. LACDRP/CDFG/ACOE
The construction plans should indicate what type of vegetation, if any, would be temporarily disturbed or removed and the post construction activities to facilitate revegetation of the temporarily impacted areas. The boundaries of the construction site and any temporary access roads within the riverbed shall be marked in the field with stakes and flagging. No construction activities, vehicular access, equipment storage, stockpiling, or significant human intrusion shall occur outside the work area and access roads.			2. CDFG/ACOE 3. Approval of Sub-Notification Letter by CDFG

MV 4.3-2 Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities that result in any disturbance to the banks or wetted channel, aquatic habitats within construction sites and access roads, as well as all aquatic habitats within 300 feet of construction sites and access roads, shall be surveyed by a qualified biologist for the presence of the unarmored threespine stickleback, arroyo chub, and Santa Ana sucker. The Corps and CDFG shall be notified at least 14 days prior to the survey and shall have the option of attending. The biologist shall file a written report of the survey with both agencies within 14 days of the survey and no later than 10 days prior to any construction work in the riverbed.	Applicant (Project Biologist)	Surveys conducted for unarmored threespine stickleback, arroyo chub, and Santa Ana sucker	1. LACDRP/CDFG/ACOE/ USFWS
If there is evidence that fish spawn has occurred in the survey area, then surveys shall cease unless otherwise authorized by USFWS. If surveys determine that gravid fish are present, that spawning has recently occurred, or that juvenile fish are present in the proposed construction areas, all activities within aquatic habitat will be suspended. Construction within aquatic habitats shall only occur when it is determined that juvenile fish are not present within the project area.		Written report shall be filed 10 days prior to any construction in riverbed	2. CDFG/ACOE/ USFWS
			3. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities that result in any disturbance to the banks or wetted channel

MV 4.3-3 Conduct focused surveys for California red-legged frogs. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed at the appropriate season for California red-legged frogs. The applicant shall contract with a qualified biologist to conduct focused surveys for California red-legged frogs. If detected in or adjacent to the project area, no work will be authorized within 500 feet of occupied habitat until the applicant provides concurrence from the USFWS to CDFG and Corps. If present, the applicant shall implement measures required by the USFWS Biological Opinion for California red-legged frog that either supplement or supercede these measures. If present, the applicant shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG.	Applicant (Project Biologist)	Conduct Focused Surveys for California Red-legged Frogs	1. LACDRP/CDFG/USFWS
(1) The applicant shall retain a qualified biologist with demonstrated expertise with California red-legged frogs to monitor all construction activities in potential red-legged frog habitat and assist the applicant in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of California red-legged frogs.		If present, an monitoring plan shall be developed and implemented	2. CDFG/USFWS
(2) Prior to the onset of construction activities, the applicant shall provide all personnel who will be present on work areas within or adjacent to the project area the following information: a. A detailed description of the California red-legged frogs, including color photographs; b. The protection the California red-legged frog receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act; c. The protective measures being implemented to conserve the California red-legged frogs and other species during construction activities associated with the proposed project; and d. A point of contact if California red-legged frogs are observed.			3. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities
(3) All trash that may attract predators of the California red-legged frogs will be removed from work sites or completely secured at the end of each work day. (4) Prior to the onset of any construction activities, the applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the California red-legged frogs and the actions taken to reduce impacts to this species. Because California red-legged frogs may occur in various locations during different seasons of the year, the applicant, USFWS, and authorized biologist will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on California red-legged frogs. The goal of this effort is to reduce the level of mortality of California red-legged frogs during construction.			

(5) Work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG. All workers will be advised that equipment and vehicles must remain within the fenced work areas. (6) The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any California red-legged frogs from within the fenced area to suitable habitat outside of the fence. If California red-legged frogs are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS/CDFG.			
(7) Fencing to exclude California red-legged frogs will be at least 24 inches in height. (8) The type of fencing must be approved by the authorized biologist and the USFWS/CDFG. (9) Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of California red-legged frogs may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the applicant in scheduling its work activities accordingly. (10) If California red-legged frogs are found within an area that has been fenced to exclude California red-legged frogs, activities will cease until the authorized biologist moves the California red-legged frog(s).			
(11) If California red-legged frogs are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the California red-legged frogs. The authorized biologist in consultation with USFWS/CDFG will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS. (12) Any California red-legged frogs found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, access to deep perennial pools, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.			
(13) The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed. (14) Staging areas for all construction activities will be located on previously disturbed upland areas, if possible, designated for this purpose. All staging areas will be fenced. (15) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.			

MV 4.3-4 Focused surveys for arroyo toad shall be conducted. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed at the appropriate season for arroyo toad. The applicant shall contract with a qualified biologist to conduct focused surveys for arroyo toad. If detected in or adjacent to the project area, no work will be authorized within 500 feet of occupied habitat until the applicant provides concurrence from the USFWS to CDFG and the Corps. The applicant shall implement measures required by the USFWS Biological Opinion that either supplement or supercede these measures. If arroyo toads are determined to be present, the applicant shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG:	Applicant (Project Biologist)	Receipt and Review of Survey Report for the Arroyo Toad	1. LACDRP/USFWS/CDFG
(1) The applicant shall retain a qualified biologist with demonstrated expertise with arroyo toads to monitor all construction activities in potential arroyo toad habitat and assist the applicant in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of arroyo toad.			2. USFWS/CDFG
(2) Prior to the onset of construction activities, the applicant shall provide all personnel who will be present on work areas within or adjacent to the project area the following information: a. A detailed description of the arroyo toad, including color photographs; b. The protection the arroyo toad receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act; c. The protective measures being implemented to conserve the arroyo toad and other species during construction activities associated with the proposed project; and d. A point of contact if arroyo toads are observed.		Field Monitoring	3. Prior to initiating construction within the riverbed as well as all riverbed areas within 1,000 feet of construction sites and access roads
(3) All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each work day. (4) Prior to the onset of any construction activities, the applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, the applicant, USFWS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads. The goal of this effort is to reduce the level of mortality of arroyo toads during construction.			
The parties realize that, if arroyo toads are present, complete prevention of all mortality is likely not possible because some arroyo toads may occur anywhere within suitable habitat during any given season; the detection of every individual over large areas is impossible because of the small size, fossorial habits, and cryptic coloration of the arroyo toad. (5) Where construction can occur in habitat where arroyo toads are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG. All workers will be advised that equipment and vehicles must remain within the fenced work areas.			

(6) The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any arroyo toads from within the fenced area to suitable habitat outside of the fence. If arroyo toads are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS/CDFG. (7) Fencing to exclude arroyo toads will be at least 24 inches in height. (8) The type of fencing must be approved by the authorized biologist and the USFWS/CDFG.			
(9) Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of arroyo toads may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the applicant in scheduling its work activities accordingly. (10) If arroyo toads are found within an area that has been fenced to exclude arroyo toads, activities will cease until the authorized biologist moves the arroyo toads.			
(11) If arroyo toads are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the arroyo toads. The authorized biologist in consultation with USFWS/CDFG will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS. (12) Any arroyo toads found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.			
(13) The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed. (14) Staging areas for all construction activities will be located on previously disturbed upland areas designated for this purpose. All staging areas will be fenced within potential toad habitat. (15) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.			
(16) Drift fence/pitfall trap surveys will be implemented in toad sensitive areas prior to construction in an effort to reduce potential mortality to this species. Prior to any construction activities in the project area, silt fence shall be installed completely around the proposed work area and a qualified biologist should conduct a preconstruction/clearance survey of the work area for arroyo toads. Any toads found in the work area should be relocated to suitable habitat. The silt fence shall be maintained for the duration of the work activity. (17) The applicant shall restrict work to daylight hours, except during an emergency, in order to avoid nighttime activities when arroyo toads may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area.			

MV 4.3-5 Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, bank protection, trails, and/or other construction activities, all construction sites and access roads within the riverbed as well as all riverbed areas within 500 feet of construction sites and access roads shall be surveyed at the appropriate season for southwestern pond turtle. Focused surveys shall consist of a minimum of four daytime surveys, to be completed between April 1 and June 1. The survey schedule may be adjusted in consultation with CDFG to reflect the existing weather or stream conditions. The applicant shall develop a Plan to address the relocation of southwestern pond turtle.	Applicant (Project Biologist)	Receipt and Review of Survey and Relocation Plan for the Southwestern Pond Turtle The Plan shall be approved by CDFG 60 days	1. LACDRP/CDFG
The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for this species; identify the locations where more intensive efforts should be conducted; identify the habitat and conditions in the proposed relocation site(s); the methods that would be utilized for trapping and relocating individuals; and provide for the documentation/recordation of the numbers of animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground-disturbing activities within potentially occupied habitat. If southwestern pond turtles are detected in or adjacent to the project, nesting surveys shall be conducted.			2. CDFG
Focused surveys for evidence of southwestern pond turtle nesting shall be conducted in, or adjacent to, the project when suitable nesting habitat exists within 1,300 feet of occupied habitat in an area where project-related ground disturbance will occur (e.g., development, ground disturbance). If both of those conditions are met, a qualified biologist shall conduct focused, systematic surveys for southwestern pond turtle nesting sites. The survey area shall include all suitable nesting habitat within 1,300 feet of occupied habitat in which project-related ground disturbance will occur. This area may be adjusted based on the existing topographical features on a case-by-case basis with the approval of CDFG. Surveys will entail searching for evidence of pond turtle nesting, including remnant eggshell fragments, which may be found on the ground following nest depredation.			3. Prior to initiating construction within the riverbed as well as all riverbed areas within 500 feet of construction sites and access roads
If a southwestern pond turtle nesting area would be adversely impacted by construction activities, the applicant shall avoid the nesting area. If avoidance of the nesting area is determined to be infeasible, the authorized biologist shall coordinate with CDFG to identify if it is possible to relocate the pond turtles. Eggs or hatchlings shall not be moved without written authorization from CDFG. The qualified biologist shall be present during all activities immediately adjacent to or within habitat that supports populations of southwestern pond turtle. Clearance surveys for pond turtles shall be conducted within 500 feet of potential habitat by the authorized biologist prior to the initiation of construction each day. The resume of the proposed biologist will be provided to CDFG for approval prior to conducting the surveys.			

MV 4.3-7 Prior to construction the applicant shall develop a relocation plan for coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch nosed snake. The Plan shall include but not be limited to the timing and location of the surveys that would be conducted for each species; identify the locations where more intensive efforts should be conducted; identify the habitat and conditions in the proposed relocation site(s); the methods that would be utilized for trapping and relocating the individual species; and provide for the documentation/recordation of the species and number of the animals relocated. The Plan shall be submitted to CDFG for approval 60 days prior to any ground disturbing activities within potentially occupied habitat.	Applicant (Project Biologist)	Receipt and Review of Relocation Plan for Coast Horned Lizard, Silvery Legless Lizard, Coastal Western Whiptail, Rosy Boa, San Bernardino Ringneck Snake, and Coast Patch-Nosed Snake	1. LACDRP/CDFG
The Plan shall include the specific survey and relocation efforts that would occur for construction activities that occur both during the activity period of the special status species (generally March to November) and for periods when the species may be present in the work area but difficult to detect due to weather conditions (generally December through February). Thirty days prior to construction activities in coastal scrub, chaparral, oak woodland, riparian habitats, or other areas supporting these species qualified biologists shall conduct surveys to capture and relocate individual coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, and coast patch nosed snake in order to avoid or minimize take of these special status species.			2. CDFG
The plan shall require a minimum of three (3) surveys conducted during the time of year/day when each species is most likely to be observed. Individuals shall be relocated to nearby undisturbed areas with suitable habitat. If construction is scheduled to occur during the low activity period (generally December through February) the surveys shall be conducted prior to this period if possible and exclusion fencing shall be placed to limit the potential for re colonization of the site prior to construction. The qualified biologist will be present during ground-disturbing activities immediately adjacent to or within habitat that supports populations of these species. Clearance surveys for special status reptiles shall be conducted by a qualified biologist prior to the initiation of construction each day.		At least 60 days prior to any ground disturbing activities within potentially occupied habitat	3. Approval of Sub-Notification Letter by CDFG
Results of the surveys and relocation efforts shall be provided to CDFG in the annual mitigation status report. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.			
MV 4.3-8 During any stream diversion or culvert installation activity, a qualified biologist(s) shall be present and shall patrol the areas within, upstream, and downstream of the work area. The biologists shall inspect the diversion and inspect for stranded fish or other aquatic organisms. Under no circumstances shall the unarmored threespine stickleback be collected or relocated, unless USFWS personnel or their agents implement this measure. Any event involving stranded fish shall be recorded and reported to CDFG and USFWS within 24 hours.	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG/USFWS 2. CDFG/USFWS 3. During Stream Diversion or Culvert Installation Activity

MV 4.3-9 Temporary bridges, culvert crossings, or other feasible methods of providing access across the river shall be constructed outside of the winter season and not during periods when spawning is occurring. Prior to the construction of any temporary or permanent crossing of the Santa Clara River, the applicant shall develop a Stream Crossing and Diversion Plan. The plan shall include the following elements: the timing and methods for pre-construction aquatic species surveys; a detailed description of the diversion methods (e.g., berms shall be constructed of on site alluvium materials of low silt content, inflatable dams, sand bags, or other approved materials); special-status species relocation; fish exclusion techniques, including the use of block netting and fish relocation; methods to maintain fish passage during construction; channel habitat enhancement, including the placement of vegetation, rocks, and boulders to produce riffle habitat; fish stranding surveys; and the techniques for the removal of crossings prior to winter storm flows. The Plan shall be submitted to the USFWS and CDFG for approval at least 30 days prior to implementation.	Applicant (Project Biologist)	Review and Approval of a Stream Crossing and Diversion Plan At least 30 days prior to Implementation of Plan and prior to the construction of any temporary or permanent crossing of the Santa Clara River	1. LACDRP/CDFG/ACOE/ USFWS
If adult special-status fishes are present and spawning has not occurred, they shall be relocated prior to the diversion or crossing. Block nets of 0.125-inch woven mesh will be set upstream and downstream. On days with possible high temperature or low humidity (temperatures in excess of 80° F), work will be done in the early morning hours, as soon as sufficient light is available, to avoid exposing fishes to high temperatures and/or low humidity.			2. CDFG/ACOE/ USFWS
If high temperatures are present, the fishes will be herded to downstream areas past the block net. Once the fishes have been excluded by herding, a USFWS staff member or his or her agents shall inspect the site for remaining or stranded fish. A USFWS staff member or his or her agents shall relocate the fish to suitable habitat outside the project area (including those areas potentially subject to high turbidity). During the diversion/relocation of fishes, the USFWS or his or her agents shall be present at all times.			3. Approval of Sub-Notification Letter by CDFG
MV 4.3-10 Installation of bridges, culverts, or other structures shall not impair the movement of fish and aquatic life. Bottoms of temporary culverts shall be placed at or below channel grade. Bottoms of permanent culverts shall be placed below channel grade. Culvert crossings shall include provisions for a low flow channel where velocities are less than 2 feet per second to allow fish passage.	Applicant (Project Biologist)	Review of Construction Plan and Field Verification	1. LACDRP/CDFG 2. CDFG 3. Prior to Any River Crossings or Bridge Construction

MV 4.3-11 a. Stream diversion bypass channels: Stream diversion bypass channels will be constructed when the active wetted channel is within the work zone. Diversion bypass channels will be built in accordance with MV 4.3-9 and in consultation with CDFG/USFWS. Equipment shall not be operated in areas of ponded or flowing water unless authorized by CDFG/USFWS. The diversion channel shall be of a width and depth comparable to the natural river channel. In all cases where flowing water is diverted from a segment of the stream channel, the bypass channel will be constructed prior to the diversion of the active stream. The bypass channel will be constructed prior to diverting the stream, beginning in the downstream area and continuing in an upstream direction. Where feasible and in consultation with CDFG/USFWS, the configuration of the diversion channel will be curved (sinuous) with multiple sets of obstructions (i.e., boulders, large logs, or other CDFG/USFWS-approved materials) placed in the channel at the point of each curve (i.e., on alternating sides of the channel).	Applicant (Restoration Ecologist)	Field Monitoring	1. LACDRP/CDFG/ACOE/USFWS
If emergent aquatic vegetation is present in the original channel, the applicant will transplant suitable vegetation into the diversion channel and on the banks prior to or at the time of the water diversion. A qualified restoration ecologist will supervise the construction of the diversion channels on site. The integrity of the channel and diversion shall be maintained throughout the intended diversion period. Channel bank or barrier construction shall be adequate to prevent seepage into or from the work area. Construction of diversion channels shall not occur if surveys determine that gravid fish are present, spawning has recently occurred, or juvenile fish are present in the proposed construction areas.			2. CDFG/ACOE/USFWS
At the conclusion of the diversion, either at the commencement of the winter season, or the completion of construction, the applicant will coordinate with CDFG/USFWS to determine if the diversion should be left in place or the stream returned to the original channel. If CDFG/USFWS determine the stream should be diverted to the original channel, the original channel will be modified prior to re-diversion (i.e., while dry) to construct curves (sinuosity) into that channel, including the placement of obstructions (i.e., boulders, large logs, or other CDFG/USFWS-approved materials). The original channel will be replanted with emergent vegetation as the diversion channel was planted. If the diversion channel is abandoned, the boulders will remain in place.			3. Prior to Construction Activities in an Active Wetted Channel
b. Dewatering: Construction dewatering in close proximity to stream flow shall implement the following: Assess local stream and groundwater conditions, including flow depths, groundwater elevations, and anticipated dewatering cone of influence (radius of draw down). Assess surface water elevations upstream, adjacent to, and downstream of the extraction points, to assess any critical flow regimes susceptible to excessive draw down and therefore fish stranding issues.			
Assess surface water elevations downstream of the discharge locations (if discharge is proposed to the flowing stream) to assess any flow regimes and overbank areas that may be susceptible to flooding and therefore fish stranding at the cessation of discharge. Discharge locations shall also be assessed for potential channel bed erosion from dewatering discharge, and appropriate BMPs must be implemented to prevent excessive erosion or turbidity in the discharge.			

The information above shall be summarized and provided in a plan approved by CDFG and Corps. Fish shall be excluded from any artificial flowing channels from dewatering discharge. Methods to ensure separation may include, but are not limited to: block netting at the confluence; creation of a physical drop greater than 4 inches at the confluence; or maintaining a velocity range unsuitable for fish passage, such as a berm at the confluence with small diameter pipes for discharge.			
MV 4.3-12 Slow-moving water habitats shall be constructed upstream and downstream of any river crossing or bridge construction area to provide refuge for special-status fishes during construction. Where feasible and in consultation with CDFG and USFWS, the applicant shall enhance slow-moving water habitats for each linear foot disturbed by hand-excavating shallow side channels and placing multiple sets of obstructions (e.g., boulders, large logs, or other CDFG- and USFWS-approved materials) in the channel.	Applicant (Restoration Ecologist)	Enhancement of Slow-Moving Water Habitats	1. LACDRP/CDFG/USFWS 2. CDFG/USFWS
		Field Verification	3. Prior to Any River Crossings or Bridge Construction
MV 4.3-13 Water containing mud, silt, or other pollutants from construction activities shall not be allowed to enter a flowing stream or be placed in locations that may be subject to normal storm flows during periods when storm flows can reasonably be expected to occur.	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG 2. CDFG 3. During Construction
MV 4.3-14 Thirty days prior to construction activities, a qualified biologist shall conduct a pre construction survey for mountain lion natal dens. The survey area shall include the construction footprint and the area within 2,000 feet of the project disturbance boundaries. Should an active natal den be located, the applicant shall cease work within 2,000 feet and inform CDFG within 24 hours. No construction activities shall occur in the 2,000-foot buffer until a qualified biologist in consultation with CDFG establishes an appropriate setback from the den that would not adversely affect the successful rearing of the cubs. No construction activities or human intrusion shall occur within the established setback until the cubs have been successfully reared or the cats have left the area.	Applicant (Project Biologist)	Conduct mountain lion Surveys	1. LACDRP/CDFG 2. CDFG 3. Within 30 Days of Ground Disturbance Activities

MV 4.3-15 Within 30 days of ground-disturbing activities associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically March through August in the project region, or as determined by a qualified biologist), the applicant shall have weekly surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone. Pre-construction surveys shall include nighttime surveys to identify active rookery sites. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 7 days prior to initiation of disturbance work. If ground-disturbing activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than 7 days will have elapsed between the survey and ground-disturbing activities.	Applicant (Project Biologist)	Conduct Bird Surveys	1. LACDRP/CDFG
If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist in consultation with CDFG, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. In the event that golden eagles establish an active nest in the River Corridor SMA/SEA 23, the buffers will be established in consultation with CDFG. Potential golden eagle nesting will be reported to CDFG within 24 hours. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts to these nests occur. Results of the surveys shall be provided to CDFG in the annual mitigation status report.			2. CDFG
For listed riparian songbirds (least Bell's vireo, southwestern willow flycatcher, yellow-billed cuckoo) USFWS protocol surveys shall be conducted. If active nests are found, clearing and construction within 300 feet of the nest shall be postponed or halted, at the discretion of the biologist in consultation with CDFG and USFWS, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. If no active nests are observed, construction may proceed. If active nests are found, work may proceed provided that construction activity is located at least 300 feet from active nests (or as authorized through the context of the Biological Opinion and 2081b Incidental Take Permit). This buffer may be adjusted provided noise levels do not exceed 60 dB(A) hourly Leq at the edge of the nest site as determined by a qualified biologist in coordination with a qualified acoustician.			3. Within 30 Days of Ground Disturbance Activities
If the noise meets or exceeds the 60 dB(A) Leq threshold, or if the biologist determines that the construction activities are disturbing nesting activities, the biologist shall have the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) Leq hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. The qualified biologist shall be responsible for documenting the results of the surveys and the ongoing monitoring and for reporting these results to CDFG and USFWS.			

For coastal California gnatcatcher, the applicant shall conduct USFWS protocol surveys in suitable habitat within the project area and all areas within 500 feet of access or construction-related disturbance areas. Suitable habitats, according to the protocol, include "coastal sage scrub, alluvial fan, chaparral, or intermixed or adjacent areas of grassland and riparian habitats." A permitted biologist shall perform these surveys according to the USFWS' (1997a) Coastal California Gnatcatcher Presence/Absence Survey Guidelines. If a territory or nest is confirmed, the USFWS and CDFG shall be notified immediately. If present, a 500-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. No project activities may occur in these areas unless otherwise authorized by USFWS and CDFG. Construction activities in suitable gnatcatcher habitat will be monitored by a full-time qualified biologist. The monitoring shall be of a sufficient intensity to ensure that the biologist could detect the presence of a bird in the construction area.			
MV 4.3-16 Thirty days prior to construction activities in grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for San Diego black-tailed jackrabbit and San Diego desert woodrat.	Applicant (Project Biologist)	Conduct San Diego Black-tailed Jackrabbit and San Diego Desert Woodrat Surveys Surveys shall be conducted 30 days prior to construction activities	1. LACDRP/CDFG
If San Diego black-tailed jackrabbits are present, non-breeding rabbits shall be flushed from areas to be disturbed. Dens, depressions, nests, or burrows occupied by pups shall be flagged and ground-disturbing activities avoided within a minimum of 200 feet during the pup-rearing season (February 15 through July 1). This buffer may be reduced based on the location of the den upon consultation with CDFG. Occupied maternity dens, depressions, nests, or burrows shall be flagged for avoidance, and a biological monitor shall be present during construction. If unattended young are discovered, they shall be relocated to suitable habitat by a qualified biologist. The applicant shall document all San Diego black-tailed jackrabbit identified, avoided, or moved and provide a written report to CDFG within 72 hours. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.			2. CDFG
If active San Diego desert woodrat nests (stick houses) are identified within the disturbance zone or within 100 feet of the disturbance zone, a fence shall be erected around the nest site adequate to provide the woodrat sufficient foraging habitat at the discretion of the qualified biologist in consultation with CDFG. Clearing and construction within the fenced area will be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. If avoidance is not possible, the applicant will take the following sequential steps: (1) all understory vegetation will be cleared in the area immediately surrounding active nests followed by a period of one night without further disturbance to allow woodrats to vacate the nest,			3. 30 days Prior to Construction Activities in Suitable Habitat
(2) each occupied nest will then be disturbed by a qualified wildlife biologist until all woodrats leave the nest and seek refuge off site, and (3) the nest sticks shall be removed from the project site and piled at the base of a nearby hardwood tree (preferably a coast live oak or California walnut). Relocated nests shall not be spaced closer than 100 feet apart, unless a qualified wildlife biologist has determined that a specific habitat can support a higher density of nests. The applicant shall document all woodrat nests moved and provide a written report to CDFG. All woodrat relocation shall be conducted by a qualified biologist in possession of a scientific collecting permit.			

MV 4.3-17 Thirty days prior to construction activities in grassland, scrub, chaparral, oak woodland, riverbank, and agriculture habitats, or other suitable habitat a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for American badger.	Applicant (Project Biologist)	Conduct American Badger Surveys Surveys shall be conducted 30 days prior to construction activities	1. LACDRP/CDFG
If American badgers are present, occupied habitat shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during the pup-rearing season (February 15 through July 1) and a minimum 200 foot buffer established. This buffer may be reduced based on the location of the den upon consultation with CDFG. Maternity dens shall be flagged for avoidance, identified on construction maps, and a qualified biologist shall be present during construction. If avoidance of a non-maternity den is not feasible, badgers shall be relocated either by trapping or by slowly excavating the burrow (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more that 4 inches at a time) before or after the rearing season (February 15 through July 1). Any relocation of badgers shall occur only after consultation with CDFG. A written report documenting the badger removal shall be provided to CDFG within 30 days of relocation. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.			2. CDFG 3. 30 Day Prior to Construction Activities in Suitable Habitat

MV 4.3-18 No earlier than 30 days prior to the commencement of construction activities, a pre construction survey shall be conducted by a qualified biologist to determine if active roosts of special status bats are present on or within 300 feet of the project disturbance boundaries. Should an active maternity roost be identified (in California, the breeding season of native bat species is generally from April 1 through August 31), the roost shall not be disturbed and construction within 300 feet shall be postponed or halted, until the roost is vacated and juveniles have fledged. Surveys shall include rocky outcrops, caves, structures, and large trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities). Trees and rocky outcrops shall be surveyed by a qualified bat biologist (i.e., a biologist holding a CDFG collection permit and a Memorandum of Understanding with CDFG allowing the biologist to handle bats).	Applicant (Project Biologist)	Conduct Special-status Surveys Surveys shall be conducted not earlier than 30 days prior to construction activities	1. LACDRP/CDFG
If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed) by the project. If avoidance of the maternity roost must occur, the bat biologist shall survey (through the use of radio telemetry or other CDFG approved methods) for nearby alternative maternity colony sites. If the bat biologist determines in consultation with and with the approval of CDFG that there are alternative roost sites used by the maternity colony and young are not present then no further action is required. If a maternity roost will be impacted by the project, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the project site no less than three months prior to the eviction of the colony.			2. CDFG
Large concrete walls (e.g., on bridges) on south or southwestern slopes that are retrofitted with slots and cavities are an example of structures that may provide alternative potential roosting habitat appropriate for maternity colonies. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. CDFG shall also be notified of any hibernacula or active nurseries within the construction zone. If non-breeding bat hibernacula are found in trees scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted, under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). In situations requiring one-way doors, a minimum of one week shall pass after doors are installed and temperatures should be sufficiently warm for bats to exit the roost because bats do not typically leave their roost daily during winter months in southern coastal California.			3. Within 30 days of Construction Activities in suitable habitat
This action should allow all bats to leave during the course of one week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in the judgment of the qualified bat biologist in consultation with CDFG shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal). These actions should allow bats to leave during nighttime hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. If an active maternity roost is located on the project site, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (i.e., prior to March 1) or after young are flying (i.e., after July 31) using the exclusion techniques described above.			

MV 4.3-19 Any common or special-status species bat day roost sites found by a qualified biologist during pre-construction surveys conducted per MV 4.3-18, to be directly (within project disturbance footprint) or indirectly (within 300 feet of project disturbance footprint) impacted are to be mitigated with creation of artificial roost sites. The project applicant shall establish (an) alternative roost site(s) within suitable preserved open space located at an adequate distance from sources of human disturbance.	Applicant (Project Biologist)	Creation of Artificial Roost site	1. LACDRP/CDFG 2. CDFG 3. Prior to Construction Activities in suitable habitat
MV 4.3-20 Thirty days prior to construction activities, a qualified biologist shall conduct CDFG protocol surveys to determine whether the burrowing owl is present at the site. The surveys shall consist of three site visits and shall be conducted in areas dominated by field crops, disturbed habitat, grasslands, and along levee locations, or if such habitats occur within 500 feet of a construction zone. If located, occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. If the burrowing owl is detected but nesting is not occurring, construction work can proceed after any owls have been evacuated from the site using CDFG approved burrow closure procedures and after alternative nest sites have been provided in accordance with the CDFG Staff Report on Burrowing Owl Mitigation (10-17-95).	Applicant (Project Biologist)	Conduct Burrowing Owl Surveys Surveys shall be conducted 30 days prior to construction activities	1. LACDRP/CDFG
Unless otherwise authorized by CDFG, a 500-foot buffer, within which no activity will be permissible, will be maintained between project activities and nesting burrowing owls during the nesting season. This protected area will remain in effect until August 31 or at CDFG's discretion and based upon monitoring evidence, until the young owls are foraging independently. Results of the surveys and relocation efforts shall be provided to CDFG in the annual mitigation status report.			2. CDFG 3. 30 Days Prior to Construction Activities
MV 4.3-21 Waste and recycling receptacles that discourage foraging by wildlife species adapted to urban environments shall be installed in common areas and parks throughout the Mission Village site.	Applicant	Field Verification	1. LACDRP 2. LACDRP 3. Prior to Issuance of Occupancy Permits
MV 4.3-22 All oaks that will not be removed that are regulated under CLAOTO with driplines within 50 feet of land clearing (including brush clearing) or areas to be graded shall be enclosed in a temporary fenced zone for the duration of the clearing or grading activities. Fencing shall extend to the root protection zone (i.e., the area at least 15 feet from the trunk or 5 feet beyond the drip line, whichever distance is greater). No parking or storage of equipment, solvents, or chemicals that could adversely affect the trees shall be allowed within 25 feet of the trunk at any time. Removal of the fence shall occur only after the project arborist or qualified biologist confirms the health of preserved trees.	Applicant (Project Biologist)	Field Verification	1. LA County Forester 2. LA County Forester 3. During Grading and All Phases of Construction

MV 4.3-23 Mitigation Measures SP 4.6-1 through SP 4.6-16 specify requirements for riparian mitigation conducted in the High Country SMA/SEA 20, Salt Creek area, and Open Area. The applicant will prepare and implement a plan for mitigation of both riparian and upland habitats (such as riparian adjacent big sagebrush scrub), and incorporates these Mitigation Measures (SP 4.6-1 through SP 4.6-16). A Comprehensive Mitigation Implementation Plan (CMIP) has been developed by Applicant that provides an outline of mitigation to offset impacts. The CMIP demonstrates the feasibility of creating the required mitigation acreage to offset project impacts (see MV 4.3-31). However, the CMIP does not identify mitigation actions specifically for impacts to waters of the United States. But since these waters are a subset of CDFG jurisdiction, the applicable Corps mitigation requirements would be met or exceeded.	Applicant (Project Biologist)	Wetland Mitigation Plans and Upland Habitat Mitigation Plans	1. ACOE, CDFG, LACDRP
Detailed riparian/wetland mitigation plans, in accordance with the CMIP, shall be submitted to, and are subject to the approval of, the Corps and CDFG as part of the sub-notification letters for individual projects. Individual project submittals shall include applicable CMIP elements, complying with the requirements outlined below. The detailed wetlands mitigation plan shall specify, at a minimum, the following: (1) the location of mitigation sites; (2) site preparation, including grading, soils preparation, irrigation installation, (2a) the quantity (seed or nursery stock) and species of plants to be planted (all species to be native to region); (3) detailed procedures for creating additional vegetation communities; (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the enhancement/restoration area;			2. ACOE, CDFG
(6) a list of criteria by which to measure success of the mitigation sites (e.g., percent cover and richness of native species, percent survivorship, establishment of self-sustaining native plantings, maximum allowable percent of non-native species); (7) measures to exclude unauthorized entry into the creation/enhancement areas; and (8) contingency measures in the event that mitigation efforts are not successful. The detailed wetlands mitigation plans shall also classify the biological value (as "high," "moderate," or "low") of the vegetation communities to be disturbed as defined in these conditions, or may be based on an agency-approved method (e.g., Hybrid Assessment of Riparian Communities [HARC]). The biological value shall be used to determine mitigation replacement ratios required under MV 4.3-31 and MV 4.3-39.			3. Approval of Sub-Notification Letters
The detailed wetlands mitigation plans shall provide for the 3:1 replacement of any Southern California black walnut to be removed from the riparian corridor for individual projects. The plan shall be subject to the approval of the CDFG and the Corps and approved prior to the impact to riparian resources. MV 4.3-33 describes that the functions and values will be assessed for the riparian areas that will be removed, and MV 4.3-31 and MV 4.3-39 describe the replacement ratios for the habitats that will be impacted.			
MV 4.3-24 Approximately 616.3 acres of coastal scrub shall be preserved on site within Open Area and/or off site within the High Country SMA/SEA 20, the Salt Creek area, or the River Corridor SMA/SEA 23 within the Specific Plan area to offset impacts associated with Mission Village. This measure ensures that preserved areas will be part of a greater managed preserved system of numerous natural vegetation communities meant to support both common and special-status widllife species. These areas support the same types of habitat that would be lost through construction and would be further enhanced through management and monitoring activities.	Applicant (Project Biologist)	Submit Offer to Dedicate	1. LACDRP/CDFG 2. LACDRP/CDFG 3. Approval of Sub-Notification Letters

MV 4.3-25 Prior to ground disturbance, construction, or site preparation activities, the applicant shall retain the services of a qualified biologist to conduct pre-construction surveys for western spadefoot toad within all portions of the project site containing suitable breeding habitat. Surveys shall be conducted during a time of year when the species could be detected (e.g., the presence of rain pools). If western spadefoot toad is identified on the project site, the following measures will be implemented: (1) Under the direct supervision of the qualified biologist, western spadefoot toad habitat shall be created within suitable natural sites on the Specific Plan site outside of the proposed development envelope. The amount of occupied breeding habitat to be impacted by the project shall be replaced at a 2:1 ratio. The actual relocation site design and location shall be approved by CDFG. The location shall be in a suitable habitat as far away as feasible from any of the homes and roads to be built.	Applicant (Project Biologist)	Pre-Construction Surveys for the Western Spadefoot Toads Monitor Relocation Sites for Five (5) Years and Review of Annual Monitoring Report	1. LACDRP/CDFG
The relocation ponds shall be designed such that they only support standing water for several weeks following seasonal rains in order that aquatic predators (e.g., fish, bullfrogs, and crayfish) cannot become established. Terrestrial habitat surrounding the proposed relocation site shall be as similar in type, aspect, and density to the location of the existing ponds as feasible. No site preparation or construction activities shall be permitted in the vicinity of the currently occupied ponds until the design and construction of the pool habitat in preserved areas of the site has been completed and all western spadefoot toad adult, tadpoles, and egg masses detected are moved to the created pool habitat. (2) Based on appropriate rainfall and temperatures, generally between the months of February and April, the biologist shall conduct pre-construction surveys in all appropriate vegetation communities within the development envelope.			2. CDFG
Surveys will include evaluation of all previously documented occupied areas and a reconnaissance-level survey of the remaining natural areas of the site. All western spadefoot adults, tadpoles, and egg masses encountered shall be collected and released in identified/created relocation ponds described above. (3) The qualified biologist shall monitor the relocation site for five years, involving annual monitoring during and immediately following peak breeding season such that surveys can be conducted for adults as well as for egg masses and larval and post-larval toads. Further, survey data will be provided to CDFG by the monitoring biologist following each monitoring period and a written report summarizing the monitoring results will be provided to CDFG at the end of the monitoring effort. Success criteria for the monitoring program shall include verifiable evidence of toad reproduction at the relocation site.			3. Prior to Ground Disturbance Activities in Suitable Habitat

MV 4.3-26 Prior to ground disturbance, vegetation clearing, construction, or site preparation activities, a qualified biologist shall be retained to conduct a Worker Environmental Awareness Program (WEAP) for all construction/contractor personnel. A list of construction personnel who have completed training prior to the start of construction shall be maintained on site and this list shall be updated as required when new personnel start work. No construction worker may work in the field for more than five days without participating in the WEAP. The qualified biologist shall provide ongoing guidance to construction personnel and contractors to ensure compliance with environmental/permit regulations and mitigation measures. The qualified biologist shall perform the following:	Applicant (Project Biologist)	Participation in a WEAP Field Verification	1. LACDRP/CDFG
• Provide training materials and briefings to all personnel working on site. The material shall include but not be limited to the identification and status of plant and wildlife species, significant natural plant community habitats (e.g., riparian), fire protection measures, and review of mitigation requirements. • A discussion of the federal and state Endangered Species Acts, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, other state or federal permit requirements and the legal consequences of non-compliance with these acts. • Attend the pre-construction meeting to ensure that timing/location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds, pre-construction surveys, or relocation efforts).			2. CDFG
• Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas. Maps showing the location of special-status wildlife or populations of rare plants, exclusion areas, or other construction limitations (e.g., limitations on nighttime work) will be provided to the environmental monitors and construction crews prior to ground disturbance. This applies to preconstruction activities, such as site surveying and staking, natural resources surveying or reconnaissance, establishment of water quality BMPs, and geotechnical or hydrological investigations. • Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction and provide a contact person in the event of the discovery of dead or injured wildlife. • Review/designate the construction area in the field with the contractor in accordance with the final grading plan.			3. Prior and during Ground Disturbance Activities
• Ensure that haul roads, access roads, and on-site staging and storage areas are sited within grading areas to minimize degradation of vegetation communities adjacent to these areas (if activities outside these limits are necessary, they shall be evaluated by the biologist to ensure that no special-status species habitats will be affected). • Conduct a field review of the staking (to be set by the surveyor) designating the limits of all construction activity. • Flag or temporarily fence any construction activity areas immediately adjacent to riparian areas. • Ensure and document that required pre-construction surveys and/or relocation efforts have been implemented.			

• To reduce the potential for the spread of exotic invasive invertebrates (e.g., New Zealand mud snails and weeds (including weed seeds) during project clearing and construction, all heavy equipment proposed for use on the project site shall be verified cleaned (including wheels, tracks, undercarriages, and bumpers, as applicable) before delivery to the project site. Equipment must be documented as exotic invasive invertebrates (e.g., mud snail) and weed free upon delivery to the project site initial staging area, including: (1) vegetation clearing equipment (skid steer loaders, loaders, dozers, backhoes, excavators, chippers, grinders, and any hauling equipment, such as off-road haul trucks, flat bed, or other vehicles); (2) earth-moving equipment (scrapers, dozers, excavators, loaders, motor-graders, compactors, backhoes, off-road water trucks, and off-road haul trucks); and (3) all project-associated vehicles (including personal vehicles) that, upon inspection by the monitoring biologist, are deemed to present a risk for spreading exotic invasive invertebrates (e.g., mud snails) or weeds. Equipment shall be cleaned at existing construction yards or at a wash station.			
The biological monitor shall document that all construction equipment (as described above) has been cleaned prior to working within the project work site. Any equipment/vehicles determined to not be free of exotic invasive invertebrates (e.g., mud snails) and weeds shall immediately be sent back to the originating construction yard for washing, or wash station where rinse water is collected and disposed of in either a sanitary sewer or other legal point of disposal. Equipment/vehicles moved from the site must be inspected, and re-washed as necessary, prior to re-engaging in construction activities in the project work area. A written daily log shall be kept for all vehicle/equipment washing that states the date, time, location, type of equipment washed, methods used, and location of work;			
• Be present during initial vegetation clearing and grading. • Submit to the CDFG an immediate report (within 72 hours) of any conflicts or errors resulting in impacts to special-status biological resources.			

MV 4.3-27 The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan (Dudek 2007) shall be revised and submitted to CDFG for review and approval prior to ground disturbance to occupied habitat. Upon approval, the plan will be implemented by the applicant or its designee. The revised plan will demonstrate the feasibility of enhancing or restoring slender mariposa lily habitat in selected areas to be managed as natural open space (i.e., the Salt Creek area or High Country SMA/SEA 20, spineflower preserves, or River Corridor SMA/SEA 23) without conflicting with other resource management objectives. Habitat replacement/enhancement will be at a 1:1 ratio (acres restored/enhanced to acres impacted).	Applicant (Project Biologist)	Review and Approval of the Revision to the RMDP Slender Mariposa Lily Mitigation and Monitoring Plan	1. LACDRP/CDFG
The revised plan will describe habitat improvement/ restoration measures to be completed prior to introducing slender mariposa lily. Habitat improvement/restoration will be based on native occupied slender mariposa lily habitat. The revised plan will specify: (1) the location of mitigation sites (may be selected from among 559 acres of suitable mitigation land in the High Country SMA/SEA 20 and Salt Creek area identified in the Draft Newhall Ranch Mitigation Feasibility Study (Dudek 2007); (2) a description of "target" vegetation (native shrubland or grassland) to include estimated cover and abundance of native shrubs and grasses in occupied slender mariposa lily habitat on Newhall Ranch land (either at sites to be destroyed by construction or at sites to be preserved); (3) site preparation measures to include topsoil treatment, soil decompaction, erosion control, temporary irrigation systems, or other measures as appropriate; (4) methods for the removal of non native plants (e.g., mowing, weeding, raking, herbicide application, or burning);			2. CDFG
(5) the source of all plant propagules (seed, potted nursery stock, etc.), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful.		Monitoring Reports to be Reviewd Annually for Five (5) Years	3. Prior to Ground Disturbance to Occupied Habitat
Habitat restoration/enhancement will be judged successful when (1) percent cover and species richness of native species reach 50 percent of their cover and species richness at undisturbed occupied slender mariposa lily habitat at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation. At that point slender mariposa lily propagules (seed or bulbs) will be introduced onto the site.			
The revised plan will specify methods to collect propagules and introduce slender mariposa lily into these mitigation sites. Introductions will use source material (seeds or bulbs) from no more than 1.0 mile distant, similar slope exposures, and no more than 500 ft. elevational difference from the mitigation site, unless otherwise approved by CDFG. Bulbs may be salvaged and transplanted from slender mariposa lily occurrences to be lost; alternately, seed may be collected from protected occurrences, following CDFG-approved seed collection guidelines (i.e., MOU for rare plant seed collection). No bulbs will be translocated into areas within 300 feet of proposed or existing development. The Applicant or its designee will monitor the reintroduction sites for no fewer than five additional years to estimate slender mariposa lily survivorship (for bulbs) or seedling establishment (for seeded sites).			

Annual monitoring reports will be prepared and submitted to CDFG and will be made available to the public to guide future mitigation planning for slender mariposa lily. Monitoring reports will describe all restoration/enhancement measures taken in the preceding year; describe success and completion of those efforts and other pertinent site conditions (erosion, trespass, animal damage) in qualitative terms; and describe mariposa lily survival or establishment in quantitative terms. A minimum of 133 acres of slender mariposa lily cumulative occupied area will be conserved and managed in the RMDP and SCP project boundaries. Of these 133 acres, approximately 103 acres of slender mariposa lily cumulative occupied area will be conserved and managed in the RMDP and SCP project boundary in the High Country SMA/SEA 20 and Salt Creek area, and 2 acres occur within the River Corridor SMA/SEA 23 and/or proposed spineflower preserves.			
Additional cumulative occupied area will be conserved and managed in the San Martinez Grande Canyon area at a 1:1 ratio (acres conserved and managed to acres impacted) based on impacts to cumulative occupied area within the Entrada planning area, as a means to ensure regional biodiversity of the species. Up to an additional 28 acres of slender mariposa lily cumulative occupied area can be conserved and managed in the San Martinez Grande Canyon area for this purpose.			
MV 4.3-28 The Oak Resource Replacement Plan to be prepared (as described in Newhall Ranch Specific Plan Program EIR Mitigation Measure SP 4.6-48) shall include measures to create, enhance, and/or restore 9.7 acres of coast live oak woodland and valley/oak savannah within the High Country SMA/SEA 20. The plan shall be subject to the requirements outlined in SP 4.6 48. The applicant shall prepare an Oak Resource Management Plan that incorporates the findings of the Draft Newhall Ranch Mitigation Feasibility Report (Dudek 2007) and areas identified (in the technical report) as being suitable for oak woodland enhancement and creation shall be used as mitigation. Other mitigation sites may be used upon approval by the County. The plan shall be reviewed by the County Forester. The plan shall include the following: (1) site selection and preparation; (2) selection of proper species, including sizes and planting densities; (3) protection from herbivores; (4) site maintenance; (5) success criteria; (6) remedial actions; and (7) a monitoring program.	Applicant (Project Biologist)	Receipt and Review of Oak Resource Replacement Plan	1. LA County Forester 2. LA County Forester 3. Prior to Final Map Recordation
MV 4.3-29 The project applicant will retain a qualified biologist to develop an Exotic Wildlife Species Control Plan and implement a control program for bullfrog, African clawed frog, and crayfish. The program will require the control of these species during construction within the River corridor and modified tributaries (bridges, diversions, bank stabilization, drop structures). The Plan shall include a description of the species targeted for eradication, the methods of harvest that will be employed, the disposal methods, and the measures that would be employed to avoid impacts to sensitive wildlife (e.g., stickleback, arroyo toad, nesting birds) during removal activities (i.e., timing, avoidance of specific areas). Annual monitoring shall occur for the first five years after construction of project facilities. Monitoring will be conducted within sentinel locations along the River Corridor SMA/SEA 23 and where the project provides potential habitat for these species (e.g., future ponds and water features). Control shall be conducted within project facilities where monitoring results indicate that exotic species have colonized an area. After the first 5 years, the NLMO or other entity will be responsible for controlling exotic aquatic species.	Applicant (Project Biologist)	Review of an Exotic Wildlife Species Control Plan Annual monitoring for five (5) years	1. LACDRP/CFDG 2. CDFG 3. Approval of Sub-Notification Letters

MV 4.3-30 In order to reduce impacts to biological resources from grading and construction activities, all related activities will be conducted to facilitate the escape of animals to natural areas. Construction and grading activities will begin in disturbed areas in order to avoid stranding animals in isolated patches of vegetation. Trenches will be covered at night or escape routes provided to prevent animals from falling into and being trapped in trenches. If escape routes are provided in lieu of covering trenches, the excavations will be inspected by a qualified biologist prior to restart of work.	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG 2. CDFG 3. During Ground Clearing Activities
MV 4.3-31 The permanent removal of existing habitats in Corps and/or CDFG jurisdictional areas in the Santa Clara River and tributaries shall be replaced by creating habitats of similar functions and values/services (see MV 4.3-33) on the project site, or as allowed under MV 4.3-39. The riparian habitat mitigation will meet CDFG mitigation requirements listed in Table 4.3-11, consistent with success criteria for mitigation in MV 4.3-36.	Applicant (Project Biologist)	Creation of Vegetation Sites/Revegetation Plan	1. LACDRP/CDFG/ACOE 2. CDFG/ACOE 3. Approval of Sub-Notification Letters
MV 4.3-32 Creation of new vegetation communities and restoration of impacted vegetation communities shall occur at suitable sites in or adjacent to jurisdictional areas or in areas where bank stabilization would occur. Locations where the excavation of uplands for bank protection/stabilization results in creation of new, unvegetated riverbed or other disturbance shall receive the highest level of priority for vegetation community restoration. Restoration sites may also occur at locations outside the riverbed where there are appropriate hydrologic conditions to create a self-sustaining riparian vegetation community and where upland and riparian vegetation community values are absent or very low. All sites shall contain suitable hydrological conditions and surrounding land uses to ensure a self-sustaining functioning riparian vegetation community.	Applicant (Project Biologist)	Creation of Vegetation Sites/Revegetation Plans Review of Annual Mitigation Status Reports	1. LACDRP/CDFG/ACOE
Candidate restoration sites shall be described in the annual mitigation status report (see MV 4.3-43). Sites will be approved when the detailed wetlands mitigation plans are submitted to the Corps and CDFG as part of the sub-notification letters submitted for individual projects. Status of the sites will be addressed through agency review of the annual mitigation status report and mitigation accounting form. Each mitigation plan will include acreages, maps, and site specific descriptions of the proposed revegetation site, including analysis of soils, hydrologic suitability, and present and future adjacent land uses.			2. CDFG/ACOE 3. Approval of Sub-Notification Letters
MV 4.3-33 Replacement vegetation communities shall be designed to replace the functions and values of the vegetation communities being removed. The replacement vegetation communities shall have similar dominant trees and understory shrubs and herbs (excluding exotic species) to those of the affected vegetation communities (see Table 4.3-12 for example of recommended plant species for the River Corridor SMA/SEA 23 and tributaries). In addition, the replacement vegetation communities shall be designed to replicate the density and structure of the affected vegetation communities once the replacement vegetation communities have met the mitigation success criteria.	Applicant (Project Biologist)	Creation of Vegetation Sites/Revegetation Plans Review of Annual Mitigation Status Reports	1. LACDRP/CDFG/ACOE 2. CDFG/ACOE 3. Approval of Sub-Notification Letters
MV 4.3-34 Average plant spacing shall be determined based on an analysis of vegetation communities to be replaced. The applicant shall develop plant spacing specifications for all riparian vegetation communities to be restored. Plant spacing specifications shall be reviewed and approved by the Corps and CDFG when restoration plans are submitted to the agencies as part of the sub-notification letters submitted to the Corps and CDFG for individual projects or as part of the annual mitigation status report and mitigation accounting form.	Applicant (Project Biologist)	Creation of Vegetation Sites/Revegetation Plans Review of Annual	1. LACDRP/CDFG/ACOE 2. CDFG/ACOE 3. Approval of Sub-Notification Letters

MV 4.3-35 If at any time prior to CDFG/Corps approval of the restoration area, the site is subject to an act of God (flood, fires, or drought), the applicant shall be responsible for replanting the damaged area. The site will be subject to the same success criteria as provided for MV 4.3-36. Should a second act of God occur prior to CDFG/Corps approval of the restoration area, the applicant shall coordinate with the CDFG/Corps to develop an alternative restoration strategy(ies) to meet success requirements. This may include restoration elsewhere in the River corridor or tributaries.	Applicant (Project Biologist)	Creation of Vegetation Sites/Revegetation Plans Review of Annual	1. LACDRP/CDFG/ACOE 2. CDFG/ACOE 3. Prior to Completion of Mitigation Monitoring
MV 4.3-36 The revegetation site will be considered "complete" upon meeting all of the following success criteria. In a sub-notification letter, the applicant may request modification of success criteria on a project by project basis. Acceptance of such request will be at the discretion of CDFG and the Corps. 1. Regardless of the date of initial planting, any restoration site must have been without active manipulation by irrigation, planting, or seeding for a minimum of three years prior to Agency consideration of successful completion.	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG/ACOE
2. The percent cover and species richness of native vegetation shall be evaluated based on local reference sites established by CDFG and the Corps for the plant communities in the impacted areas. 3. Native shrubs and trees shall have at least 80 percent survivorship after two years beyond the beginning of the success evaluation start date. This may include natural recruitment. 4. Non-native species cover will be no more than 5 percent absolute cover through the term of the restoration.			2. CDFG/ACOE
5. Giant reed (*Arundo donax*), tamarisk (*Tamarix ramosissima*), perennial pepperweed (*Lepidium latifolium*), tree of heaven (*Ailanthus altissimus*), pampas grass (*Cortaderia selloana*) and any species listed on the California State Agricultural list, or Cal-IPC list of noxious weeds will not be present on the revegetation site as of the date of completion approval. 6. Using the HARC assessment methodology, the compensatory mitigation site shall meet or exceed the baseline functional scores of the impact area in Corps' jurisdictional waters, as described in the Conceptual Mitigation Plan for Waters of the United States.			3. Prior to Completion of Mitigation Monitoring
MV 4.3-37 Temporary irrigation shall be installed as necessary for plant establishment. Irrigation shall continue as needed until the restoration site becomes self sustaining regarding survivorship and growth. Irrigation shall be terminated in the fall to provide the least stress to plants. Following irrigation termination, the irrigation piping will be removed where not destructive to the established plants.	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG/ACOE 2. CDFG/ACOE 3. Prior to Completion of Mitigation Monitoring
MV 4.3-38 In areas where invasive exotic plant species control is authorized by CDFG in lieu of creating or restoring other riparian habitat mitigation (MV 4.3-31), removal areas shall be kept free of exotic plant species for 5 years after initial treatment. In areas where extensive exotic removal occurs, revegetation with native plants or natural recruitment shall be documented.	Applicant (Project Biologist)	Creation of Vegetation Sites/Revegetation Plan or Contribute to "In-Lieu Fees" to the Upper Santa Clara	1. LACDRP/CDFG/ACOE 2. CDFG/ACOE 3. Prior to Completion of Mitigation Monitoring
MV 4.3-39 The exotics control program may utilize methods and procedures in accordance with the provisions in the Upper Santa Clara River Watershed Arundo/Tamarisk Removal Plan Final Environmental Impact Report, dated February 2006, or the applicant may propose alternative methods and procedures for Corps and CDFG review and approval pursuant to a sub-notification letter. By example: a 10-acre site occupied by 10% exotic species will be credited for 1 acre of mitigation.	Applicant (Project Biologist)	Review of an Exotic Control Program	1. LACDRP/CDFG/ACOE 2. CDFG/ACOE 3. Approval of Sub-Notification Letters

MV 4.3-40 All native riparian trees with a 3-inch diameter at breast height (dbh) or greater in temporary construction areas shall be replaced using 1- or 5-gallon container plants, containered trees, or pole cuttings in the temporary construction areas in the winter following the construction disturbance. The growth and survival of the replacement trees shall meet the performance standards specified in MV 4.3-36. In addition, the growth and survival of the planted trees shall be monitored until they meet the self-sustaining success criteria in accordance with the methods and reporting procedures specified in MV 4.3-36, MV 4.3-42, and MV 4.3-43.	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG/ACOE 2. CDFG/ACOE 3. Prior to Completion of Mitigation Monitoring
MV 4.3-41 Vegetation communities temporarily impacted by the proposed project shall be revegetated as described in MV 4.3-31. Large trunks of removed trees may also remain on site to provide habitat for invertebrates, reptiles, and small mammals or may be anchored within the project site for erosion control. To facilitate restoration, mulch, or native topsoil (the top 6- to 12-inch deep layer containing organic material), may be salvaged from the work area prior to construction. Following construction, salvaged topsoil shall be returned to the work area and placed in the restoration site. Within one year, the project biologist will evaluate the progress of restoration activities in the temporary impact areas to determine if natural recruitment has been sufficient for the site to reach performance goals. In the event that native plant recruitment is determined by the project biologist to be inadequate for successful habitat establishment, the site shall be revegetated in accordance with the methods designed for permanent impacts (i.e., seeding, container plants, and/or a temporary irrigation system may be recommended). This will help ensure the success of mitigation areas. The applicant shall restore the temporary construction area per the success criteria and ratios described in MV 4.3-23, MV 4.3-31, and MV 4.3-36. Annual monitoring reports on the status of the recovery of temporarily impacted areas shall be submitted to the Corps and CDFG as part of the annual mitigation status report (MV 4.3-42 and MV 4.3-43).	Applicant (Project Biologist)	Creation of Vegetation Sites/Revegetation Plan Field Verification	1. LACDRP/CDFG/ACOE 2. CDFG/ACOE 3. Prior to Completion of Mitigation Monitoring
MV 4.3-42 To provide an accurate and reliable accounting system for mitigation, the applicant shall file a mitigation accounting form annually with the Corps and CDFG by April 1.	Applicant (Project Biologist)	Review of a Mitigation Accounting Form	1. CDFG/ACOE 2. CDFG/ACOE 3. Prior to Completion of Mitigation Monitoring
MV 4.3-43 An annual mitigation status report shall be submitted to the Corps and CDFG by April 1 of each year until satisfaction of success criteria identified in MV 4.3-36. This report shall include any required plans for plant spacing, locations of candidate restoration and weed control sites or proposed "in lieu fees," restoration methods, and vegetation community restoration performance standards. For active vegetation community creation sites, the report shall include the survival, percent cover, and height of planted species; the number by species of plants replaced; an overview of the revegetation effort and its success in meeting performance criteria; the method used to assess these parameters; and photographs. For active exotics control sites, the report shall include an assessment of weed control; a description of the relative cover of native vegetation, bare areas, and exotic vegetation; an accounting of colonization by native plants; and photographs. The report shall also include the mitigation accounting form (see MV 4.3-42), which outlines accounting information related to species planted or exotics control and mitigation credit remaining. The annual mitigation and monitoring report shall document the current functional capacity of the compensatory mitigation site using the HARC assessment methodology, as well as documenting the baseline functional scores of the impact site in jurisdictional waters of the United States.	Applicant (Project Biologist)	Annual Mitigation Status Report	1. CDFG/ACOE 2. CDFG/ACOE 3. Prior to Completion of Mitigation Monitoring

MV 4.3-44 Require focused surveys for the spring snail (*Pyrgulopsis castaicensis n.* sp.) by a qualified biologist prior to the commencement of grading/construction activities in any drainage area supporting perennial flow. Any individuals of the *Pyrgulopsis castaicensis n.* sp. found within the Middle Canyon drainage shall be relocated to appropriate habitat within Middle Canyon Spring. If *Pyrgulopsis castaicensis n.* sp. are discovered during aquatic and semi-aquatic pre construction surveys in any other perennial flowing water, the applicant shall consult with CDFG prior to initiating disturbance of the area. A report documenting the number of *Pyrgulopsis castaicensis n.* sp. located, the conditions of the area, and where the species has been relocated to, if applicable, shall be submitted to CDFG within 60 days following the relocation.	Applicant (Project Biologist)	Pre-Construction Surveys for *Pyrgulopsis castaicensis* n. sp.; report to CDFG	1. LACDRP/CDFG 2. CDFG 3. Prior to Ground Disturbance in Aquatic Areas
MV 4.3-45 An Integrated Pest Management (IPM) plan that addresses the use of pesticides (including rodenticides and insecticides) on site will be prepared prior to the issuance of building permits for the initial tract map. The IPM will implement appropriate Best Management Practices to avoid and minimize adverse effects on the natural environment, including vegetation communities, special-status species, species without special status, and associated habitats, including prey and food resources (e.g., insects, small mammals, seeds). Potential management practices include cultural (e.g., planting pest-free stock plants), mechanical (e.g., weeding, trapping), and biological controls (e.g., natural predators or competitors of pest species, insect growth regulators, natural pheromones, or biopesticides), and the judicious use of chemical controls, as appropriate (e.g., targeted spraying versus broadcast applications). The IPM will establish management thresholds (i.e., not all incidences of a pest require management); prescribe monitoring to determine when management thresholds have been exceeded; and identify the most appropriate and efficient control method that avoids and minimizes risks to natural resources. Preparation of the covenants, conditions, and restrictions (CC&Rs) for each tract map shall include language that prohibits the use of anticoagulant rodenticides in the project site.	Applicant	Review of Integrated Pest Management Plan and CC&Rs	1. LACDRP/CDFG 2. CDFG 3. Prior to Issuance of Building Permits
MV 4.3-46 The Natural Lands Management Organization (NLMO) shall fund or otherwise coordinate the regular removal of trash and debris from riparian habitats on or adjacent to the project site. The removal of trash shall be conducted in a manner as to not disturb sensitive habitats.	Applicant/Natural Lands Management Organization (NLMO) -- Long-Term Management	Field Verification or payment of fees	1. LACDRP 2. LACDRP 3. Prior to Dedication
MV 4.3-47 Each tract map Home Owners' Association shall supply educational information to future residents regarding pets, wildlife, and open space areas. The material shall discuss the presence of native animals (e.g., coyote, bobcat, mountain lion), indicate that those native animals could prey on pets, indicate that no actions shall be taken against native animals should they prey on pets allowed outdoors, indicate that residents should not feed wildlife intentionally or unintentionally by leaving pet food outside, and indicate that pets must be leashed while using the designated trail system and/or in any areas within or adjacent to open space. Control of stray and feral cats and dogs will be conducted in open space areas on an as-needed basis by the NLMO(s) or the Newhall Ranch joint powers authority (JPA) managing the River Corridor SMA/SEA 23, High Country SMA/SEA 20, or Salt Creek area or by the HOAs managing the Open Areas. Feral cats and dogs may be trapped and deposited with the local Society for the Prevention of Cruelty to Animals or the Los Angeles County Department of Animal Control.	Mission Village Homeowners Association	Supply written material	1. LACDRP/CDFG 2. LACDRP/CDFG 3. Prior to Occupancy

MV 4.3-48 Upon initiating landscaping within a development area, quarterly monitoring shall be initiated for Argentine ants along the urban–open space interface at sentinel locations where invasions could occur (e.g., where moist microhabitats that attract Argentine ants may be created). A qualified biologist shall determine the monitoring locations. Ant pitfall traps will be placed in these sentinel locations and operated on a quarterly basis to detect invasion by Argentine ants. If Argentine ants are detected during monitoring, direct control measures will be implemented immediately to help prevent the invasion from worsening. These direct controls may include but are not limited to nest/mound insecticide treatment, or available natural control methods being developed. A general reconnaissance of the infested area would also be conducted to identify and correct the possible source of the invasion, such as uncontrolled urban runoff, leaking pipes, or collected water. Monitoring and control of Argentine ants would occur for a 5-year period. After the first 5 years, the NLMO or other entity will be responsible for controlling Argentine ants.	Applicant (Project Biologist)	Quarterly Monitoring for Argentine Ants Where Applicable	1. LACDRP/CDFG 2. CDFG 3. Following the Issuance of Occupancy Permits for 5-years
MV 4.3-49 Thirty days prior to construction activities, a qualified biologist shall conduct a preconstruction survey for ringtail. The survey area shall include suitable riparian and woodland habitat (southern coast live oak riparian forest, southern cottonwood–willow riparian forest, southern willow scrub, coast live oak woodland, valley oak woodland, and mixed oak woodland) within the construction disturbance zone and a 300 foot buffer around the construction site. Should the ringtail be observed in the breeding and rearing period of February 1 through August 31, no construction related activities shall occur within 300 feet of the occupied area for the period of February 1 through August 31 or until the ringtail has been determined by a qualified biologist (in consultation with CDFG) to no longer occupy areas within 300 feet of the construction zone and/or that construction activities would not adversely affect the successful rearing of young. If the ringtail is observed within the construction disturbance zone or in the 300 foot buffer around the construction site in the nonbreeding/rearing period of September 1 through January 31, and avoidance is not possible, denning ringtail shall be safely evicted under the direction of a qualified biologist (as determined by a Memorandum of Understanding with CDFG). All activities that involve the ringtail shall be documented and reported to CDFG.	Applicant (Project Biologist)	Preconstruction survey for Ringtail Documentation shall be reported to CDFG	1. LACDRP/CDFG 2. CDFG 3. 30 days Prior to Construction Activities
MV 4.3-50 Any Southern California black walnut and mainland cherry trees or shrubs outside riparian areas greater than 1 inch dbh shall be replaced in the ratio of at least 2:1. Multi-trunk trees/shrub dbh shall be calculated based on combined trunk dbh. Mitigation shall be deemed complete when each replacement tree attains at least 1 inch in diameter 1 foot above the base.	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG 2. CDFG 3. Prior to Completion of Mitigation Monitoring
MV 4.3-51 Bridges over the Santa Clara River shall be designed to minimize impacts to natural areas and riparian resources from associated lighting and stormwater runoff. All lighting will be designed to be directed away from natural areas (pursuant to SP-4.6-56) using shielded lights, low sodium-vapor lights, bollard lights, or other available light and glare minimization methods. Bridges will be designed to minimize normal vehicular lighting from trespassing into natural areas using side walls a minimum of 24 inches high. All stormwater from the bridges will be directed to water treatment facilities for water quality treatment.	Applicant	Lighting plan and bridge design review	1. LACDRP/CDFG 2. CDFG 3. Approval of Sub-Notification Letters

MV 4.3-52 Construction plans shall include necessary design features and construction notes to ensure protection of vegetation communities and special status plant and aquatic wildlife species adjacent to construction. In addition to applicable erosion control plans and performance under SCAQMD Rule 403d dust control (SCAQMD 2005), the project stormwater pollution prevention plan (SWPPP) shall include the following minimum BMPs. Together, the implementation of these requirements shall ensure protection of adjacent habitats and wildlife species during construction. At a minimum, the following measures/restrictions shall be incorporated into the SWPPP, and noted on construction plans where appropriate, to avoid impacting special status species during construction:	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG
• Avoid planting or seeding invasive species in development areas within 200 feet of native vegetation communities. • Provide location and details for any dust control fencing along project boundaries (MV 4.3-53). • Vehicles shall not be driven or equipment operated in areas of ponded or flowing water, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as otherwise provided for in the 404 Permit or 1603 Agreement.			2. CDFG
• Silt settling basins installed during the construction process shall be located away from areas of ponded or flowing water to prevent discolored, silt bearing water from reaching areas of ponded or flowing water during normal flow regimes. • If a stream channel has been altered during the construction and/or maintenance operations, its low flow channel shall be returned as nearly as practical to pre project topographic conditions without creating a possible future bank erosion problem or a flat, wide channel or sluice like area. The gradient of the streambed shall be returned to pre project grade, to the extent practical, unless it represents a wetland restoration area. • Temporary structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the high water mark before such flows occur.			3. During Grading Activities
• Staging/storage areas for construction equipment and materials shall be located outside of the ordinary high water mark. • Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily, to prevent leaks of materials that could be deleterious to aquatic life if introduced to water. • Stationary equipment such as motors, pumps, generators, and welders which may be located within the riverbed construction zone shall be positioned over drip pans. No fuel storage tanks shall be allowed in the riverbed. • No debris, bark, slash sawdust, rubbish, cement or concrete or washing thereof, oil, petroleum products, or other organic material from any construction, or associated activity of whatever nature, shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into, watercourses included in the permit. When construction operations are completed, any excess materials or debris shall be removed from the work area. • No equipment maintenance shall be done within or near any stream where petroleum products or other pollutants from the equipment may enter these areas with stream flow. • The operator shall install and use fully covered trash receptacles to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash will be regularly picked up in construction areas. • The operator shall not permit pets on or adjacent to the construction site. • No guns or other weapons are allowed on the construction site during construction, with the exception of the security personnel and only for security functions. No hunting shall be authorized/permitted during construction.			

MV 4.3-53 Development areas shall have dust control measures implemented and maintained to prevent dust from impacting vegetation communities and special status plant and aquatic wildlife species. Dust control shall comply with SCAQMD Rule 403d (SCAQMD 2005). Where construction activities occur within 100 feet of known special status plant species locations, chemical dust suppression shall not be utilized. Where determined necessary by a qualified biologist, a screening fence (i.e., a 6-foot-high chain link fence with green fabric up to a height of 5 feet) shall be installed to protect special status species locations. See MV 4.3-65 for dust control requirements related to spineflower preserves.	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG 2. CDFG 3. During Grading Activities
MV 4.3-54 Permanent fencing shall be installed along all River Corridor SMA/SEA 23 trails adjacent to the Santa Clara River, or other sensitive resources, in order to minimize impacts associated with increased human presence on protected vegetation communities and special status plant and wildlife species. The fencing will be split rail to avoid inhibiting wildlife movement. Viewing platforms will be located in land covers currently mapped as agriculture, disturbed land, or developed land.	Applicant	Field Verification	1. LACDRP 2. LACDRP 3. Prior to Trail Fencing Plan Approval along the River Corridor
MV 4.3-55 To protect Middle Canyon Spring and to reduce potential direct impacts to any special status species that may be located within the spring complex due to unrestricted access, the project applicant or its designee shall avoid all construction-related activities within the Middle Canyon Spring complex and erect and maintain temporary orange fencing and prohibitive signage around the Middle Canyon Spring prior to and during all phases of construction within 200 feet of the spring and, if applicable, around the Middle Canyon drainage within 100 feet of flowing water. A qualified biologist will be present to monitor construction activities within 200 feet of the spring and, if applicable, around the Middle Canyon drainage within 100 feet of flowing water. The areas behind the temporary fencing shall not be used for the storage of any equipment, materials, construction debris, or anything associated with construction activities. Any upslope runoff from construction areas will be directed away from the Middle Canyon Spring.	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG
Following the final phase of construction of any Newhall Ranch subdivision tract adjacent to Middle Canyon Spring, the project applicant or its designee shall install and maintain permanent fencing along the subdivision tract bordering the spring. Permanent signage shall be installed on the fencing along the spring boundary to indicate that the fenced area is a biological preserve that contains protected species and habitat. No trail shall be constructed that passes within 100 feet of the Middle Canyon Spring (see Figure 4.3-4B above).			2. CDFG
a. As described in MV 4.3-51, the Commerce Center Drive Bridge will be designed to minimize secondary impacts associated with lighting and water quality impacts through the installation of indirect and downcast lighting, and routing of stormwater to water quality treatment facilities.			3. Approval of Sub-Notification Letters
MV 4.3-56 A Middle Canyon Spring Habitat Management Plan will be developed that details the measures to be implemented to maintain the populations of the spring snail (Pyrgulopsis castaicensis n. sp.) and Newhall sunflower species. The plan shall be subject to the approval of CDFG and implemented by the Applicant prior to disturbance within 100 feet of flowing water in Middle Canyon Creek and/or 200 feet of Middle Canyon Spring.	Applicant (Project Biologist)	Review Management Plan	1. LACDRP/CDFG 2. CDFG 3. Approval of Sub-Notification Letters

MV 4.3-57 Plant palettes proposed for use on landscaped slopes, street medians, park sites, and other public landscaped and fuel modification zone (FMZ) areas within 200 feet of native vegetation communities shall be reviewed by a qualified restoration specialist to ensure that the proposed landscape plants will not naturalize and require maintenance or cause vegetation community degradation in the open space areas (River Corridor SMA/SEA 23, High Country SMA/SEA 20, Salt Creek area, and natural portions of the Open Area).	Applicant (Landscape Architect)	Review and approval of Landscape Plans	1. LACDRP/CDFG
Container plants to be installed within public areas within 200 feet of the open space areas shall be inspected by a qualified restoration specialist for the presence of disease, weeds, and pests, including Argentine ants. Plants with pests, weeds, or diseases shall be rejected. In addition, landscape plants within 200 feet of native vegetation communities shall not be on the Cal IPC California Invasive Plant Inventory (most recent version) or on the list of Invasive Ornamental Plants listed in Appendix B of the Spineflower Conservation Plan (SCP).			2. LACDRP/CDFG
The current Cal IPC list can be obtained from the Cal IPC web site (http://www.cal ipc.org/ip/inventory/index.php). Landscape plans will include a plant palette composed of native or non native, non invasive species that do not require high irrigation rates. Except as required for fuel modification, irrigation of perimeter landscaping shall be limited to temporary irrigation (i.e., until plants become established).			3. Prior to Approval of Landscape Plans
MV 4.3-58 A final SCP shall be adopted and implemented after approval by CDFG, including the permanent dedication of preserves (see draft in Appendix 4.3). The proposed spineflower preserve areas shall be offered to CDFG as a permanent conservation easement within one year after issuance of the requested 2081 Permit to ensure long term protection. The conservation easement shall be to CDFG and contain appropriate funding and restrictions to help ensure that the spineflower preserve lands are protected in perpetuity.	Applicant	Offer of conservation easement	1. CDFG 2. CDFG 3. One year after 2081 permit issuance
MV 4.3-59 The spineflower preserves shall be managed by Applicant and their preserve manager(s) and/or natural lands management organization(s) (NLMO). Applicant shall submit a statement of qualifications for their proposed preserve manager(s)/NLMO(s) for approval by CDFG. Applicant will fund in full all implementation of spineflower preserve management as described in the SCP and all mitigation measures listed in this document.	Applicant (Preserve Manager)	Approval of Preserve Manager	1. CDFG 2. CDFG 3. Prior to Dedication
MV 4.3-60 Spineflower preserve temporary fencing shall be shown on construction plans and installed prior to initiating construction clearing and grubbing activities within 500 feet of spineflower preserves, including the buffers. The spineflower preserve manager or a qualified biologist shall monitor fence installation. Clearing for fence installation shall be minimized to what is necessary to install the fence and, where possible, shall leave the roots of native plants in place to allow regrowth. As necessary, native vegetation will be restored and weed management will be performed following fence installation to ensure temporarily cleared native plant areas do not become weed dominated after installation. General project clearing and grubbing within 500 feet of the fence may commence upon verification by the spineflower preserve manager or the qualified biologist that protective fencing is in place and is adequate. Appropriate BMPs shall be installed at the edge of development manufactured slopes when the spineflower preserve is within 500 feet and down-slope of proposed development.	Applicant (Project Biologist)	Field verification	1. CDFG 2. CDFG 3. During construction

MV 4.3-61 Construction documents shall indicate that the grading contractor is responsible for protecting spineflower preserves during construction work. The construction documents shall indicate that the contractor is responsible for informing all employees and subcontractors of the environmentally sensitive areas and the proper conduct of work when working near (e.g., within 500 feet) of these areas.	Applicant (Project Biologist)	Field verification	1. LACDRP/CDFG
The construction documents shall require a pre-construction meeting to perform an "environmental education session" with the grading contractor/contractor's employees, subcontractors, and equipment operators prior to commencing construction work within 500 feet of the spineflower preserves. The environmental education session shall be conducted by the spineflower preserve manager or a qualified biologist and focus on informing workers of the location and sensitivity of the spineflower and the requirements for protecting it.			2. CDFG
The construction documents shall indicate that the grading contractor shall be responsible for mitigating any impacts to spineflower preserves due to the negligence of the grading contractor/contractor's employees, subcontractors, or equipment operators. If accidental trespass into a spineflower preserve occurs during construction, the violation shall be documented by the preserve manager and immediately reported to CDFG. Follow-up action will be taken in accordance with the Section 2081 of the Fish and Game Code, Incidental Take Permit issued by CDFG.			3. During construction
MV 4.3-62 Construction plans shall include necessary design features and construction notes to demonstrate consistency of development in the vicinity of spineflower preserves with the Spineflower Conservation Plan (SCP). In addition to applicable erosion control plans and performance under SCAQMD Rule 403d dust control (SCAQMD 2005), the project stormwater pollution prevention plan (SWPPP). Together, the implementation of these requirements shall ensure that spineflower preserve populations are protected during construction. At a minimum, the following measures/restrictions shall be incorporated into the SWPPP and noted on construction plans, where appropriate, to avoid impacting spineflower preserves during construction: • Avoid planting or seeding invasive species in development areas during construction phases. • Do not use erosion control devices that may contain weeds, such as hay bales, etc., within 200 feet of spineflower preserves, or anywhere upstream of spineflower preserves.	Applicant (Project Biologist)	Field verification	1. LACDRP/CDFG
• Do not windrow or stockpile soil within 200 feet of spineflower preserve boundaries or anywhere upstream of spineflower preserves. • Do not locate staging areas, maintenance, or concrete washout areas within 500 feet (unless otherwise authorized by CDFG, and no closer than 200 feet in any instance), where adjacent to or anywhere upstream of spineflower preserves. • Do not store toxic compounds, including fuel, oil, lubricants, paints, release agents, or any other construction materials that could damage spineflower habitat if spilled near spineflower preserve areas, or anywhere upstream of spineflower preserves, or along spineflower preserve boundaries.			2. CDFG
• Provide location and details for any fencing for temporary and permanent access control along preserve boundaries (per MV 4.3-64 for temporary fencing and MV 4.3-69 for permanent fencing). • Provide location and details for any dust control fencing along preserve boundaries (per MV 4.3-65). • Provide location and details for any stormwater run on controls/BMPs coming from development area to spineflower preserve (per MV 4.3-71 and MV 4.3-72).			3. During construction

MV 4.3-63 The spineflower preserve manager or qualified biologist shall review construction plans and specifications, SWPPP, and, where appropriate, erosion control plans and implementation of SCAQMD Rule 403d dust control measures (SCAQMD 2005) prior to construction within 500 feet of spineflower preserves for compliance with the Spineflower Conservation Plan and associated permits and project-related environmental documents. A copy of the SWPPP and associated monitoring reports will be provided to CDFG.	Applicant (Project biologist or Preserve manager)	Field verification	1. LACDRP/CDFG 2. CDFG 3. During construction
MV 4.3-64 Spineflower preserves shall be protected prior to clearing and during construction with temporary construction fencing as described in MV 4.3-60. Openings shall be included in the fence when located within wildlife corridors and vegetation community connectivity areas to allow for the safe passage of wildlife. The spineflower preserve manager or a qualified biologist shall indicate the location and width of each of these openings. The fencing shall be three-strand non-barbed wire fence or bright orange ultraviolet stabilized polyethylene construction "snow" fencing, attached to metal t-posts that extend at least 4 feet above grade or equivalent. Protective fencing shall be maintained in good condition until completion of project construction. Where construction activities occur within 500 feet of a spineflower preserve, the spineflower preserve manager or qualified biologist shall review fencing weekly during construction monitoring visits and note any fencing that is in need of repair. Repairs shall be completed within three working days of notification by the spineflower preserve manager or qualified biologist.	Applicant (Project Biologist or Preserve Manager)	Field verification	1. LACDRP/CDFG 2. CDFG 3. During construction
MV 4.3-65 Development areas shall have dust control measures implemented and maintained to prevent dust from impacting vegetation within the spineflower preserve areas. Dust control shall be implemented during construction in compliance with SCAQMD Rule 403d (SCAQMD 2005). Where construction activities occur within 100 feet of a spineflower location, chemical dust suppression shall not be utilized. Where determined necessary by the spineflower preserve manager or qualified biologist, a screening fence (i.e., a 6-foot-high chain link fence with green fabric up to a height of 5 feet) shall be installed to protect spineflower locations.	Applicant (Project Biologist or Preserve Manager)	Field verification	1. LACDRP/CDFG 2. CDFG 3. During construction

MV 4.3-66 The spineflower preserve manager or qualified biologist shall perform weekly construction monitoring for all construction activities within 500 feet of spineflower preserve areas. The spineflower preserve manager's or qualified biologist's construction monitoring tasks shall include reviewing and approving protective fencing, dust control measures, and erosion control devices before construction work begins; conducting a contractor education session at the preconstruction meeting; reviewing the site weekly (minimum) during construction to ensure the fencing, dust control, and BMP measures are in place and functioning correctly and that work is not directly or indirectly impacting spineflower plants; and quarterly monitoring shall be initiated for Argentine ants along the construction–open space interface at sentinel locations where invasions could occur (e.g., where moist microhabitats that attract Argentine ants may be created) A qualified biologist shall determine the monitoring locations. Ant pitfall traps will be placed in these sentinel locations and operated on a quarterly basis to detect invasion by Argentine ants. If Argentine ants are detected during monitoring, direct control measures will be implemented immediately to help prevent the invasion from worsening. These direct controls may include but are not limited to nest/mound insecticide treatment, or available natural control methods being developed. A general reconnaissance of the infested area would also be conducted to identify and correct the possible source of the invasion, such as uncontrolled urban runoff, leaking pipes, or collected water. Each site visit shall be followed up with a summary monitoring report sent electronically to Applicant indicating the status of the site. Monthly monitoring reports, as needed, shall be submitted to CDFG and the County of Los Angeles). Monitoring reports shall include remedial recommendations and issue resolution discussions when necessary.	Applicant (Project Biologist or Preserve Manager)	Field verification	1. LACDRP/CDFG 2. CDFG 3. During construction
MV 4.3-67 Plant palettes proposed for use on landscaped slopes, street medians, park sites, and other public landscaped and FMZ areas within 200 feet of a spineflower preserve shall be reviewed and approved within 30 days by the spineflower preserve manager or qualified biologist and CDFG to ensure that the proposed landscape plants will not naturalize and require maintenance or cause vegetation community degradation in the spineflower preserve and buffer areas. Container plants to be installed within public areas within 200 feet of the spineflower preserves shall be inspected by the spineflower preserve manager or qualified biologist for the presence of disease, weeds, and pests, including Argentine ants. Plants with pests, weeds, or diseases shall be rejected. In addition, for public areas within 200 feet of spineflower preserves, landscape plants shall not be on the Cal-IPC California Invasive Plant Inventory (most recent version) or on the list of Invasive Ornamental Plants listed in Appendix B of the SCP. The current Cal IPC list can be obtained from the Cal-IPC web site (http://www.cal ipc.org/ip/inventory/index.php).	Applicant (Project Biologist or Preserve Manager)	Plant palette review	1. LACDRP/CDFG 2. CDFG 3. During construction
MV 4.3-68 All portions of the spineflower preserves shall be closed, with the exception of pre-identified existing dirt roads and utility easements. The pre-identified existing dirt roads and utility easement access roads shall function as access routes for the spineflower preserve manager, spineflower preserve maintenance personnel, utility personnel, and emergency services vehicles only (e.g., police, fire, and medical). No other vehicle or foot traffic, including nature or recreational trails, will be permitted in the preserve, including the buffer. The dirt roads shall be gated and locked at the outside edges of the buffer zone. Signs discouraging unauthorized access shall be posted. The only persons or entities issued gate keys shall be the spineflower preserve managers and their employees, easement holding utility companies, emergency services, the Applicant, and CDFG.	Applicant (Project Biologist or Preserve Manager)	Field verification	1. LACDRP/CDFG 2. CDFG 3. Approval of Sub-Notification Letters

MV 4.3-69 Fencing shall be installed along the outside edge of the spineflower preserve and buffer areas adjacent to proposed developments, parks, golf courses, or other "active land uses" to prevent unauthorized access. Specific areas that are adequately protected by steep terrain (1.5:1 or steeper) and/or dense vegetation may not require fencing but would require signage. The determination of the need for fencing in these areas shall be subject to the approval of the spineflower preserve manager or qualified biologist. If monitoring determines that slope and/or vegetation is not effective at deterring unauthorized access, additional fencing may be required to be added by the spineflower preserve manager or qualified biologist. Fencing is not required in areas bordered by large parcels of conserved natural open space areas or the Santa Clara River riparian corridor, as installing fencing in these areas would be unnecessary and damaging to existing vegetation and wildlife corridors. Fencing must extend a minimum of 4 feet above grade and include wood-doweled split rail fencing, exterior grade heavy-duty vinyl three-railed fencing, three-strand non-barbed wire, or approved alternate. Fencing installed adjacent to native vegetation communities and natural open space areas will allow for the passage of animals.	Applicant (Project Biologist or Preserve Manager)	Field verification	1. LACDRP/CDFG 2. CDFG 3. Approval of Sub-Notification Letters
MV 4.3-70 Outdoor all-weather signs measuring approximately 12 by 16 inches shall be posted on all spineflower preserve access gates and along spineflower preserve fencing at approximately 800 feet on center, except adjacent to road crossings, where signs will be posted. The placement will take topography into account, emphasizing placement on ridgelines where signs will be visible to emergency fire personnel and others. Signs shall state in English and Spanish that the area is a biological preserve that hosts a state-listed endangered and federal candidate plant species and that trespassing is prohibited (in accordance with Newhall Ranch Specific Plan Program EIR Mitigation Measure SP 4.6-68). Signs shall indicate that fuel modification and management work is not allowed within the spineflower preserve (including buffer areas). The signage shall state that people who do not abide by these rules or who damage the protected species will be subject to prosecution, including fines and/or imprisonment. All signage shall include emergency contact information and shall be reviewed and approved by the spineflower preserve manager or qualified biologist.	Applicant (Project Biologist or Preserve Manager)	Field verification	1. LACDRP/CDFG 2. CDFG 3. Approval of Sub-Notification Letters
MV 4.3-71 Storm drain outfalls from proposed development areas shall only be installed uphill from spineflower preserve areas where necessary to retain pre-construction hydrological conditions within the spineflower preserves, sustain existing riparian and wetland vegetation communities, and/or allow for the restoration of currently disturbed areas to native riparian/alluvial vegetation communities. When located in a spineflower preserve area, storm drains must meet the following criteria: • Storm drains must not impact spineflower either directly or indirectly, and • Under no circumstances shall storm drains daylight onto steeply sloped areas or other areas that would cause erosion.	Applicant (Project Engineer)	Grading Plan Review	1. LACDRP/CDFG 2. CDFG 3. Approval of Sub-Notification Letters

MV 4.3-72 Any surface water entering a spineflower preserve area from development areas during construction is required to pass through BMP measures, which will be described in the SWPPP. Storm drain outlets must contain hydrologic controls (e.g., adequate energy dissipaters) to prevent downstream erosion and stream channel down-cutting. Additionally, storm drain outlets must be designed based on pre- and post-construction hydrological studies (in accordance with Newhall Ranch Specific Plan Program EIR Mitigation Measure SP 4.6 69). Storm drains and permanent structural BMPs shall be designed by a licensed civil engineer. Requirements of MV 4.3 62 and MV 4.3-71, where applicable, shall be incorporated into the facility design and shall be subject to approval by the spineflower manager or qualified biologist. Long-term maintenance of storm drain BMPs will be the responsibility of the designated maintenance entity.	Applicant (Project Biologist or Preserve Manager)	Field verification	1. LACDRP/CDFG 2. CDFG 3. Approval of Sub-
MV 4.3-73 Disturbed portions (i.e., agricultural lands, disturbed lands, and developed lands) of the spineflower preserves, including buffers, will be restored through revegetation with native plant communities. In summary, areas that have greater than 30 percent relative cover by weeds will be restored to have relative cover comparable to that of existing occupied spineflower habitat. Habitat restoration and enhancement plans (including restoration plans) for areas within the preserves shall be prepared at the direction of the preserve manager by a qualified biologist and submitted to the County and CDFG for approval prior to implementation. In addition, Cal IPC List A and B plants that are present within the spineflower preserve will be controlled. Restoration and enhancement efforts within the spineflower preserve areas shall be in conformance with the Spineflower Conservation Plan and will not include permanent irrigation.	Applicant (Project Biologist or Preserve Manager)	Review of Habitat Restoration Plan	1. LACDRP/CDFG 2. CDFG 3. Approval of Sub-Notification Letters
MV 4.3-74 In the event that a spineflower preserve, or buffer, or a portion of a spineflower preserve, or buffer burns in a wildfire or suffers from mass movements (e.g., landslides, slope sloughing, or other geologic events), the spineflower preserve manager and the Applicant shall promptly review the site and determine what action, if any, should be taken. The primary anticipated post fire spineflower preserve management activity involves monitoring the site and controlling annual weeds that may invade burned areas following a fire event, especially when such weeds (that were not previously present or not present in similar densities) exceed the 30 percent maximum threshold (see MV 4.3-73). If fire control lines or other forms of bulldozer damage occur in the spineflower preserves, these areas will be repaired and revegetated to pre burn conditions or better. An emergency fire response plan will be prepared (in accordance with Mitigation Measure SP 4.6 72) prior to the establishment of the spineflower preserves and approved by CDFG and Los Angeles County Fire Department. The preserve manager will contact the Los Angeles County Fire Department at least once every 5 years to review the plan and consult with them on implementation of the plan. The same methods will be applied to mass movement, landslide, or slope sloughing types of events. This measure shall be implemented in conformance with the Spineflower Conservation Plan.	Applicant (Project Biologist or Preserve Manager)	Field verification	1. LACDRP/CDFG 2. CDFG 3. As Required

MV 4.3-75 Focused surveys for the undescribed species of everlasting (a special status plant species) shall be conducted by a qualified botanist prior to the commencement of grading/construction activities wherever suitable habitat (primarily river terraces) could be affected by direct, indirect, or secondary construction impacts. The surveys shall be conducted no more than one year prior to commencement of construction activities within suitable habitat, and the surveys shall be conducted at a time of year when the plants can be located and identified	Applicant (Project Biologist)	Review of Everlasting Plant Surveys	1. LACDRP/CDFG
Should the species be documented within the project boundary, avoidance measures shall be implemented to minimize impacts to individual plants wherever feasible. These measures shall include minor adjustments to the boundaries/location of haul routes and other project features. If, due to project design constraints, avoidance of all plants is not possible, then further measures, described in MV 4.3-76, shall be implemented to salvage seeds and/or transplant individual plants.			2. CDFG
All seed collection and/or transplantation methods, as well as the location of the receptor site for seeds/plants (assumed to be within preserved open space areas of Newhall Ranch along the Santa Clara River), shall be coordinated with CDFG prior to impacting known occurrences of the undescribed everlasting.			3. Approval of Sub-Notification Letters
MV 4.3 76 For any individual project, or any phase of an individual project, to be located where undescribed everlasting plants may occur, the Applicant shall prepare and implement an Undescribed Everlasting Mitigation and Monitoring Plan prior to the issuance of grading permits.	Applicant (Project Biologist)	Review of Plan	1. LACDRP/CDFG
The Plan shall provide for replacement of individual plants to be removed at a minimum 1:1 ratio, within suitable habitat at a site where no future construction-related disturbance will occur. The plan shall specify the following: (1) the location of the mitigation site in protected/preserved areas within the Specific Plan site; (2) methods for harvesting seeds or salvaging and transplantation of individual plants to be impacted; (3) measures for propagating plants (from seed or cuttings) or transferring living specimens from the salvage site to the introduction site; (4) site preparation procedures for the mitigation site; (5) a schedule and action plan to maintain and monitor the mitigation area; (6) the list of criteria and performance standards by which to measure the success of the mitigation site (below); (7) measures to exclude unauthorized entry into the mitigation areas; and (8) contingency measures such as erosion control, replanting, or weeding to implement in the event that mitigation efforts are not successful. The performance standards for the Undescribed Everlasting Mitigation and Monitoring Plan shall be the following:			2. CDFG
(a) Within four years after reintroducing the undescribed everlasting to the mitigation site, the extent of occupied acreage and the number of established, reproductive plants will be no smaller than at the site lost for project construction. (b) Non-native species cover will be no more than 5 percent absolute cover through the term of the restoration. (c) Giant reed (Arundo donax), tamarisk (Tamarix ramosissima), perennial pepperweed (Lepidium latifolium), tree of heaven (Ailanthus altissimus), pampas grass (Cortaderia selloana), and any species listed on the California State Agricultural list (CDFA 2009) or Cal-IPC list of noxious weeds (Cal-IPC 2006, 2007) will not be present on the revegetation site as of the date of completion approval.			3. Approval of Sub-Notification Letters

MV 4.3-77 A cowbird trapping program shall be implemented once vegetation clearing begins and maintained throughout the construction, maintenance, and monitoring period of the riparian restoration sites. A minimum of five traps shall be utilized, with at least one trap adjacent to the project site and one or two traps located at feeding areas or other CDFG approved location. The trapping contractor may consult with CDFG to request modification of the trap location(s). CDFG must approve any relocation of the traps. Traps will be maintained beginning each year on April 1 and concluding on/or about November 1 (may conclude earlier, depending upon weather conditions and results of capture). The trapping contractor may also consult CDFG on a modified, CDFG-approved trapping schedule modification. The applicant shall follow CDFG and USFWS protocol. In the event that trapping is terminated after the first few years, subsequent phases of the development will require initiation of trapping surveys to determine whether re-establishment of the trapping program is necessary.	Applicant (Project Biologist)	Review of Program	1. LACDRP/CDFG 2. CDFG 3. Approval of Sub-Notification Letters
MV 4.3-78 Bridge and culvert designs, where practicable, shall provide roosting habitat for bats. A qualified biologist shall work with the project engineer in identifying and incorporating structures into the design that provide suitable roosting habitat for bat species occurring in the project area. The final design of the roosting structures would be chosen in consultation with CDFG.	Applicant (Project engineer and biologist)	Review of bridge design	1. LACDRP/CDFG 2. CDFG
MV 4.3-79 To preclude the invasion of Argentine ants into the spineflower preserves and their associated buffers, controls will be implemented using an integrated pest management (IPM) approach in accordance with the approved SCP. The controls include (1) Providing "dry zones" between urban development and spineflower populations, where typical soil moistures are maintained at levels below about 10% soil saturation, which will deter the establishment of nesting colonies of ants; and providing dry zone buffers of sufficient width to reduce the potential for Argentine ant activity within core habitat areas; (2) Where feasible, and/or appropriate, dry areas such as parking lots and roadways shall be built next to preserve boundaries. These will be designed to slope away from the preserve to avoid runoff entering the preserve; (3) Pedestrian pathways placed next to preserves shall consist of decomposed granite or other gravel to minimize the holding of moisture, thereby preventing establishment of suitable habitat for Argentine ant colonies; (4) Ensuring that landscape container plants installed within 200 feet of spineflower preserves are ant free prior to installation to reduce the chance of colonies establishing in areas close to the preserves; (5) Maintaining natural hydrological conditions in the spineflower preserves, including the buffers, through project design features for roadways, French drains, irrigation systems, underground utilities, drainage pipes and fencing, storm drains, and any other BMP measures that apply to surface water entering the preserve areas; (6) Using drought resistant plants in FMZs and minimizing irrigation to the extent feasible.	Applicant (Project Biologist or Preserve Manager)	Review of Plan	1. LACDRP/CDFG 2. CDFG 3. Approval of Sub-Notification Letters
MV 4.3-80 The mitigation program shall incorporate applicable principles from the interagency Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks (60 FR 58605–58614) to the extent feasible and appropriate, particularly the guidance on administration and accounting. Nothing in the section 404 or section 2081 Permit or section 1605 Agreement shall preclude the applicant from selling mitigation credits to other parties wishing to use those permits or that agreement for a project and/or maintenance activity included in the permits/agreement.	Applicant (Project Biologist)	Review of Plan	1. LACDRP/CDFG 2. CDFG 3. Approval of Sub-Notification Letters

MV 4.3-81 The 1,518 acre Salt Creek area shall be offered for phased dedication to the public pursuant to Condition 42 of the approved Specific Plan. Using a "rough step" land dedication approach, irrevocable offers of dedication will be provided to CDFG for identified impact offsets in accordance with the Comprehensive Mitigation Implementation Plan (MV 4.3-23). The Salt Creek area includes approximately 629 acres of coastal scrub communities within both Ventura and Los Angeles counties. This land dedication shall be managed in conjunction with the 4,205 acre High Country SMA (containing 1,314 acres of coastal scrub communities). a. To facilitate wildlife movement between the north side of SR-126 and the Salt Creek area, enhancements will be made to the existing agricultural undercrossing and to the agricultural land at the base of Salt Creek as discussed in MV 4.3-84. A Wildlife Movement Enhancement Plan shall be submitted to the Corps and CDFG for approval prior to implementation. The plan shall include at the minimum the following: i. A portion of the agricultural field on the north side of SR-126 will be dedicated to wildlife movement. Trees and/or scrubs will be planted in the agricultural field to guide wildlife into the existing undercrossing. ii. On the south side of SR-126 two rows of trees/scrubs will be planted to guide wildlife to the Santa Clara River. iii. A wildlife corridor will be created through the agricultural fields at the base of Salt Creek Canyon. (The second part of this mitigation measure (a. i. through a. iii.) has been identified to offset cumulative impacts to wildlife habitat, including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area, but is not required for implementation with the Mission Village tract map.)	Applicant (Project Biologist)	Offer to Dedicate	1. LACDRP/CDFG
			2. CDFG
			3. Approval of Sub-Notification Letters

MV 4.3-82 Supplemental restoration of coastal scrub shall be conducted as an adaptive management measure pursuant to MV 4.3-24. Eight areas were identified in the Draft Newhall Ranch Mitigation Feasibility Report in the High Country SMA, Salt Creek area, and River Corridor SMA (Dudek 2007A) for coastal scrub restoration. In the event that coastal scrub restoration is required pursuant to MV 4.3-24, the applicant shall develop a Coastal Scrub Restoration Plan, subject to the approval of CDFG. The plan shall specify, at a minimum, the following: (1) the location of mitigation sites to be selected from suitable mitigation land in the High Country and Salt Creek areas identified in the Feasibility Study; (2) a description of "target" vegetation (native shrubland) to include estimated cover and abundance of native shrubs; (3) site preparation measures to include topsoil treatment, soil decompaction, erosion control, temporary irrigation systems, or other measures as appropriate; (4) methods for the removal of non native plants (e.g., mowing, weeding, raking, herbicide application, or burning); (5) the source of all plant propagules (e.g., seed, potted nursery stock, etc. collected from within five miles of the restoration site), the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas;	Applicant (Project Biologist)	Field Verifiction	1. LACDRP/CDFG
(6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful. Habitat restoration/enhancement will be judged successful when: (1) percent cover and species richness of native species reach 50% of cover and species richness at reference sites; and (2) the replacement vegetation has persisted at least one summer without irrigation.			2. CDFG
			3. As Required

MV 4.3-83a. As a supplement to MV 4.3-1, MV 4.3-23 and MV 4.3-31 through MV 4.3-43, and MV 4.3-80, additional habitat mitigation through replacement or enhancement of nesting/foraging habitat for least Bell's vireo will be provided for certain key habitat zones at higher ratios (identified as "key population areas" in Figure 4.5-86, Alternative 2 Impacts to Least Bell's Vireo Habitat). Southern willow scrub, southern cottonwood–willow riparian, arrow weed scrub, mulefat scrub, and Mexican elderberry scrub and woodland that provide nesting/foraging habitat for least Bell's vireo in "key population areas" shall be replaced or enhanced. All permanent loss to nesting/foraging habitat in key population areas shall be mitigated at a 5:1 ratio unless otherwise authorized by CDFG or USFWS. Temporary habitat loss of foraging/nesting habitat in key population areas shall be mitigated at a 2:1 ratio. The requirements for replacing habitat by either creating new habitat or removing exotic species from existing habitat shall follow the procedures outlined in MV 4.3-1, MV 4.3-23 and MV 4.3-31 through MV 4.3-43, and MV 4.3-80. To replace the lost functions of habitat located adjacent to the Santa Clara River due to noise impacts, all nesting/foraging habitat within the 60 dBA sound contour (associated with development site roadway improvements) shall be considered degraded. Nesting/foraging habitat within this area shall be mitigated at a ratio of 2:1.	Applicant (Project Biologist)	Review of Plan	1. LACDRP/CDFG
b. The loss of documented occupied nesting habitat for coastal California gnatcatcher shall be mitigated. If the coastal California gnatcatcher is identified nesting on site, the applicant will acquire or preserve nesting coastal California gnatcatcher habitat at a 3:1 ratio for impacts to documented occupied habitat, or by the ratio specified in MV 4.3-31, whichever is greater. Mitigation acquisition shall occur at an agreed-upon location as approved by the USFWS upon consultation. The applicant shall enter into a binding legal agreement regarding the preservation of occupied habitat describing the terms of the acquisition, enhancement, and management of those lands.			2. CDFG
			3. Approval of Sub-Notification Letters
			3. Prior to issuance of Building permit
MV 4.3-84 Road undercrossings will be built in accordance with accepted design criteria to allow the passage of mountain lions and mule deer. The applicant shall prepare a Wildlife Movement Corridor Plan that specifically addresses wildlife movement corridors at San Martinez Grande, Chiquito Canyon, and Castaic Creek, which shall be monitored for one year prior to construction of the SR-126 widenings. The Plan shall address current movement that is occurring, the methods that will be implemented to provide for passage, including lighting, fencing, vegetation planting, the installation of bubblers to encourage wildlife usage, and the size of the passage. The applicant shall install motion cameras at these locations in consultation with CDFG and monitor these passages for a period of two years subsequent to constructing improvements. A report of the wildlife documented to utilize these crossings shall be provided to CDFG annually. In addition, the Salt Creek crossing west of the Project area will be enhanced prior to initiation of construction in Long Canyon (southern portion of the Homestead Village). This crossing will be monitored for one year at the initiation of RMDP development, for two years at the time the crossing is enhanced, and then for three years after Project buildout. Prior to the construction of adjacent developments, signs will be placed along the roads indicating potential wildlife crossings where mountain lions and mule deer are likely to cross. (This mitigation measure has been identified to offset cumulative impacts to wildlife habitat (including coastal scrub). Implementation of the measure is linked directly to construction activities related to the widening of SR-126 and/or the southern portion of the Homestead Village area, but is not required for implementation with the Mission Village tract map.)	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG
			2. CDFG
			3. As Required

MV 4.3-85 At least 1,900 acres of Open Area within the Specific Plan area shall be offered for dedication to an NLMO in fee and/or by conservation easement. These 1,900 acres of the Open Area will be left as natural vegetation. Dedication of open areas lands shall be reported annually to CDFG.	Applicant (Project Biologist)	Offer to Dedicate	1. LACDRP/CDFG
			2. CDFG
			3. Approval of Sub-Notification Letters
MV 4.3-86 Pre-construction surveys for San Emigdio blue butterfly shall occur in all areas containing host plants in sufficient density to support this species. A qualified Lepidoptera biologist shall conduct focused surveys at a time of year and during weather conditions when the detection of eggs, larvae, or adults is possible. All occupied habitat shall be mapped and the locations provided to CDFG. Should the removal of quail brush or other documented host plants from occupied San Emigdio blue butterfly habitat in Potrero Canyon or other areas be required, the plants shall be removed when eggs and larvae are not present (i.e., mid September to March). Removal of quail brush plants from the documented habitat in Potrero Canyon may only be conducted from April through early September if it is determined by a qualified biologist that eggs and/or larvae are not present on the plants to be removed.	Applicant (Project Biologist)	Preconstruction Surveys	1. LACDRP/CDFG
			2. CDFG
			3. Approval of Sub-Notification Letters
MV 4.3-87 The removal of quail brush or other documented host plants from any occupied San Emigdio blue butterfly habitat in Potrero Canyon or other areas shall be replaced at a minimum of a 1.5:1 ratio. The replacement plants shall be planted contiguous to the existing quail brush plants associated with the San Emigdio blue butterfly habitat. The success of the replanting shall be monitored for survival and vigor consistent with survivorship requirements of Mitigation Measure MV 4.3-35 and MV 4.3-36.	Applicant (Project Biologist)	Review of Plan	1. LACDRP/CDFG
			2. CDFG
			3. Approval of Sub-Notification Letters
MV 4.3-88 Prior to any construction activities occurring within 200 feet of any occupied San Emigdio blue butterfly habitat in Potrero Canyon or other areas, the boundaries of preserved areas of the habitat shall be clearly marked with flagging. The flagging would serve to identify the boundaries of the habitat to construction personnel and to prevent the inadvertent construction related loss of quail brush or other host plants associated with the habitat. Construction personnel working in the area shall be informed that the removal of or damage to any flagged quail brush or other host plants located outside the disturbance footprint is prohibited.	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG
			2. CDFG
			3. During Construction

MV 4.3-89 The Newhall Ranch JPA will have overall responsibility for recreation within and conservation of the High Country. The Newhall Ranch JPA and Project applicant and/or NLMO shall develop and implement a conservation education and citizen awareness program for the High Country SMA informing the public of the special status resources present within the High Country SMA and providing information on common threats posed by the presence of people and pets to those resources. The NLMO shall install trailhead and trail signage indicating the High Country SMA is a biological conservation area and requesting advising that people and their animals must stay on existing trails at all times and that violators may be cited. The NLMO shall provide quarterly maintenance patrols to remove litter and monitor trail expansion and fire hazards within the High Country SMA, funded by the JPA.	Applicant (Project Biologist)	Develop Program	1. LACDRP/CDFG
			2. CDFG
			3. Prior to Dedication
MV 4.3-90 The status of the Potrero Canyon San Emigdio blue butterfly colony shall be monitored by a qualified biologist for a period of five years after Potrero Canyon Road construction completion/operation commencement to evaluate whether the operation of the road may be contributing to a population decline in the colony. Should it be determined that a population decline is occurring, habitat creation for the San Emigdio blue butterfly shall be implemented in suitable locations contiguous to the habitat but away from the road. A habitat creation plan will be prepared that details the location and methods for creating habitat, that specifies success criteria, and that describes measures that will be implemented in the event that the habitat creation does not stabilize the San Emigdio blue butterfly population.	Applicant (Project Biologist)	Review of Plan	1. LACDRP/CDFG
			2. CDFG
			3. As Required
MV 4.3-91 The installation of new, or relocation of existing, utility poles and phone and cell towers shall be coordinated with CDFG where located in the High Country SMA and Salt Creek area. The applicant or SCE shall install utility poles, phone, and cell towers in conformance with APLIC standards for collision-reducing techniques as outlined in Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (APLIC 2006).	Applicant (Project Biologist)	Review of Plan	1. LACDRP/CDFG
			2. CDFG
			3. As Required

MV 4.3-92 a. a. All surfaces on new antennae and phone/utility towers shall be designed and operated with anti perching devices in conformance with APLIC standards to deter California condors and other raptors from perching. During construction the area shall be kept clean of debris, such as cable, trash, and construction materials. The applicant shall collect all microtrash and litter (anything shiny, such as broken glass), vehicle fluids, and food waste from the Project area on a daily basis. Workers will be trained on the issue of microtrash: what constitutes microtrash, its potential effects on California condors, and how to avoid the deposition of microtrash.	Applicant (Project Biologist)	Field Verification	1. LACDRP/CDFG
b. The applicant shall retain a qualified biologist with knowledge of California condors to monitor construction activities within the Project area. The resumes of the proposed biologist(s) will be provided to CDFG for concurrence. This biologist(s) will be referred to as the authorized biologist hereafter. During clearing and grubbing of construction areas, the qualified biologist shall be present at all times. During mass grading, construction sites shall be monitored on a daily basis. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed. If condors are observed landing in the Project area, the applicant shall avoid further construction within 500 feet of the sighting until the animals have left the area, or as otherwise authorized by CDFG and USFWS. All condor sightings in the Project area will be reported to CDFG and USFWS within 24 hours of the sighting. Should condors be found roosting within 0.5 mile of the construction area, no construction activity shall occur between one hour before sunset to one hour after sunrise, or until the condors leave the area, or as otherwise directed by USFWS. Should condors be found nesting within 1.5 miles of the construction area, no construction activity will occur until further authorization occurs from CDFG and USFWS.			2. CDFG
c. To further protect California condor potentially foraging in the Project area over the long term from negative interactions with humans and/or artificial structures, the applicant or the JPA or the NLMO shall remove dead cattle that are found or reported within 1,000 feet of a residential or commercial development boundary. Dead cattle shall be relocated to a predetermined location within the High Country SMA or Salt Creek area. The locations where carcasses shall be placed shall be a minimum of 1,000 feet from a development area boundary. Appropriate locations for transfer of carcasses include open grasslands and oak/grassland areas where condors can readily detect carcasses and easily land and take off without encountering physical obstacles such as powerlines and other utility structures. The proposed locations would be selected and approved by the CDFG and USFWS. Pursuant to this measure, a telephone number for reporting dead cattle shall be provided and actively maintained. Any cattle carcasses transferred to the relocation areas shall be reported to the USFWS Condor group.			3. During Construction
4.4 VISUAL QUALITIES			
SP 4.7-1 In conjunction with the development review process set forth in Chapter 5 of the Specific Plan, all future subdivision maps and other discretionary permits which allow construction shall incorporate the Development Guidelines (Specific Plan, Chapter 3) and Design Guidelines (Specific Plan, Chapter 4), and the design themes and view considerations listed in the Specific Plan. (*Mission Village Vesting Tentative Tract Map 61105 and the applicable related discretionary permits incorporate the Specific Plan Development and Design Guidelines consistent with the requirements of the Specific Plan and this mitigation measure* .)	Applicant	Plan Check	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Approval of Final Maps

SP 4.7-2 In design of residential tentative tract maps and site planning of multifamily areas and Commercial and Mixed-Use land use designations along SR-126, the following Design Guidelines shall be utilized: • Where the elevations of buildings will obstruct the views from SR-126 to the south, the location and configuration of individual buildings, driveways, parking, streets, signs and pathways shall be designed to provide view corridors of the river, bluffs, and the ridge lines south of the river. Those view corridors may be perpendicular to SR-126 or oblique to it in order to provide for views of passengers within moving vehicles on SR-126.	Applicant	Plan Check	1. LA County Department of Regional Planning
• The Community Park between SR-126 and the Santa Clara River shall be designed to promote views from SR-126 of the river, bluffs, and ridge lines to the south of the river. (This requirement is not applicable to Mission Village.) • Residential site planning guidelines set forth in Section 4.3.1, Residential and Architectural Guidelines, set forth [in] Section 4.4.1, Residential, shall be employed to ensure that the views from SR-126 are aesthetically pleasing and that views of the river, bluffs, and ridge lines south of the river are preserved to the extent practicable.			2. LA County Department of Regional Planning
• Mixed-Use and the Commercial site planning guidelines set forth in Section 4.3.2 and Architectural Guidelines set forth Section 4.4.2 shall be incorporated to the extent practicable in the design of the Riverwood Village Mixed Use and Commercial land use designations to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs, and ridge lines south of the river. (This requirement is not applicable to Mission Village.) • Landscape improvements along SR-126 shall incorporate the Landscape Design guidelines, set forth in Section 4.6 in order to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs, and ridge lines south of the river. (*This requirement is not applicable to Mission Village* .) (*To the extent the requirements of this mitigation measure apply to the Mission Village project, the Mission Village site plan has been designed to retain view corridors consistent with the measure's requirements* .)			3. Prior to Approval of Final Subdivision Maps or Site Plans as applicable
4.5 TRAFFIC/ACCESS			
SP 4.8-1 The applicants for future subdivision maps which permit construction shall be responsible for funding and constructing all on-site traffic improvements except as otherwise provided below. The obligation to construct improvements shall not preclude the applicant's ability to seek local, state, or federal funding for these facilities. (*All on-site traffic improvements included as part of the Mission Village project will be funded and/or constructed by the project applicant* .)	Applicant(s)	Bonding of and/or Receipt of Funding and/or	1. LACDPW
		Field Verification of Construction	2. LACDPW
			3. Prior to Issuance of Building Permit
SP 4.8-2 Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall indicate the specific improvements for all on-site roadways which are necessary to provide adequate roadway and intersection capacity as well as adequate right-of-way for the subdivision and other expected traffic. Transportation performance evaluations shall be approved by Los Angeles County Department of Public Works according to standards and policies in effect at that time. The transportation performance evaluation shall form the basis for specific conditions of approval for the subdivision. (*This EIR,* ***Section 4.5*** *, provides the required transportation performance evaluation and, in combination with* ***Project Description, Section 1.0*** *, indicates the on-site roadway improvements necessary to provide adequate capacity.*)	Applicant (Traffic Engineer)	Receipt and Review of Transportation Performance Evaluation	1. LACDPW 2. LACDPW 3. Prior to Approval of Subdivision Maps

SP 4.8-3 The applicants for future subdivisions shall provide the traffic signals at the 15 locations labeled "B" through "P" in Figure 4.8-17 [of the Newhall Ranch Specific Plan Final EIR] as well as any additional signals warranted by future subdivision design. Signal warrants shall be prepared as part of the transportation performance evaluations noted in Mitigation Measure 4.8-2 [of the Newhall Ranch Specific Plan Final EIR]. [*Ten (10) intersections located within the Mission Village site will be signalized intersections, including the three (3) intersections depicted as signalized by Specific Plan Figure 4.8-17: Commerce Center Drive and "A" Street, Commerce Center Drive and Magic Mountain Parkway, and Magic Mountain Parkway and "A" Street. This EIR,* ***Section 4.5****, in combination with the traffic analysis presented in EIR* ***Appendix 4.5****, provides the required signal warrants.*]	Applicant (Traffic Engineer)	Installation of Traffic Signals or funding of or bonding of project's share	1. LACDPW 2. LACDPW 3. Prior to Issuance of Occupancy Permits
SP 4.8-4 All development within the Specific Plan shall conform to the requirements of the Los Angeles County Transportation Demand Management (TDM) Ordinance	Applicant (Traffic Engineer)	Subdivision Review	1. LACDPW 2. LACDPW 3. Prior to Final Map Approval and/or approval of improvement plans
SP 4.8-5 The applicants for all future subdivision maps which permit construction shall consult with the local transit provider regarding the need for, and locations of, bus pull-ins on highways within the Specific Plan area. All bus pull-in locations shall be approved by the Department of Public Works, and approved bus pull-ins shall be constructed by the applicant.	Applicant (Traffic Engineer)	Verification of Consultation with Review of bus pull-in locations	1. LACDPW 2. LACDPW 3. Prior to Final Map Approval and/or approval of improvement plans
SP 4.8-6 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall determine the specific improvements needed to each off-site arterial and related costs in order to provide adequate roadway and intersection capacity for the expected Specific Plan and General Plan buildout traffic trips.	Applicant(s)	Payment of Fee	1. LACDPW
The transportation performance evaluation shall be based on the Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant shall be required to fund its fair share of improvements to these arterials, as stated on Table 4.8-18 [of the Newhall Ranch Specific Plan Final EIR]. The applicants' total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor-Serving, Mixed-Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the County and/or the City at each building permit.			2. LACDPW
For off-site areas within the County unincorporated area, the applicant may construct improvements for credit against or in lieu of paying the fee. (*This mitigation measure may or may not be applicable depending upon approval of other Newhall Ranch Specific Plan subdivisions in process.*)		Determination of fair share funding obligation and fee structure for off-site improvements	3. Prior to Recordation of the First Subdivision Map

SP 4.8-7 Each future performance evaluation which shows that a future subdivision map will create significant impacts on SR-126 shall analyze the need for additional travel lanes on SR-126. If adequate lane capacity is not available at the time of subdivision, the applicant of the subdivision shall fund or construct the improvements necessary to serve the proposed increment of development. Construction or funding of any required facilities shall not preclude the applicant's ability to seek state, federal, or local funding for these facilities. (*The future performance evaluation presented in this EIR,* ***Section 4.5*** *, determined that the Mission Village project would cause significant impacts at the Chiquito Canyon Road/SR-126 intersection under the Stage 1 plus Related Projects scenario, and at the Commerce Center Drive/SR-126 intersection at buildout, and that the project would be responsible for its fair-share of improvements to these intersections .*)	Applicant(s)	Receipt and Review of Transportation	1. LACDPW 2. LACDPW
		Applicant Funding of or bonding of Fair Share of Improvements	3. Prior to Recordation of Final Tract Map
SP 4.8-8 Project-specific environmental analysis for future subdivision maps which allow construction shall comply with the requirements of the CMP in effect at the time that subdivision map is filed. (*The future performance evaluation presented in this EIR,* ***Section 4.5*** *, complies with the requirements of the Congestion Management Program presently in effect.*)	Applicant	Review of future environmental analysis	1. LACDPW 2. LACDPW 3. Prior to certification of future environmental documents
SP 4.8-9 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation evaluation including all of the Specific Plan land uses which shall determine the specific improvements needed to the following intersections with SR-126 in the City of Fillmore and community of Piru in Ventura County: "A," "B," "C," "D," and "E" Streets, Old Telegraph, Olive, Central, Santa Clara, Mountain View, El Dorado Road, and Pole Creek (Fillmore), and Main/Torrey and Center (Piru).	Applicant (Traffic Engineer)	Receipt and Review of Transportation Performance Evaluation	1. LACDPW
The related costs of those intersection improvements and the project's fair share shall be estimated based upon the expected Specific Plan traffic volumes. The transportation performance evaluation shall be based on the Los Angeles County Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works.			2. LACDPW
The applicant's total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor Center, Mixed Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the City of Fillmore and the County of Ventura at each building permit. *(This mitigation measure may or may not be applicable depending upon approval other Newhall Ranch Specific Plan subdivisions in process.)*		Payment of Fee to City of Fillmore or County of Ventura	3. Prior to Recordation of the First Subdivision Map; Payment of Fee Prior to Issuance of Building Permits
SP 4.8-10 The Specific Plan is responsible to construct or fund its fair-share of the intersections and interchange improvements indicated on Table 4.8-18 [of the Newhall Ranch Specific Plan Final EIR]. Each future transportation performance evaluation required by Mitigation Measure 4.8-2 [of the Newhall Ranch Specific Plan Final EIR] which identifies a significant impact at these locations due to subdivision map-generated traffic shall address the need for additional capacity at each of these locations. If adequate capacity is not available at the time of subdivision map recordation, the performance evaluation shall determine the improvements necessary to carry Specific Plan generated traffic, as well as the fair share cost to construct such improvements.	Applicant	Field Verification of Construction or Receipt of Fair Share Funding or Bonding	1. LACDPW
If the future subdivision is conditioned to construct a phase of improvements which results in an overpayment of the fair-share cost of the improvement, then an appropriate adjustment (offset) to the fees paid to Los Angeles County and/or City of Santa Clarita pursuant to **Mitigation Measure 4.8-6**, above, shall be made. (*The transportation performance evaluation presented in this EIR,* ***Section 4.5*** *, fulfills the requirements of this Specific Plan mitigation measure relative to Mission Village.*)			2. LACDPW 3. Prior to Issuance of Occupancy Permits

P-4.8-11 The applicant of the Newhall Ranch Specific Plan shall participate in an I-5 developer fee program, if adopted by the Board of Supervisors for the Santa Clarita Valley. (*The Board of Supervisors has not adopted a developer fee program for the Santa Clarita Valley. However, the applicant currently is in negotiations with Caltrans regarding a funding agreement.*).	Applicant	Field Verification of Construction or Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Prior to Issuance of Occupancy Permits
SP-4.8-12 The applicant of the Newhall Ranch Specific Plan shall participate in a transit fee program, if adopted for the entire Santa Clarita Valley by Los Angeles County and City of Santa Clarita. (*The applicant will be required to pay the applicable transit fees in place at the time of map recordation* .)	Applicant	Field Verification of Construction or Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Prior to Issuance of Occupancy Permits
SP-4.8-13 Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a traffic analysis approved by the Los Angeles County Department of Public Works. The analysis will assess project and cumulative development (including an existing plus cumulative development scenario under the County's Traffic Impact Analysis Report Guidelines [TIA] and its Development Monitoring System [DMS]). In response to the traffic analysis, the applicant may construct off-site traffic improvements for credit against, or in lieu of paying, the mitigation fees described in Mitigation Measure 4.8-6 [of the Newhall Ranch Specific Plan Final EIR]. If future subdivision maps are developed in phases, a traffic study for each phase of the subdivision map may be submitted to determine the improvements needed to be constructed with that phase of development. (*The traffic analysis presented in this* ***Section 4.5*** *fulfills the requirements of this Specific Plan mitigation measure* .)	Applicant(s) (Project Traffic Engineer)	Receipt and Review of TIA and DMS Applicant Funding of or bonding of Fair Share of Improvements	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map
MV 4.5-1 28. The Old Road & McBean Parkway - Consistent with the milestones established in the most current County Department of Public Works (DPW) approved Westside Roadway Phasing Analysis, the project applicant shall stripe a third southbound through lane and a westbound right-turn lane at the intersection. Detailed signing and striping plans and traffic signal plans shall be submitted to the County Department of Public Works for review and approval. (*The Mission Village project's fair-share responsibility for the improvements identified in this mitigation measure is 27% in the cumulative condition. This fair-share information is provided to facilitate any future action by the Project applicant to seek participatory funding from other development unrelated to the Mission Village project. Please refer to EIR Appendix 4.5, AFA Traffic Impact Analysis, Appendix J, for fair-share calculations* .)	Applicant (Traffic Engineer)	Review of striping and signal plan	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-2 94. Commerce Center Drive & SR-126 - The project applicant shall reconstruct the existing intersection as a grade-separated interchange prior to issuance of building permits for the 2,780th residential unit and 935,000 square feet of non-residential commercial uses (or an equivalent traffic-generating combination thereof), or as otherwise provided in the most current County DPW approved Westside Roadway Phasing Analysis, whichever would require reconstruction of the intersection first. Detailed signing and striping plans and traffic signal plans shall be submitted to the County Department of Public Works for review and approval. (*The Mission Village project's fair-share responsibility for the improvements identified in this mitigation measure is 44.8% in the cumulative condition. This fair-share information is provided to facilitate any future action by the Project applicant to seek participatory funding from other development unrelated to the Mission Village project. Please refer to EIR Appendix 4.5, AFA Traffic Impact Analysis, Appendix J, for fair-share calculations* .)	Applicant (Traffic Engineer)	Field Verification of Construction	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis

MV 4.5-3 7. I-5 Southbound Ramps & SR-126 – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to stripe a fourth westbound through lane. (*Project Share = 14.3 percent) Please refer to EIR Appendix 4.5, AFA Traffic Impacts Analysis, Appendix J, for fair-share calculations* .)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-4 12. I-5 Southbound Ramps & Valencia Boulevard - Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to re-stripe the second westbound free-flow right-turn lane to a third westbound through lane/shared free-flow right-turn lane. (Project Share = 7.5 percent)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-5 25. The Old Road & Rye Canyon Road - Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to: (i) add a second northbound through lane and a second southbound left-turn lane; and (ii) convert the northbound and westbound free-flow right-turn lanes to conventional right-turn lanes with overlap phasing. (Project Share = 7.1 percent)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-6 45. McBean Parkway/Magic Mountain Parkway – The improvements recommended to mitigate the project's identified significant impacts at this intersection are to re-stripe for a third eastbound through lane and add a right-turn overlap phase for a westbound right-turn lane. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvement and, under such scenario, shall be entitled to reimbursement from the Valencia B&T District for the full cost of the improvement, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis.	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis

MV 4.5-7 48. McBean Parkway/Newhall Ranch Road – The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) Re-stripe for a fourth westbound through lane; and (ii) Re-stripe the northbound approach to provide dual right-turn lanes in conjunction with appropriate pedestrian safety enhancements. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (7%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis.	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW
			2. LACDPW
			3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-8 55. Orchard Village & McBean Parkway – The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) add a separate southbound left-turn lane; (ii) add a separate southbound through lane; (iii) add a separate southbound right-turn lane; and (iv) reconfigure the existing southbound right-turn lane as a shared left-turn through lane, as identified in the mitigation for the Henry Mayo Newhall Memorial Hospital expansion project. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the project applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (3%) and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. (Note: In the event the above improvements are implemented as part of the Henry Mayo Newhall Memorial Hospital expansion project, Mission Village would no longer result in significant impacts at this intersection and no mitigation would be necessary.)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW
			2. LACDPW
			3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis

MV 4.5-9 66. Bouquet Canyon Road & Newhall Ranch Road – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to reconfigure the second eastbound right-turn lane to a shared through/right-turn-lane. This improvement is located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (4%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis.	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-10 Applicable transit mitigation fees shall be paid by the project applicant at the time of building permit issuance, unless modified by an approved transit mitigation agreement.	Applicant (Traffic Engineer)	Pay applicable fee	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permit
MV 4.5-11 Prior to the commencement of project construction activities, the project applicant shall institute construction traffic management controls in accordance with the California Department of Transportation (Caltrans) traffic manual. These traffic management controls shall include measures determined on the basis of site-specific conditions including, as appropriate, the use of construction signs (e.g., "Construction Ahead") and delineators, and private driveway and cross-street closures.	Applicant (Traffic Engineer)	Field Verification of Construction	1. LACDPW 2. LACDPW 3. Prior to Construction
MV 4.5-12 Traffic signals shall be installed at the following intersections within the project site. The design and construction of the traffic signals shall be the sole responsibility of the project. The signals shall be in place to the satisfaction of the County Department of Public Works. Detailed signing and striping plans and traffic signal plans shall be submitted to Public Works for review and approval: • B Street at Magic Mountain Parkway; • A Street at Magic Mountain Parkway; • Commerce Center Drive at A Street; • KK Drive/HH Street at Magic Mountain Parkway; • II Drive at Magic Mountain Parkway; • Westridge Parkway at Magic Mountain Parkway; • Commerce Center Drive at Magic Mountain Parkway; • Commerce Center Drive at DD Drive; • Commerce Center Drive at GG Street; and • Westridge Parkway at QQ Street (Fire Station Signal).	Applicant (Traffic Engineer)	Plan Approval	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map

MV 4.5-13 The project applicant, or the current owner of the development, shall monitor the following intersections for the installation of traffic signals once the Mission Village elementary school is opened and every year thereafter for up to five years after the certificate of occupancy of the last residential unit of Mission Village (excluding age restricted/qualified residential units and residential units within the Saugus School District) is issued and the full planned occupancy of 900 students for the school is reached (or fewer students if official documentation from the Newhall School District shows no increase in student enrollment for five consecutive school years):	Applicant (Traffic Engineer)	Review of signal warrant analyses	1. LACDPW
• A Street at B Street/CC Drive; • Q1 Street at A Street; and • HH Street/R Street at A Street.			2. LACDPW
The referenced monitoring shall include the submittal of annual traffic signal warrant analyses to the County Department of Public Works for review and approval. At the time, if any, traffic signals are warranted, the applicant shall enter into a secured agreement/bond with Public Works to guarantee the installation of traffic signals, design the necessary striping and signal plans, and construct the signals to the satisfaction of Public Works. Any security for the traffic signal construction submitted will be returned once the construction is completed to the satisfaction of Public Works or at the expiration of the referenced monitoring program.			3. Annualy for 5 years after last occupancy to rmarket rate unti within NSD boundary
MV 4.5-14 The project shall install a traffic signal at the following location after detailed signing and striping plans and traffic signal plans have been reviewed and approved by the County Department of Public Works: • Westridge Parkway at Old Rock Road.	Applicant (Traffic Engineer)	Plan Approval	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map
MV 4.5-15 Prior to recordation of the first tract map in Mission Village, a revised Westside Roadway Phasing Analysis (RPA), prepared and submitted by the project applicant, shall be reviewed and approved by the County Department of Public Works (DPW). This RPA shall update the previously approved RPA and identify the necessary improvements and residential unit thresholds (timing requirements) for those improvements for Mission Village based on then-current phasing assumptions. The revised RPA shall include actual traffic counts on newly constructed roadways and/or at intersections where traffic mitigation measures have been carried out. Subsequent updates of the RPA shall be prepared based on the following development thresholds:	Applicant (Traffic Engineer)	Submittal of revised Westside Roadway Phasing analysis	1. LACDPW
i) 3,176 residential units and 13.17 million square feet non-residential uses; ii) 6,066 residential units and 14.87 million square feet non-residential uses; iii) 14,515 residential units and 16.00 million square feet non-residential uses; iv) 21,373 residential units and 17.65 million square feet non-residential uses; v) 25,001 residential units and 19.78 million square feet non-residential uses; and vi) 27,615 residential units and 22.08 million square feet non-residential uses.			2. LACDPW
In addition, the applicant shall submit to DPW for review and approval an annual report, due January 30th for the prior year, identifying the number and type of residential and commercial building permits issued for Mission Village (and any other development within the Westside Santa Clarita area). The purpose of this annual report will be to track development progress against the thresholds identified in the AFA Traffic Impact Analysis and the then-current RPA. 7. I-5 SB Ramps & Henry Mayo Drive (SR-126) - The project's compliance with mitigation MV 4.5-3 would mitigate the project's contribution to the identified significant impact and no further mitigation is required.			3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis

MV 4.5-16 9. The Old Road & I-5 SB Ramps – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to: (i) add a second northbound right-turn lane; (ii) add a second southbound left-turn lane; (iii) add a third southbound through lane; and (iv) convert the shared westbound left/right-turn lane to a second westbound left-turn lane and add a right-turn lane. (Project Share = 1.4 percent. P*lease refer to EIR Appendix 4.5, AFA Traffic Impacts Analysis, Appendix J, for fair-share calculations* .)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-17 10. I-5 SB Ramps & Magic Mountain Parkway – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to re-stripe the shared southbound left-turn/through lane to a left-turn lane and the first southbound right-turn lane to a shared through/left-turn lane (Project Share = 19.7 percent)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-18 11. I-5 NB Ramps & Magic Mountain Parkway –The improvement recommended to mitigate the project's identified significant impacts at this intersection is to re-stripe the shared northbound through/right-turn lane to a shared left-turn/through/right-turn lane. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvements will be constructed through the Valencia B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvements and, under such scenario, shall be entitled to reimbursement from the Valencia B&T District for the full cost of the improvements, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis.	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-19 14. I-5 SB Ramps & McBean Parkway - Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the costs to add a second southbound left-turn lane. (Project Share = 12.6%.)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-20 16. I-5 SB/Marriott & Pico Canyon Road/Lyons Avenue - Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the costs to add: (i) a left-turn phase for the westbound left-turn lane (can be protected/permissive configuration); and (ii) right-turn overlap phasing for the northbound right-turn lane. (Project Share = 4.7% percent.)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis

MV 4.5-21 17. I-5 NB On/Off Ramps & Lyons Avenue – The improvements recommended to mitigate the project's identified significant impacts at this intersection are: (i) re-stripe the third westbound through lane to a right-turn lane; and (ii) re-stripe the second westbound through lane to a shared through/right-turn lane. These improvements are located within the Via Princessa B&T District and, therefore, it is expected the improvements will be constructed through the Via Princessa B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (7%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis.		Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-22 25. The Old Road & Rye Canyon Road – Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, and in addition to compliance with mitigation MV 4.5-5, the project applicant shall fund its fair share of the costs to: (i) add a third northbound through lane; (ii) add a third southbound through lane; and (iii) add a second and third westbound left-turn lane. (Project Share = 7.1 percent) (*Note: This mitigation is supplemental to mitigation MV 4.5-5* .)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-23 26. The Old Road & Magic Mountain Parkway - Consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis, the project applicant shall fund its fair share of the cost to add right-turn overlap phasing for the southbound right-turn lane. (Project Share = 21.1)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis

MV 4.5-24 37. Tourney & Magic Mountain Parkway – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to stripe a fourth eastbound through lane. This improvement is located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvement and, under such scenario, shall be entitled to reimbursement from the Valencia B&T District for the full cost of the improvement, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis.	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW
			2. LACDPW
			3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-25 51. Wiley Canyon & Lyons – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to re-stripe the eastbound right-turn lane to a third through lane (shared through/right-turn lane). This improvement is located within the Via Princessa B&T District and, therefore, it is expected the improvements will be constructed through the Via Princessa B&T District. However, as the intersection is within the jurisdiction of the City of Santa Clarita, at the request of the City, the project applicant will construct the identified improvement and, under such scenario, shall be entitled to reimbursement from the Via Princessa B&T District for the full cost of the improvement, should the improvement not be constructed by the time it is identified as necessary in the most current County DPW approved Westside Roadway Phasing Analysis.	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW
			2. LACDPW
			3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis

MV 4.5-26 54. Orchard Village & Wiley Canyon – The improvement recommended to mitigate the project's identified significant impact at this intersection is to stripe a northbound right-turn lane. This improvement is located within the Via Princessa B&T District and, therefore, it is expected the improvement will be constructed through the Via Princessa B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (2%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. (Note: In the event a northbound right-turn lane is striped as part of the Henry Mayo Newhall Memorial Hospital expansion project, the improvement recommended to mitigate the project's identified significant impact at this intersection is to add a second southbound left-turn lane and remove the existing southbound right-turn lane.)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-27 57. Valencia Boulevard & Magic Mountain Parkway – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to add a second westbound left-turn lane by removing or relocating the existing east leg raised median. These improvements are located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvements as calculated based on project traffic volumes (6%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. (Note: In the event a second westbound left-turn lane is added as part of the Henry Mayo Newhall Memorial Hospital expansion project, the improvement recommended to mitigate the project's identified significant impact at this intersection is to reinstate a dedicated westbound right-turn lane (the Hospital project would remove the existing right-turn lane) and add a third eastbound through lane.)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis

MV 4.5-28 66. Bouquet Canyon Road & Newhall Ranch Road – The improvement recommended to mitigate the project's identified significant impacts at this intersection is to restripe the eastbound approach to consist of two eastbound left-turn lanes, four eastbound through lanes, and two eastbound right-turn lanes. This improvement is located within the Valencia B&T District and, therefore, it is expected the improvement will be constructed through the Valencia B&T District. However, because the intersection is within the jurisdiction of the City of Santa Clarita, the City desires to reserve the right to modify such mitigation improvements in the future. Therefore, at the request of the City, to facilitate the potential construction of an alternative improvement, the applicant will pay, or utilize existing B&T credits to fund, an amount equivalent to the applicant's percentage cost of the identified improvement as calculated based on project traffic volumes (4%), and under a timetable consistent with the milestones established in the most current County DPW approved Westside Roadway Phasing Analysis. (Note: This mitigation is supplemental to mitigation MV 4.5-9.)	Applicant (Traffic Engineer)	Payment of fair share of fees	1. LACDPW
			2. LACDPW
			3. Prior to Recordation of the Final Tract Map as determined by the approved Westside Phasing Ananlysis
MV 4.5-29 State Highways. The applicant shall work cooperatively with Caltrans to determine and provide transportation mitigation needed on State Highway facilities. The applicant shall construct mitigation improvements or pay an equitable share for mitigation projects to the satisfaction of Caltrans. The applicant shall enter into a traffic mitigation agreement with Caltrans before or within six months of certification of the EIR.	Applicant (Traffic Engineer)	Execute Traffic Mitigation Agreement	1. LACDPW
			2. LACDPW
			3. Prior to Issuance of Building Permit
Note: Subsequent to circulation of the Draft EIR, Caltrans and the project applicant worked together to prepare an agreement under which the applicant will pay to Caltrans, at the time of issuance of project building permits, the project's pro-rata share of the I-5 Improvement Project, as determined by an I-5 shares analysis conducted as part of the agreement. Under the agreement, Caltrans acknowledges that the applicant's full payment of its proportionate share amount satisfies its mitigation obligations to Caltrans relative to the project. A copy of the agreement, which has been executed by the project applicant, and the corresponding shares analysis are included in the Final EIR. (See Appendix F4.5, Traffic Mitigation Agreement Fair Share Payment, and, Mission Village I-5 Share Calculations, AFA (March 8, 2011).) Should the County certify this EIR as adequate under CEQA and approve the Mission Village project, Caltrans, as a responsible agency, would utilize the certified EIR as the basis for executing the agreement.			
4.6 NOISE			
SP 4.9-1 All construction activity occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the "County of Los Angeles Construction Equipment Noise Standards," County of Los Angeles Ordinance No. 11743, Section 12.08.440 as identified in [Specific Plan Program EIR] Table 4.9-3.	Applicant (Construction Contractor)	Include Measure in Specifications	1. LA County Department of Health Services
			2. LACDPW, Building and Safety
		Field Verification With Noise Monitor	3. During Grading and Construction Activities

SP 4.9-2 Limit all construction activities near occupied residences to between the hours of 6:30 AM and 8:00 PM, and exclude all Sundays and legal holidays pursuant to County Department of Public Works, Construction Division standards.	Applicant (Construction Contractor)	Include Measure in Specifications	1. LA County Department of Health Services
		Field Verification With Noise Monitor	2. LACDPW, Building and Safety
		Field Verification	3. During Grading and Construction Activities
SP 4.9-3 When construction operations occur adjacent to occupied residential areas, implement appropriate additional noise reduction measures that include changing the location of stationary construction equipment, shutting off idling equipment, notifying adjacent residences in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.	Applicant (Construction Contractor)	Include Measure in Specifications	1. LA County Department of Health Services
			2. LACDPW, Building and Safety
		Field Verification and Verification that Adjacent Residents Were Notified	3. During Grading and Construction Activities
SP 4.9-4 Locate construction staging areas on site to maximize the distance between staging areas and occupied residential areas.	Applicant (Construction Contractor)	Include Measure in Specifications	1. LA County Department of Health Services
			2. LACDPW, Building and Safety
		Field Verification	3. During Grading and Construction Activities
SP 4.9-5 Where new single-family residential buildings are to be constructed within an exterior noise contour of 60 dB(A) CNEL or greater, or where any multi-family buildings are to be constructed within an exterior noise contour of 65 dB(A) CNEL or greater, an acoustic analysis shall be completed prior to approval of building permits. The acoustical analysis shall show that the building is designed so that interior noise levels resulting from outside sources will be no greater than 45 dB(A) CNEL. (*The noise impacts analysis presented in this EIR* ***Section 4.6****, and the information contained in* ***Appendix 4.6****, provide the acoustical analysis required by this mitigation measure* .)	Applicant	Receipt and Review of Acoustical Analysis	1. LA County Department of Health Services
			2. LACDPW, Building and Safety
			3. Prior to the Issuance of Building Permits
SP 4.9-6 For single-family residential lots located within the 60 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 60 dB(A) CNEL or less. (*The noise impacts analysis presented in this EIR* ***Section 4.6****, and the information contained in* ***Appendix 4.6****, provide the acoustical analysis required by this mitigation measure.*)	Applicant	Receipt and Review of Acoustical Analysis	1. LA County Department of Health Services
			2. LACDPW, Building and Safety
			3. Prior to Tentative Approval of Subdivision
SP 4.9-7 For multi-family residential lots located within the 65 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 65 dB(A) CNEL or less. (*The noise impacts analysis presented in this EIR* ***Section 4.6****, and the information contained in* ***Appendix 4.6****, provide the acoustical analysis required by this mitigation measure* .)	Applicant	Receipt and Review of Acoustical Analysis	1. LA County Department of Health Services
			2. LACDPW, Building and Safety
			3. Prior to Tentative Approval of Subdivision

SP 4.9-8 For school sites located within the 70 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that noise at exterior play areas will be reduced to 70 dB(A) CNEL or less. (*The noise impacts analysis presented in this EIR* ***Section 4.6,*** *and the information contained in* ***Appendix 4.6,*** *provide the acoustical analysis required by this mitigation measure* .)	Applicant	Receipt and Review of Acoustical Analysis	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Tentative Approval of Subdivision
SP 4.9-9 All residential air conditioning equipment installed within the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Residential Air Conditioning and Refrigeration Noise Standards, County of Los Angeles Ordinance No. 11743, Section 12.08.530.	Building Contractor	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to the Issuance of Occupancy Permits
SP 4.9-10 All stationary and point sources of noise occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Ordinance No. 11743, Section 12.08.390 as identified in [Specific Plan Program EIR] Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources.	Future Owners/ Operators within project	Field Verification	1. LA County Department of Health Services 2. LA County Department of Building and Safety 3. During Life of Project
SP 4.9-11 Loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 PM and 6:00 AM in such a manner as to cause a noise disturbance is prohibited in accordance with the County of Los Angeles Ordinance No. 11743, Section 12.08.460.	Future Owners/ Operators within project	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Life of Project
SP 4.9-12 Loading zones and trash receptacles in commercial and Business Park areas shall be located away from adjacent residential areas, or provide attenuation so that noise levels at residential uses do not exceed the standards identified in Section 12.08.460 of the Ordinance No. 11743.	Applicant	Plan Check Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Approval of Final Maps or improvement/building plans and Verify Prior to Issuance of Occupancy Permits
SP 4.9-13 Where residential lots are located with direct lines of sight to the Magic Mountain Theme Park, an acoustic analysis shall be submitted to show that exterior noise on the residential lots generated by activities at the park do not exceed the standards identified in Section 12.08.390 of the Ordinance No. 11743 as identified in Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources. (*The noise impacts analysis presented in this EIR* ***Section 4.6*** *, and the information contained in* ***Appendix 4.6,*** *provide the acoustical analysis required by this mitigation measure.)*	Applicant	Receipt and Review of Acoustical Analysis; Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to issuance of building permit

SP 4.9-14 After the time that occupancy of uses on the Newhall Ranch Specific Plan site occurs, AND when noise levels at Travel Village reach 70 dB(A) CNEL at locations where recreational vehicles are inhabited, the applicant shall construct a noise abatement barrier to reduce noise levels at Travel Village to 70 dB(A) CNEL or less. (The noise impacts analysis presented in this EIR Section 4.6 determined that Year 2013 roadway noise levels at Travel Village would exceed 70 dB(A) CNEL with project build out. This mitigation measure may or may not be applicable depending upon approval of other Newhall Ranch Specific Plan subdivisions in process.	Applicant	Receipt and Review of Acoustical Analysis	1. LA County Department of Health Services
			2. LACDPW, Building and Safety
		Field Verification	3. Upon Occupancy of Uses on Newhall Ranch and if/when noise levels in Travel Village reach 70 dB(A) CNEL
SP 4.9-15 Despite the absence of a significant impact, applicants for all building permits of Residential, Mixed-Use, Commercial, and Business Park land uses (Project) shall pay to the Santa Clara Elementary School District, prior to issuance of building permits, the Project's pro rata share of the cost of a sound wall to be located between SR-126 and the Little Red School House.	Applicants for all Building Permits	Payment to Santa Clara Elementary School District	1. LACDRP
The Project's pro rata share shall be determined by multiplying the estimated cost of the sound wall by the ratio of the project's estimated contribution of average daily trips on SR-126 (ADT) at the Little Red School House (numerator) to the total projected cumulative ADT increase at that location (denominator).			2. LACDPW, Building and Safety
The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR 126 from the projected cumulative trips as shown in Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling west of the City of Fillmore. (The applicant will pay its pro-rata fee prior to the issuance of building permits in accordance with this mitigation measure.)			3. Upon Issuance of Building Permits
SP 4.9-16 Despite the absence of a significant impact, the applicant for all building permits of Residential, Mixed-Use, Commercial and Business Park land uses (Project) shall participate on a fair-share basis in noise attenuation programs developed and implemented by the City of Moorpark to attenuate vehicular noise on SR-23 just north of Casey Road for the existing single-family homes which front SR-23.	Applicants for all Building Permits	Payment to City of Moorpark	1. LACDRP
The mitigation criteria shall be to reduce noise levels to satisfy State noise compatibility standards. The Project's pro rata share shall be determined by multiplying the estimated cost of attenuation by the ratio of the project's estimated contribution of average daily trips on SR-23 (ADT) north of the intersection of SR-23 and Casey Road (numerator) to the total projected cumulative ADT increase at that location (denominator).			2. LACDPW, Building and Safety
The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-23 north of Casey Road from the projected cumulative trips as shown in Topical Response 5 – Traffic Impacts of the Program EIR to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling south of the City of Fillmore. (The applicant will pay its pro-rata fee prior to the issuance of building permits in accordance with this mitigation measure.)			3. Upon Issuance of Building Permits

SP 4.9-17 Prior to the approval of any subdivision map which permits construction within the Specific Plan area, the applicant for that map shall prepare an acoustical analysis assessing project and cumulative development (including an existing plus project analysis, and an existing plus cumulative development analysis including the project). The acoustical analysis shall be based upon state noise land use compatibility criteria and shall be approved by the Los Angeles County Department of Health Services. (The noise impacts analysis presented in this EIR Section 4.6, and the information contained in Appendix 4.6, provide the acoustical analysis required by this mitigation measure.)	Applicants for all Building Permits	Payment of Fee to Los Angeles County, Ventura County, City of Fillmore or the City of Santa Clarita	1. LACDRP
In order to mitigate any future impacts resulting from the project's contribution to significant cumulative noise impacts to development in existence as of the adoption of the Newhall Ranch Specific Plan and caused by vehicular traffic on off-site roadways, the applicant for building permits of Residential, Mixed-Use, Commercial, Visitor Serving and Business Park land uses shall, prior to issuance of building permits, pay a fee to Los Angeles County, Ventura County, the City of Fillmore or the City of Santa Clarita. The amount of the fee shall be the project's fair-share under any jurisdiction-wide or Santa Clarita Valley-wide noise programs adopted by any of the above jurisdictions. (The proposed Mission Village project would contribute to a significant cumulative noise impact to the Travel Village Recreational Vehicle Park; however, the project would not contribute to significant cumulative noise impacts to other development in existence as of the adoption of the Newhall Ranch Specific Plan and caused by vehicular traffic on off-site roadways.			2. Los Angeles Co. Department of Health Services
Mitigation Measure SP 4.9-14 requires that the project applicant construct a noise abatement barrier to reduce noise levels at Travel Village to 70 dB(A) CNEL or less. Because the noise abatement barrier would mitigate the identified significant impact, no further mitigation is required. In addition, the mitigation measure is not applicable because neither Los Angeles County nor the City of Santa Clarita has adopted a countywide or citywide noise program.)			3. Upon Issuance of Building Permits
MV 4.6-1 The project applicant, or its designee, shall not undertake construction activities that can generate noise levels in excess of the County's Noise Ordinance on Sundays or legal holidays.	Applicant (Construction Contractor)	Include Measure in Specifications	1. LA County Department of Health Services
			2. LACDPW, Building and Safety
		Field Verification	3. During Grading
MV 4.6-2 When construction operations occur in close proximity to on or off-site occupied residences, and if it is determined by County staff during routine construction site inspections that the construction equipment could generate a noise level at the residences that would be in excess of the Noise Ordinance, the project applicant, or its designee, shall implement appropriate additional noise reduction measures. These measures shall include, among other things, changing the location of stationary construction equipment, shutting off idling equipment, notifying residents in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services
			2. LACDPW, Building and Safety
			3. During Grading During Construction Activities

MV 4.6-3 In lieu of conventional pile driving, the project developer shall utilize cast-in-drilled-hole piles, or hydrohammer pile driving equipment with noise reduction, or an alternative methodology that would achieve equivalent noise level reductions, in those circumstances in which pile-driving activities would occur within 4,000 feet of sensitive receptors. Pile drilling is an alternate method of pile installation where a hole is drilled into the ground up to the required elevations and concrete is then cast into it. The estimated noise level of pile drilling at 50 feet is 80 to 95 dB(A) Leq compared to 90 to 105 dB(A) Leq of conventional pile driving. Therefore, pile drilling generally produces noise levels approximately 10 to 15 decibels lower than pile driving. Hydrohammer pile driving equipment uses an enclosed hydraulically driven hammer with noise reduction. Noise can be reduced to less than 80 dB(A) at 25 feet, 70 dB(A) at 80 feet, 65 dB(A) at 150 feet, and 60 dB(A) at 250 feet.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Bridge Construction
MV 4.6-4 If pile driving is utilized for the Commerce Center Drive Bridge construction consistent with the limitations imposed by Mitigation Measure MV 4.6-3, the project applicant shall, to the extent necessary, reduce the level of vibration impact by: • identifying all uses in the vicinity, if any, at which the vibration perception threshold may exceed permissible County limits identified in Section 12.08.560 of the County's Noise Ordinance; and • installing seismographs at the aforementioned sensitive locations, if any, to ensure that Section 12.08.560 of the County's Noise Ordinance is not exceeded, and/or that the pile driving would not cause structural damage or adversely affect vibration-sensitive equipment; and • if the seismographs determine the permissible perception threshold is exceeded at any of the uses, adjusting vibration amplitudes of the pile driving on the conditions of the affected structures, the sensitivity of equipment, and/or human tolerance to reduce the vibration level to permissible limits.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Bridge Construction
MV 4.6-5 To mitigate the noise impacts on Lots 561, 562, 563, and 564 (Area A2) (single-family residential) that back onto Commerce Center Drive from traffic on the proposed Commerce Center Drive extension through the site, the project applicant shall, prior to occupancy, construct a 5-foot solid wall along the rear lot lines of these lots. The wall may be constructed of 3/8 or 5/8-inch Plexiglas or other material of similar acoustic performance, and shall be continuous with no breaks or gaps.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit
Draft EIR Mitigation Measure MV 4.6-6 applied to Lot 468, which previously was designated for apartment/condominium use. When VTTM No. 61105 was revised December 15, 2010, the spineflower preserves were expanded to include Lot 468. Therefore, theas Lot 468 no longer includes sensitive receptors anduses would not longer be signficantly impacted by project noise, and Mitigation Measure MV 4.6-6 is no longer necesary.			
MV 4.6-7 To mitigate the noise impacts on Lot 508 (Mixed Use Commercial) from traffic on the proposed Commerce Center Drive extension through the site, the project applicant shall place planned frequent use areas for the residential component if any in the interior of the lot and separated from the roadway by structures. Alternatively, if residential uses are proposed, the project applicant shall construct a 5-foot berm/solid wall along the property line that abuts Commerce Center Drive.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit
MV 4.6-8 To mitigate the noise impacts on Lot 512 (Mixed Use Residential/Commercial) from traffic on the proposed Magic Mountain Parkway extension through the site, the project applicant shall place planned frequent use areas for the residential component in the interior of the lot and separated from the roadway by structures. Alternatively, the project applicant shall construct a 5-foot berm/solid wall along the property line that abuts Commerce Center Drive.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit

MV 4.6-9 When the final plans for the Mixed-use Residential/Commercial lots are complete showing the locations and orientations of the residences within the lots are complete, acoustic analyses shall be conducted by a qualified acoustic consultant to ensure that interior noise levels of any residences within the commercial lots can be feasibly reduced to 45 dB(A).	Applicant	Receipt and Review of Acoustical Analysis	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to issuance of building permit
MV 4.6-10 All residences located within Mixed-Use Residential/Commercial areas and within 200 feet of the centerlines of Commerce Center Drive and/or Magic Mountain Parkway shall incorporate the following roadway noise-reducing measures into the exterior wall that faces onto those roadways:	Applicant	Receipt and Review of Acoustical Analysis	1. LA County Department of Health Services
(a) All windows, both fixed and operable, shall consist of either double-strength glass or double-paned glass. All windows facing sound waves generated from the mobile source noise shall be manufactured and installed to specifications that prevent any sound from window vibration caused by the noise source. (b) Doors shall be solid core and shall be acoustically designed with gasketed stops and integral drop seals. (c) If necessitated by the architectural design of a structure, special insulation or design features shall be installed to meet the required interior ambient noise level.			2. LACDPW, Building and Safety
The specifications in this measure shall be refined when the final plans showing the locations and orientations of the residences within the lots along Commerce Center Drive and Magic Mountain Parkway are completed. Interior noise levels of all residences within lots designated for Mix Use shall not exceed of 45 dB(A) CNEL.			3. Prior to issuance of building permit
MV 4.6-11 Air conditioning units shall be installed to serve all living areas of all residences located with direct lines of sight to Commerce Center Drive and/or Magic Mountain Parkway so that windows may remain closed without compromising the comfort of the occupants.	Applicant (Construction Contractor)	Building Plan Check	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit Permit
MV 4.6-12 If residential lots abut portions of commercial lots where delivery truck/garbage truck activities would occur, a method of noise attenuation shall be specified by a qualified acoustic consultant that reduces noise to a level within normally acceptable levels identified in the applicable compatibility guidelines.	Applicant (Project Acoustic Consultant and Construction Contractor)	Building Plan Check	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit Permit
MV 4.6-13 All HVAC units within commercial lots adjacent to residential uses shall be enclosed so that noise levels from the units are no greater than 60 dB(A) at the property line when in proximity to single-family residences, and no greater than 65 dB(A) at the property line when in proximity to multi-family residences (apartments and condominiums).	Applicant (Project Acoustic Consultant and Construction Contractor)	Building Plan Check	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit Permit

MV 4.6-14 Balconies with direct lines of sight to Commerce Center Drive and/or Magic Mountain Parkway shall be discouraged from exposure to exterior noise levels greater than the 60 dB(A) CNEL standard for single-family residences or the 65 dB(A) CNEL standard for multi-family residences through architectural or site design. Alternatively, balconies shall be enclosed by solid noise barriers, such as 3/8-inch glass or 5/8 inch Plexiglas to a height specified by a qualified noise consultant that results in noise levels within normally acceptable levels identified in the applicable compatibility guidelines.	Applicant (Project Acoustic Consultant and Construction Contractor)	Building Plan Check	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit
MV 4.6-15 Prior to all home sales and rentals within Mission Village, the project applicant, or its designee, shall inform prospective buyers and renters that fireworks displays periodically occur at Magic Mountain Theme Park and that instantaneous noise levels at the eastern boundary of Mission Village could exceed 90 dB(A) for the duration of the displays. The disclosure statement shall include information on the current permits to conduct fireworks displays on the theme park, including dates of the fireworks, estimated times, and durations.	Applicant	Review of Project C C & R	1. L.A. County Department of Regional Planning 2. L.A. County Department of Regional Planning 3. Prior to Issuance of Occupancy Permit
4.7 AIR QUALITY			
SP 4.10-1 The Specific Plan will provide Commercial and Service Uses in close proximity to residential subdivisions. (*Mission Village provides commercial uses in close proximity to residential subdivisions)* .	Applicant	Approval of Tentative Maps	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals
SP 4.10-2 The Specific Plan will locate residential uses in close proximity to Commercial Uses, Mixed-Uses, and Business Parks. (*Mission Village locates residential uses in close proximity to Commercial Uses and Mixed Uses*).	Applicant	Approval of Tentative Maps	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals
SP 4.10-3 Bus pull-ins will be constructed throughout the Specific Plan site. (*Mission Village provides for bus stops at designated locations*).	Applicant	Final Highway Plan Check	1. LACDPW 2. LACDPW 3. Prior to Tentative Subdivision Map Approvals
SP 4.10-4 Pedestrian facilities, such as sidewalks, and community regional, and local trails, will be provided throughout the Specific Plan site. (Pedestrian facilities, such as sidewalks, bike paths, and trails, will be constructed throughout Mission Village, with future connections to other on site and off-site future developments and designated trails).	Applicant	Submittal of Tentative Maps	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals
SP 4.10-5 Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Specific Plan site connecting the individual Villages and community. (Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Mission Village site with future connections to future developments within Newhall Ranch).	Applicant	Submittal of Tentative Maps	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals

SP 4.10-6 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 - Nuisance, Rule 403 - Fugitive Dust, Rule 1113 - Architectural Coatings) and which are in effect at the time of development. The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (i.e., rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in Tables 1 and 2 of the Rule for each applicable source of fugitive dust and take certain notification and record keeping actions; or (2) obtain an approved Fugitive Dust Control Plan.	Applicant	Plan Check Review and apply applicable rules as part of environmental document	1. LACDRP
A complete copy of the SCAQMD's Rule 403 Implementation Handbook, which has been included in Appendix 4.10 [of the Newhall Ranch Specific Plan Program EIR], provides guideline tables to demonstrate the typical mitigation program and record keeping required for grading operations (Tables 1 and 2 and sample record keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent.			2. LACDRP
Each future subdivision proposed in association with the Newhall Ranch Specific Plan shall implement the following if found applicable and feasible for that subdivision: a. Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more). b. Replace groundcover in disturbed areas as quickly as possible. c. Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications, to exposed piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.			3. Prior to Tentative Subdivision Map Approvals
d. Water active sites at least twice daily. e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph. f. Monitor for particulate emissions according to district-specified procedures. g. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of CVC Section 23114.			
Paved Roads h. Sweep paved streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water). i. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. Unpaved Roads j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces. k. Reduce traffic speeds on all unpaved roads to 15 mph or less.			

l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles. m. Pave all construction access roads at least 100 feet on to the site from the main road. n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips. These measures control PM10 emissions and would also control PM2.5 emissions. The effectiveness of these measures at reducing PM10 emissions ranges from 7 to 92.5 percent. For the purposes of this impact analysis, and to be consistent with URBEMIS2002 methodology, it is assumed that implementation of these measures would reduce PM2.5 and PM10 emissions by a maximum of 68 percent.			
SP 4.10-7 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the construction emission reduction measures indicated below (and in Tables 11-2 and 11-3 of the SCAQMD's CEQA Air Quality Handbook, as amended) shall be implemented if found applicable and feasible for that subdivision: **On-Road Mobile Source Construction Emissions** a. Configure construction parking to minimize traffic interference. b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours).	Applicant	Field Verification and review and include applicable and feasible rules as part of environmental document	1. LACDRP
c. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM and between 10:00 AM and 3:00 PM). d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees. e. Implement a shuttle service to and from retail services and food establishments during lunch hours. f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets: • Rerouting construction traffic off congested streets; • Consolidating truck deliveries; and • Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site.			2. LACDRP
g. Prohibit truck idling in excess of 2 minutes. **Off-Road Mobile Source Construction Emissions** h. Use methanol-fueled pile drivers. i. Suspend use of all construction equipment operations during second stage smog alerts. j. Prevent trucks from idling longer than 2 minutes. k. Use electricity from power poles rather than temporary diesel-powered generators. l. Use electricity from power poles rather than temporary gasoline-powered generators. m. Use methanol- or natural gas-powered mobile equipment instead of diesel. n. Use propane- or butane-powered on-site mobile equipment instead of gasoline.			3. Prior to Tentative Subdivision Map Approvals
SP 4.10-8 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 - Nuisance, Rule 461 - Gasoline Transfer And Dispensing, Rule 1102 - Petroleum Solvent Dry Cleaners, Rule 1111 – NOX Emissions from Natural Gas-Fired, Fan-Type Central Furnaces, Rule 1138 - Control Of Emissions From Restaurant Operations, Rule 1146 - Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters) and which are in effect at the time of occupancy permit issuance.	Applicant	Field Verification and review and include applicable and feasible rules as part of environmental document	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals

SP 4.10-9 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the operational emission reduction measures indicated below (and in Tables 11-6 and 11-7 of the SCAQMD's CEQA Air Quality Handbook, as amended) shall be implemented if found applicable and feasible for that subdivision. **On Road Mobile Source Operational Emissions** ***Residential Uses*** a. Include satellite telecommunications centers in residential subdivisions. (*Removed as growth of Internet allows residents to telecommute from home using personal computers.*) b. Establish shuttle service from residential subdivision to commercial core areas. *(Residences are proposed in walking distance to many proposed commercial areas* .) c. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).	Applicant	Field Verification and review and include applicable and feasible rules as part of environmental document	1. LACDRP
d. Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks. e. Include retail services within or adjacent to residential subdivisions. (*Retail services will be available in proximity to residential areas* .) f. Provide shuttles to major rail transit centers or multi-modal stations. (*Not applicable because the project site is already served by two SCT routes that connect to McBean Transfer Station.*) g. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). h. Synchronize traffic lights on streets impacted by development. i. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes.			2. LACDRP
Commercial/Office Uses j. Provide preferential parking spaces for carpools and vanpools and provide 7 feet 2 inches minimum vertical clearance in parking facilities for vanpool access. k. Not applicable. l. Not applicable. m. Not applicable. n. Not applicable. o. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work. (*Removed as growth of Internet allows employers to establish websites where such information can be posted and accessed by employees at home on personal computers.*) p. Not applicable. q. Not applicable. r. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202). *(Rule 2202 applies to employers with more than 250 employees on a single work site. The Mission Village project is not anticipated to include uses that would generate significant levels of employment at a single location. Furthermore, the project applicant cannot enforce this measure on individual businesses. In the event that a business would employ more than 250 employees, the business itself would be required to comply with Rule 2202* .)			3. Prior to Tentative Subdivision Map Approvals

s. Implement a lunch shuttle service from a worksite(s) to food establishments. t. Not applicable. u. Not applicable. v. Utilize satellite offices rather than regular worksite to reduce VMT. (*Removed as growth of Internet allows employees to work from home on personal computers.*) w. Establish a home-based telecommuting program. (*Communication technology allows employees to work from remote locations.*) x. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance.			
y. Not applicable. z. Not applicable. aa. Establish a shuttle service from residential core areas to the worksite. ab. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters). ac. Not applicable. ad. Include residential units within a commercial project. (*Residential uses would be in proximity to commercial uses.*) ae. Not applicable. af. Any two of the following: • Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths. • Include bicycle parking facilities, such as bicycle lockers and racks. • Include showers for bicycling employees' use. ag. Any two of the following: • Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks. • Construct on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths. • Include showers for pedestrian employees' use. (Not applicable because the project applicant cannot enforce this measure on individual businesses).			
ah. Not applicable. ai. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). aj. Not applicable. ak. Synchronize traffic lights on streets impacted by development. al. Not applicable. am. Not applicable. an. Not applicable. ao. Implement or contribute to public outreach programs.			

ap. Not applicable. aq. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes. Industrial Uses ar. Not applicable. as. Not applicable. at. Not applicable. au. Not applicable. av. Not applicable. aw. Not applicable. ax. Not applicable. ay. Not applicable. az. Not applicable.			
ba. Not applicable. bb. Not applicable. bc. Not applicable. bd. Not applicable. be. Not applicable. bf. Not applicable. bg. Not applicable. bh. Not applicable. bi. Not applicable. bj. Not applicable. bk. Not applicable. bl. Not applicable. bm. Not applicable. bn. Not applicable. bo. Not applicable. bp. Not applicable. bq. Not applicable. br. Not applicable.			

Stationary Source Operational Emissions ***Residential*** bs. Use solar or low emission water heaters. bt. Not applicable. bu. Use built-in energy-efficient appliances. bv. Provide shade trees to reduce building heating/cooling needs. bw. Use energy-efficient and automated controls for air conditioners. bx. Use double-paned windows. by. Not applicable. bc. Use lighting controls and energy-efficient lighting. ca. Not applicable. cb. Not applicable. cb. Use light-colored roofing materials to reflect heat. cd. Increase walls and attic insulation beyond Title 24 requirements			
Commercial/Office Uses ce. Use solar or low emission water heaters. cf. Use central water heating systems. cg. Provide shade trees to reduce building heating/cooling needs. ch. Use energy-efficient and automated controls for air conditioners. ci. Use double-paned windows. cj. Use energy-efficient low-sodium parking lot lights. ck. Use lighting controls and energy-efficient lighting. cl. Use light-colored roofing materials to reflect heat. cm. Increase walls and attic insulation beyond Title 24 requirements. cn. Not applicable. ***Industrial Uses*** co. Not applicable. cp. Not applicable. cq. Not applicable. cr. Not applicable. cs. Not applicable. ct. Not applicable. cu. Not applicable. cv. Not applicable. cw. Not applicable. cx. Not applicable. cy. Not applicable. cz. Not applicable.			

SP 4.10-10 All non-residential development of 25,000 gross square feet or more shall comply with the County's Transportation Demand Management (TDM) Ordinance (Ordinance No. 93-0028M) in effect at the time of subdivision. The sizes and configurations of the Specific Plan's non-residential uses are not known at this time and the Ordinance specifies different requirements based on the size of the project under review. All current provisions of the ordinance are summarized in Appendix 4.10 of the Newhall Ranch Specific Plan Program EIR.	Applicant	Include Requirement in Future environmental documents and/or check at Building Permit	1. LACDPW 2. LACDRP 3. Tentative Map Approval or Building Permit, as applicable
SP 4.10-11 Subdivisions and buildings shall comply with Title 24 of the California Code of Regulations which are current at the time of development.	Applicant	Include Requirement in Future environmental documents and/or check at Building Permit	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Tentative Map Approval or Building Permit, as applicable
SP 4.10-12 Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage.	Applicant	Include Requirement in Future environmental documents and/or check at Building	1. LACDPW 2. LACDPW 3. Tentative Map Approval or Building Permit, as applicable
SP 4.10-13 Any on-site subterranean parking structures shall provide adequate ventilation systems to disperse pollutants and preclude the potential for a pollutant concentration to occur.	Applicant	Include Requirement in Future environmental documents and/or check at Building	1. LACDPW 2. LACDPW 3. Tentative Map Approval or Building Permit, as applicable
SP 4.10-14 The sellers of new residential units shall be required to distribute brochures and other relevant information published by the SCAQMD or similar organization to new homeowners regarding the importance of reducing vehicle miles traveled and related air quality impacts, as well as on local opportunities for public transit and ridesharing.	Applicant	LACDRP Review of information package and distribution records	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of Building Permit (Package) and Occupancy Permits (Records)
MV 4.7-1 The project applicant shall require that prior to the commencement of construction its contractors shall develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles including, but not limited to, scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes.	Applicant (Construction Superintendant)	LACDRP receipt of Emission Management Plan; field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of Grading or Building Permit

MV 4.7-2 The project applicant shall require that its contractors suspend the use of all construction equipment during first-stage smog alerts.	Applicant (Construction Superintendant)	LACDRP receipt of Emission Management Plan; field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During all construction
MV 4.7-3 The project applicant shall require that its contractors maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.	Applicant (Construction Superintendant)	LACDRP receipt of Emission Management Plan; field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During construction
MV 4.7-4 The project applicant shall require that its contractors use electric welders to avoid emissions from gas or diesel welders.	Applicant (Construction Superintendant)	LACDRP receipt of Emission Management Plan; field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During construction
MV 4.7-5 The project applicant shall require that its contractors reduce traffic speeds on all unpaved roads to 15 miles per hour or less.	Applicant (Construction Superintendant)	LACDRP receipt of Emission Management Plan; field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During construction
MV-4.7-6 The project applicant shall require that its contractors water active sites at least three times daily during dry weather.	Applicant (Construction Superintendant)	LACDRP receipt of Emission Management Plan; field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During construction
MV 4.7-7 The project applicant shall require that its contractors replace ground cover as quickly as possible.	Applicant (Construction Superintendant)	Field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During and following construction
MV 4.7-8 The project applicant shall require that its contractors schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM and between 10:00 AM and 3:00 PM).	Applicant (Construction Superintendant)	Field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During construction
MV 4.7-9 The project applicant shall require the contractor to provide temporary controls, such as a flag person, during all phases of construction to maintain smooth traffic flow.	Applicant (Construction Superintendant)	Field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During construction

MV 4.7-10 The project applicant shall require the contractor route construction trucks away from congested streets and sensitive receptor areas (e.g., residences, schools, hospitals, etc.).	Applicant (Construction Superintendant)	Field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During construction
MV-4.7-11 The project applicant shall install shaker plates at construction site exits, to minimize dirt track out and dust generation.	Applicant (Construction Superintendant)	Field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During construction
MV-4.7-12 The project applicant shall operate street sweepers that comply with SCAQMD Rules 1186 and 1186.1 on roads adjacent to the construction site in a nearly conitnuous manner so as to minimize dust emissions. Paved parking and staging areas shall be swept daily.	Applicant (Construction Superintendant)	Field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During construction
MV 4.7-13 The project applicant shall all on-site construction equipment to meet U.S. EPA Tier 2 of higher emissions standards according to the following: • April 2010 through December 31, 2011: All offroad diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 offroad emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. • January 1, 2012 through December 31, 2014: All offroad diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 3 offroad emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. • Post-January 1, 2015: All offroad diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 4 offroad emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.	Applicant (Construction Superintendant)	Field verification	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During construction
MV 4.7-14 An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. Any reasonable complaints shall be rectified within 24 hours of their receipt.	Applicant	Site Plan Check	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permit
Operational Mitigation Measures ***(a) Point Source Operational Emissions***			

MV4.7-15 Any dry cleaners proposing to locate on site shall utilize the services of off-site cleaning operations at already SCAQMD permitted locations. No on-site dry cleaning operations utilizing perchloroethylene or any other cleaning solvent containing toxic air contaminants shall be permitted within Mission Village.	Applicant	Site Plan Check	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permit
(b) Mobile Source Operational Emissions			
MV4.7-16 The project developer(s) shall coordinate with Santa Clarita Transit to identify appropriate bus stop/turnout locations.	Applicant	Site Plan Check	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permit
MV4.7-17 Kiosks containing transit information shall be constructed by the project applicant adjacent to selected future bus stops prior to initiation of bus service to the site.	Applicant	Site Plan Check	1. LACDRP 2. LACDRP 3. Prior to Issuance of Occupancy Permit
(c) Area Source Operational Emissions			
MV4.7-18 Wood-burning fireplaces and stoves shall be prohibited in all residential units. Use of wood in fireplaces shall be prohibited through project Covenants, Conditions, and Restrictions (CC&Rs).	Applicant	Approved CC&Rs	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permit
4.8 WATER SERVICE			
SP 4.11-1 The proposed Specific Plan shall implement a water reclamation system in order to reduce the Specific Plan's demand for imported potable water. The Specific Plan shall install a distribution system to deliver non-potable reclaimed water to irrigate land uses suitable to accept reclaimed water, pursuant to Los Angeles County Department of Health Standards. (*Consistent with this measure, the Project Description section of this EIR discusses the fact that the Mission Village project will install and implement a recycled water delivery system in order to reduce the project's demand for imported potable water. As required by this measure, recycled (reclaimed) water would be used to irrigate land uses suitable to accept recycled water, pursuant to Los Angeles County Department of Health standards.*)	Applicant	Subdivision Map Improvement Plan Check	1. LACDRP 2. LACDPW 3. Prior to Issuance of Building Permit(s)
SP 4.11-2 Landscape concept plans shall include a palette rich in drought-tolerant and native plants. (*Consistent with this measure, the Mission Village project's landscape plans shall include a palette rich in drought-tolerant and native plants.*)	Applicant	Preliminary Landscape Plan Review	1. LACDPW 2. LA County Fire Department or Parks and Recreation 3. Prior to Recordation of Final Map
SP 4.11-3 Major manufactured slopes shall be landscaped with materials that will eventually naturalize, requiring minimal irrigation. (*Consistent with this measure, the Mission Village project's grading/landscape plans shall include a note requiring landscaping with materials that will eventually naturalize, requiring minimal irrigation.*)	Applicant	Preliminary Landscape Plan Review	1. LACDPW 2. LA County Fire Department or Parks and Recreation 3. Prior to Recordation of Final Map

SP 4.11-4 Water conservation measures as required by the State of California shall be incorporated into all irrigation systems. (*Consistent with this measure, the Mission Village project shall incorporate into all of its irrigation systems, water conservation measures required by the State of California* .)	Applicant	Architectural Plans	1. California Department of Conservation 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit(s)
SP 4.11-5 Not applicable.			
SP 4.11-6 In conjunction with the submittal of applications for tentative tract maps or parcel maps which permit construction, and prior to approval of any such tentative maps, and in accordance with the requirements of the Los Angeles County General Plan DMS, as amended, Los Angeles County shall require the applicant of the map to obtain written confirmation from the retail water agency identifying the source(s) of water available to serve the map concurrent with need. If the applicant of such map cannot obtain confirmation that a water source(s) is available for buildout of the map, the map shall be phased with the timing of an available water source(s), consistent with the County's DMS requirements. (*Consistent with this measure, Valencia Water Company, the retail water purveyor for the Mission Village project, has issued its Mission Village WSA for the project, confirming the availability of water to serve the project concurrent with need* .)	Applicant	Written Confirmation of Water Availability	1. LACDPW 2. LACDPW 3. Prior to Recordation of Final Subdivision Maps
SP 4.11-7 Prior to commencement of use, all uses of recycled water shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services. (*Consistent with this measure, the Mission Village project's recycled water delivery system shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services* .)	Applicant	Plan Check	1. County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Grading or Occupancy Permit(s) as applicable
SP 4.11-8 Prior to the issuance of building permits that allow construction, the applicant of the subdivision shall finance the expansion costs of water service extension to the subdivision through the payment of connection fees to the appropriate water agency(ies). (*Consistent with this measure, prior to issuance of building permits, the applicant for the Mission Village project shall pay for and construct the required water service extension to the Mission Village subdivision.*)	Applicant	Payment of Connection Fees	1. Castaic Lake Water Agency (CLWA)/VWC 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permits

SP 4.11-9 Pursuant to Public Resources Code Section 21081(a)(2), the County shall recommend that the Upper Santa Clara Water Committee (or Santa Clarita Valley Water Purveyors), made up of the Castaic Lake Water Agency, Los Angeles County Waterworks District No. 36, Newhall County Water District, Santa Clarita Water Division of CLWA and the Valencia Water Company, prepare an annual water report that will discuss the status of groundwater within the Alluvial and Saugus Aquifers, and State Water Project water supplies as they relate to the Santa Clarita Valley.	Applicant	Receipt of Annual Report	1. Board of Supervisors
The report will also include an annual update of the actions taken by CLWA to enhance the quality and reliability of existing and planned water supplies for the Santa Clarita Valley. In those years when the Committee or purveyors do not prepare such a report, the applicant at its expense shall cause the preparation of such a report that is acceptable to the County to address these issues.			2. LACDRP
This annual report shall be provided to Los Angeles County who will consider the report as part of its local land use decision making process. (*As an update, a total of 10 annual water reports have been prepared and provided to the County of Los Angeles, the City of Santa Clarita and other interested persons and organizations from 1998 through 2008. The latest 2009 Water Report is included in* ***Appendix 4.8.***)			3. Prior to Recordation of Final Subdivision Maps
SP 4.11-10 Pursuant to Public Resources Code Section 21081(a)(2), the County shall recommend that Castaic Lake Water Agency (CLWA), in cooperation with other Santa Clarita Valley retail water providers, continue to update the UWMP for Santa Clarita Valley once every five years (on or before December 31) to ensure that the County receives up-to-date information about the existing and planned water supplies in the Santa Clarita Valley. The County will consider the information contained in the updated UWMP in connection with the County's future local land use decision-making process. The County will also consider the information contained in the updated UWMP in connection with the County's future consideration of any Newhall Ranch tentative subdivision maps allowing construction. (*CLWA and other local retail water purveyors have completed the 2005 UWMP in the fall 2005. The County will consider the information contained in the adopted 2005 UWMP in connection with the Mission Village project.*)	Applicant	Receipt of written identification of water service from retailer	1. Board of Supervisors 2. LACDRP 3. Prior to Recordation of Final Subdivision Maps
SP 4.11-11 Not applicable			
SP 4.11-12 Not applicable			
SP 4.11-13 Not applicable			
SP 4.11-14 Not applicable			

SP 4.11-15 Groundwater historically and presently used for crop irrigation on the Newhall Ranch Specific Plan site and elsewhere in Los Angeles County shall be made available by the Newhall Land and Farming Company, or its assignee, to partially meet the potable water demands of the Newhall Ranch Specific Plan. The amount of groundwater pumped for this purpose shall not exceed 7,038 afy. This is the amount of groundwater pumped historically and presently by the Newhall Land and Farming Company in Los Angeles County to support its agricultural operations. Pumping this amount will not result in a net increase in groundwater use in the Santa Clarita Valley.	Applicant	Receipt of written identification of water service provider or applicant	1. Board of Supervisors
To monitor groundwater use, the Newhall Land and Farming Company, or its assignee, shall provide the County an annual report indicating the amount of groundwater used in Los Angeles County and the specific land upon which that groundwater was historically used for irrigation. For agricultural land located off the Newhall Ranch Specific Plan site in Los Angeles County, at the time agricultural groundwater is transferred from agricultural uses on that land to Specific Plan uses, The Newhall Land and Farming Company, or its assignee, shall provide a verified statement to the County's Department of Regional Planning that Alluvial aquifer water rights on that land will now be used to meet Specific Plan demand. (*Consistent with this measure, the applicant has provided the County with the annual reports, and the reports are included in Draft EIR* ***Appendix 4.8.*** *)*			2. LACDRP 3. Prior to Recordation of Final Subdivision Maps
SP 4.11-16 The agricultural groundwater used to meet the needs of the Specific Plan shall meet the drinking water quality standards required under Title 22 prior to use. (*Consistent with this measure, the agricultural groundwater used to meet the needs of the Mission Village project shall meet the drinking water quality standards required under Title 22 prior to use* .)	Applicant	Receipt of written report on water quality from ASR program engineer	1. LACDPW 2. LACDRP 3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.
SP 4.11-17 In conjunction with each project-specific subdivision map for the Newhall Ranch Specific Plan, the County shall require the applicant of that map to cause to be prepared a supplemental or subsequent Environmental Impact Report, as appropriate, pursuant to CEQA requirements. By imposing this EIR requirement on each Newhall Ranch tentative subdivision map application allowing construction, the County will ensure that, among other things, the water needed for each proposed subdivision is confirmed as part of the County's subdivision map application process. This mitigation requirement shall be read and applied in combination with the requirements set forth in revised Mitigation Measure 4.11-6, above, and in Senate Bills 221 and 610, as applicable, regardless of the number of lots in a subdivision map. (*This measure has been satisfied by the County requiring preparation of this EIR for the Mission Village project* .)	Applicant	Review of Subdivision Map Application	1. LACDPW 2. LACDRP 3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.
SP 4.11-18 The storage capacity purchased in the Semitropic Groundwater Banking Project by the Newhall Ranch Specific Plan applicant shall be used in conjunction with the provision of water to the Newhall Ranch Specific Plan. The applicant, or entity responsible for storing Newhall Ranch water in this groundwater bank, shall prepare an annual status report indicating the amount of water placed in storage in the groundwater bank. This report shall be made available annually and used by Los Angeles County in its decision making processes relating to buildout of the Newhall Ranch Specific Plan. *(This measure is not applicable to the Mission Village project, because the water to be stored in the Semitropic Groundwater Banking Project is not needed to satisfy the water demand of the project or cumulative development in the Santa Clarita Valley; however, as requested by the County, the applicant provided the annual status report to County staff in 2010 (see EIR* ***Appendix 4.8*** *for the applicant's status report letter.*)	Applicant	Review of Subdivision Map Application	1. LACDPW 2. LACDRP 3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.

SP 4.11-19 A Memorandum of Understanding (MOU) and Water Resource Monitoring Program has been entered into between United Water Conservation District and the Upper Basin Water Purveyors, effective August 20, 2001. The MOU/Water Resource Monitoring Program, when executed, will put in place a joint water resource monitoring program that will be an effective regional water management tool for both the Upper and Lower Santa Clara River areas as further information is developed, consistent with the MOU. This monitoring program will result in a database addressing water usage in the Saugus and Alluvium aquifers over various representative water cycles. The parties to the MOU intend to utilize this database to further identify surface water and groundwater impacts on the Santa Clara River Valley. The applicant, or its designee, shall cooperate in good faith with the continuing efforts to implement the MOU and Water Resource Monitoring Program.	Applicant	Review of Initial Study and subdivision maps	1. LACDRP
As part of the MOU process, the United Water Conservation District and the applicant have also entered into a "Settlement and Mutual Release" agreement, which is intended to continue to develop data as part of an ongoing process for providing information about surface and groundwater resources in the Santa Clara River Valley. In that agreement, the County and the applicant have agreed to the following:			2. LACDRP
4.3 Los Angeles County and Newhall will each in good faith cooperate with the parties to the MOU and will assist them as requested in the development of the database calibrating water usage in the Saugus and Alluvium aquifers over multi-year water cycles. Such cooperation will include, but not be limited to, providing the parties to the MOU with historical well data and other data concerning surface water and groundwater in the Santa Clara River and, in the case of Newhall, providing Valencia Water Company with access to wells for the collection of well data for the MOU.			3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.
4.4 Los Angeles County and Newhall further agree that the County of Los Angeles will be provided with, and consider, the then-existing data produced by the MOU's monitoring program in connection with, and prior to, all future Newhall Ranch subdivision approvals or any other future land use entitlements implementing the Newhall Ranch Specific Plan. If the then-existing data produced by the MOU's monitoring program identifies significant impacts to surface water or groundwater resources in the Santa Clara River Valley, Los Angeles County will identify those impacts and adopt feasible mitigation measures in accordance with the California Environmental Quality Act.			
(*Since the MOU was signed in 2001, the United Water Conservation District and the Upper Basin Water Purveyors (CLWA, Los Angeles County Waterworks District #36, CLWA Santa Clarita Water Division, NCWD and Valencia Water Company) have worked together to accomplish the stated purpose and objectives of the MOU. The MOU has resulted in the collection and analysis of groundwater and other hydrologic data, along with construction and calibration of a sophisticated regional groundwater flow model for the Upper Basin. These efforts benefit the service areas of both the United Water Conservation District and the Upper Basin water purveyors.*)			
SP 4.11-20 Not Applicable			
SP 4.11-21 The applicant, in coordination with RWQCB staff, shall select a representative location upstream and downstream of the Newhall Ranch Specific Plan and sample surface and groundwater quality. Sampling from these two locations would begin upon approval of the first subdivision map and be provided annually to the RWQCB and County for the purpose of monitoring water quality impacts of the Specific Plan over time. If the sampling data results in the identification of significant new or additional water quality impacts resulting from the Specific Plan, which were not previously known or identified, additional mitigation shall be required at the subdivision map level. (*This measure is not applicable until subdivision map approval for the Mission Village project.*)	Applicant	Water quality sampling in coordination with RWQCB staff	1. LACDRP 2. LACDRP/RWQCB 3. Concurrent with Approval of the first Subdivision Map which permits construction, and annually thereafter.

SP 4.11-22 Beginning with the filing of the first subdivision map allowing construction on the Specific Plan site and with the filing of each subsequent subdivision map allowing construction, the Specific Plan applicant, or its designee, shall provide documentation to the County of Los Angeles identifying the specific portion(s) of irrigated farmland in the County of Los Angeles proposed to be retired from irrigated production to make agricultural water available to serve the subdivision. As a condition of subdivision approval, the applicant or its designee, shall provide proof to the County that the agricultural land has been retired prior to issuance of building permits for the subdivision. (*Consistent with this measure, the applicant of the Mission Village project has provided the County with this documentation. As a condition of approval of the Mission Village tract map, the applicant will provide proof to the County that the agricultural land in the County proposed to be retired from irrigated production, in fact, has been retired prior to issuance of building permits for the Mission Village subdivision* .)	Applicant	Receipt of written report from applicant	1. LACDRP 2. LACDRP 3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.
MV 4.8-1 Upon the issuance of building permits associated with each subdivision map allowing construction within the Mission Village site, the applicant shall pay Facility Capacity Fees to the Castaic Lake Water Agency (CLWA) in accordance with CLWA policies and procedures.	Applicant	Receipt of documentation from applicant	1. LACDRP 2. LACDRP 3. Prior to Issuance of Building Permit
4.9 WASTEWATER DISPOSAL			
SP 4.12-1 The Specific Plan shall reserve a site of sufficient size to accommodate a water reclamation plant to serve the Newhall Ranch Specific Plan. (*This measure has been implemented by the Board of Supervisors' approval in May 2003, of the Newhall Ranch WRP within the boundary of the Specific Plan.*)	Applicant	Specific Plan Review	1. LA County Department of Regional Planning
			2. LA County Department of Regional Planning
			3. Prior to Final Approval of Specific Plan
SP 4.12-2 A 5.8 to 6.9 mgd water reclamation plant shall be constructed on the Specific Plan site, pursuant to County, State, and Federal design standards, to serve the Newhall Ranch Specific Plan. (*This measure will be implemented pursuant to the project-level analysis already completed for the Newhall Ranch WRP in the certified Newhall Ranch Specific Plan EIR* .)	WRP Applicant	Review of WRP Construction Plans	1. County Sanitation Districts of Los Angeles County (CSDLAC)
			2. CSDLAC
			3. Prior to Demand for First Phase or WRP Capacity
SP 4.12-3 The Conceptual Backbone Sewer Plan shall be implemented pursuant to County, State, and Federal design standards. (*The proposed Mission Village sewer system would implement the previously adopted Conceptual Backbone Sewer Plan relative to the Mission Village portion of the Specific Plan* .)	Applicant (Project Engineer)	Review of Tentative Map	1. LACDPW 2. LACDPW 3. Prior to Approval of Tentative Maps
SP 4.12-4 Prior to recordation of each subdivision permitting construction, the applicant of each subdivision shall obtain a letter from the new County sanitation district stating that treatment capacity will be adequate for that subdivision. (*This mitigation measure, as it applies to Mission Village, will be implemented concurrent with project development* .)	Applicant	Review Final Subdivision Map	1. CSDLAC 2. LACDPW 3. Prior to Recordation of Each Final Subdivision Map
SP 4.12-5 All facilities of the sanitary sewer system will be designed and constructed for maintenance by the County of Los Angeles Department of Public Works and the County Sanitation Districts of Los Angeles County, and/or the new County sanitation district or similar entity in accordance with their manuals, criteria, and requirements. (*This mitigation measure, as it applies to Mission Village, will be implemented concurrent with project development.*)	Applicant (Project Engineer)	Review Final Subdivision Plans	1. CSDLAC, LACDPW 2. CSDLAC, LACDPW 3. Prior to Recordation of Each Final Subdivision Map

SP 4.12-6 Pursuant to Los Angeles County Code, Title 20, Division 2, all industrial waste pretreatment facilities shall, prior to the issuance of building permits, be reviewed by the County of Los Angeles Department of Public Works, Industrial Waste Planning and Control Section and/or the new County sanitation district, to determine if they would be subject to an Industrial Wastewater Disposal Permit. *(To the extent this mitigation measure applies to Mission Village, it will be implemented concurrent with project development.*)	Applicant (Project Engineer)	Plan Check	1. CSDLAC, LACDPW 2. CSDLAC, LACDPW 3. Prior to issuance of building permit
SP 4.12-7 Each subdivision permitting construction shall be required to be annexed into the Los Angeles County Consolidated Sewer Maintenance District. (*This mitigation measure, as it applies to Mission Village, will be implemented concurrent with project development.*)	LACDPW	Review of Final Sewer Plans	1. LACDPW 2. LACDPW 3. After County Acceptance of Sewer Improvements
4.10 SOLID WASTE SERVICES			
SP 4.15-1 Each future subdivision which allows construction within the Newhall Ranch Specific Plan shall meet the requirements of all applicable solid waste diversion, storage, and disposal regulations that are in effect at the time of subdivision review. Current applicable regulations include recycling areas that are: • compatible with nearby structures; • secured and protected against adverse environmental conditions; • clearly marked, and adequate in capacity, number and distribution; • in conformance with local building code requirements for garbage collection access and clearance; • designed, placed and maintained to protect adjacent developments and transportation corridors from adverse impacts, such as noise, odors, vectors, or glare; • in compliance with federal, state, or local laws relating to fire, building, access, transportation, circulation, or safety; and • convenient for persons who deposit, collect, and load the materials.	Applicant	Include in Future Subdivision Design and/or environmental documents for Tentative Maps	1. LACDPW, Waste Management Division 2. LACDPW, Waste Management Division 3. Prior to Tentative Map Approval
SP 4.15-2 Future multi-family, commercial, and industrial projects within the Newhall Ranch Specific Plan shall provide accessible and convenient areas for collecting and loading recyclable materials. These areas are to be clearly marked and adequate in capacity, number, and distribution to serve the development.	Applicant	Include in Future Subdivision Design and/or environmental documents for Tentative Maps	1. LACDPW, Waste Management Division 2. LACDPW, Waste Management Division 3. Prior to Tentative Map Approval
SP 4.15-3 The first purchaser of each residential unit within the Newhall Ranch Specific Plan shall be given educational or instructional materials which will describe what constitutes recyclable and hazardous materials, how to separate recyclable and hazardous materials, how to avoid the use of hazardous materials, and what procedures exist to collect such materials.	Applicant	Review of Information Package and Distribution Records	1. LACDRP 2. LACDRP 3. Prior to Issuance of Building Permit (Package) and Occupancy Permits (Records)
SP 4.15-4 The applicant of all subdivision maps which allow construction within the Newhall Ranch Specific Plan shall comply with all applicable future state and Los Angeles County regulations and procedures for the use, collection and disposal of solid and hazardous wastes.	Applicant	Include in Future Subdivision Design and/or environmental documents for Tentative Maps	1. LACDPW, Waste Management Division 2. LACDPW, Waste Management Division 3. Prior to Tentative Map Approval

MV 4.10-1 Prior to the issuance of grading permits, the project applicant shall prepare a Waste Management Plan pursuant to Los Angeles County Code, Title 20, Chapter 20.87, Construction and Demolition Debris Recycling. The Waste Management Plan shall include provisions for the recycling of a minimum of 50 percent of the construction and demolition debris, and the submittal of corresponding reports to the Los Angeles County Environmental Programs Division.	Applicant	Review of Waste Management Plan and corresponding reports	1. Los Angeles County Environmental Programs Division 2. Los Angeles County Environmental Programs Division 3. Prior to Grading Permit
4.11 SHERIFF SERVICES			
SP 4.17-1 As subdivision maps are submitted to the County for approval in the future, the applicant shall incorporate County Sheriff's Department design requirements (such as those pertaining to site access, site security lighting, etc.) which will reduce demands for Sheriff's Department service to the subdivisions and which will help ensure adequate public safety features within the tract designs.	Applicant	Plan Check Field Verification	1. LA County Sheriff's Department 2. LA County Sheriff's Department 3. Prior to Final Map Approvals and Verify Prior to Issuance of Occupancy Permits
MV 4.11-1 Prior to the commencement of construction activities, the project applicant, or its designee, shall enter into an agreement with the California Highway Patrol for traffic control services during project construction. Such traffic control shall include the posting of reduced construction zone speed limit signs as necessary.	Applicant	Field Verification	1. California Highway Patrol 2. California Highway Patrol 3. During Constuction
MV 4.11-2 Prior to the commencement of construction activities, the project applicant, or its designee, shall retain the services of a private security company to patrol the construction site(s), as necessary, to minimize the potential for trespass, theft and other unlawful activity associated with construction-related activities.	Applicant	Contract Review Field Verification	1. California Highway Patrol 2. California Highway Patrol 3. During Constuction
MV 4.11-3 Prior to the commencement of construction activities, the project applicant, or its designee, shall prepare an approved traffic management plan for construction activities affecting rights-of-way within the jurisdiction of the California Department of Transportation (Caltrans) and the Los Angeles County Department of Public Works.	Applicant	Review of Approved Traffic Management Plan	1. LA County Sheriff's Department 2. LA County Sheriff's Department 3. Prior to Issuance of Grading Permit
MV 4.11-4 Prior to the issuance of building permits or certificates of occupancy as applicable, the project applicant, or its designee, shall pay to the County the applicable law enforcement facilities fee required by Los Angeles County Code section 22.74.010, et seq., or, in the alternative, shall enter into an agreement with the County for the in lieu payment of such fees.	Applicant	Payment of Fees	1. LA County Sheriff's Department 2. LA County Sheriff's Department 3. Prior to Issuance of Building Permits or Certificate of Occupancy

MV 4.11-5 Prior to the issuance of building permits or certificates of occupancy as applicable, the project applicant, or its designee, shall incorporate the following crime prevention measures into the proposed Project: - Provide lighting in open areas and parking lots; - Ensure the visibility of doors and windows from the street; - Ensure that the required building address numbers are lighted and readily apparent from the street for emergency response agencies; - Provide knox box entry key system for law enforcement if a gated community, gated apartments or gated town homes are planned in the project boundary.	Applicant	Building Plan Check	1. LA County Sheriff's Department 2. LA County Sheriff's Department 3. Prior to Issuance of Building Permits or Certificate of Occupancy
4.12 FIRE PROTECTION SERVICES			
SP 4.18-1 At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a Wildfire Fuel Modification Plan shall be prepared and submitted for approval by the County Fire Department. The Wildfire Fuel Modification Plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to County Fire Department requirements.	Applicant	Receipt and Review of Wildfire Fuel Modification Plan	1. LA County Fire Department
The wildfire fuel modification plan shall depict a fuel modification zone in conformance with the Fuel Modification Ordinance in effect at the time of subdivision. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the County Forester. Fire resistant plant species containing habitat value may be planted in the fuel modification zone. (*The proposed Mission Village project provides standards that are parallel with standards as presented by the Wildfire Fuel Modification Program. Construction vehicles used during the construction of the Mission Village Project would incorporate the use of spark arrestors on all machinery to prevent fires, along with a lookout for fires during welding and activities that could produce large amounts of sparks*)			2. LA County Fire Department 3. Prior to Approval of Final Maps
SP 4.18-2 Each subdivision and site plan for the proposed Specific Plan shall provide sufficient capacity for fire flows of 1,250 gpm at 20 pounds psi residual pressure for a 2-hour duration for single-family residential units, and 5,000 gpm at 20 psi residual pressure for a 5-hour duration for multi-family residential units and commercial/retail uses, or whatever fire flow requirement is in effect at the time of subdivision and site plan approval. (*All development within the Mission Village project area will be required to comply with the fire flow standards for single-family residential, multi-family residential, commercial uses, and industrial uses as provided in the Los Angeles County Municipal Code, as adopted through the 2006 California Fire Code* .)	Applicant	Field Verification of Required Fire Flows	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Occupancy Permits
SP 4.18-3 Each subdivision map and site plan for the proposed Specific Plan shall comply with all applicable building and fire codes and hazard reduction programs for Fire Zones 3 and 4 that are in effect at the time of subdivision map and site plan approval. (*The proposed Mission Village Project will include development standards for construction of residential and commercial uses that would provide for the reduction of fire threats* .)	Applicant	Field Verification	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Occupancy Permits

SP 4.18-4 The developer will provide funding for three fire stations to the Consolidated Fire Protection District of Los Angeles County (the "Fire District") in lieu of developer fees. The developer will dedicate two fire station sites for the two fire stations located in Newhall Ranch. The Fire District will dedicate the site for the fire station to be located at the Del Valle Training Facility. Each fire station site will have a building pad consisting of a net buildable area of 1 acre. If the cost of constructing the three fire stations, providing and dedicating the two fire station sites, and providing three engines, one paramedic squad and 63 percent of a truck company exceeds the developer's developer fee obligation for the Newhall Ranch development as determined by the Fire District, the Fire District will fund the costs in excess of the fee obligation.	Applicant	Execute "Fire Protection Plan" Agreement Monitor Adequacy of Fire Prevention Services	1. LA County Fire Department
Two of the three fire stations to be funded by the developer will not exceed 6,000 square feet; the third fire station to be funded by the developer will not exceed 8,500 square feet. The Fire District will fund the cost of any space/square footage of improvement in excess of these amounts as well as the cost of the necessary fire apparatus for any such excess square footage of improvements. The cost of three fire engines, a proportionate share of a truck and one squad to be provided by the developer will be determined based upon the apparatus cost at the time the apparatus is placed in service. The Fire District and the developer will mutually agree to the requirements of first-phase protection requirements based upon projected response/travel coverage. Such mutual agreement regarding first-phase fire protection requirements ("fire protection plan") and the criteria for timing the development of each of the three fire stations will be defined in a Memorandum of Understanding between the developer and the Fire District.			2. LA County Fire Department
Delivery of fire service for Newhall Ranch will be either from existing fire stations or one of the three fire stations to be provided by the developer pursuant to this section. Prior to the commencement of the operation of any of the three fire stations, fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the developer at mutually agreed-upon locations, to be replaced by the permanent stations which will be located within the Newhall Ranch development. The developer and the Fire District will annually review the fire protection plan to evaluate development and market conditions and modify the Memorandum of Understanding accordingly. (*The Mission Village Project Site will be required to comply with the MOU for the development of Fire Station 177 as specifically provided by* ***Mitigation Measure MV 4.12-2***)			3. Prior to Approval of First Final Subdivision Map
MV 4.12-1 Prior to approval of a final subdivision map for the project, the applicant must prepare and submit for approval by the County Fire Department a preliminary fuel modification plan, a preliminary landscape plan, and a preliminary irrigation plan for the project, as required by Section 1117.2.1 of the County of Los Angeles Fire Code.	Applicant	Receipt and Review of Fuel Modification Plan, Landscape Plan, and Irrigation Plan	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval

MV 4.12-2 The applicant shall construct a fire station on the Mission Village site, including all ancillary requirements for normal fire station operation such as landscaping, parking, fuel tanks, storage rooms, etc. The applicant also shall provide funding for the purchase of one Fire District standard, fully equipped fire pumper engine, and one Tiller Truck/Quint to be housed at the fire station. Upon completion of construction, the fire station, including the underlying land and equipment, shall be conveyed to the Consolidated Fire Protection District of Los Angeles County (Fire District) in lieu of the payment of any/all developer fees otherwise required of the project. The applicant and the Fire District shall enter into a memorandum of understanding (MOU) detailing the terms of the agreement as generally set forth in this mitigation measure.	Applicant	Execution of MOU	1. LA County Fire Department
The fire station will be constructed on a minimum 1.5-acre site located south of Magic Mountain Parkway at the intersection of Westridge Parkway and "QQ" Street; the location and configuration of the site shall be approved by the Fire District. The fire station shall be approximately 13,500 GSF in size and include a 3,600 GSF apparatus storage building; future changes in federal, state, or local requirements may affect this minimum size. The Fire District shall approve all plans and designs for the fire station prior to the commencement of construction.			2. LA County Fire Department
The Fire District will evaluate with the applicant the requirements of first-phase protection based upon projected response/travel coverage with the goal of achieving 5-minute response coverage. The results of such evaluation shall include requirements for first-phase fire protection ("fire protection plan"), and the criteria for timing the development of the fire station shall be outlined in the MOU. Prior to the commencement of operation of the fire station, fire service may be delivered to Mission Village from existing fire stations or from temporary fire stations to be provided by the applicant at mutually agreed-upon locations, to be replaced by the permanent station. The use of such temporary fire stations shall be approved by the Fire District and detailed in the MOU. (*This mitigation measure implements mitigation previously adopted by the County in connection with development of the Newhall Ranch Specific Plan and does not impose upon the applicant an obligation to fund or construct additional fire stations beyond those obligations previously imposed by the County.*)			3. Prior to Issuance of any Building Permit
MV 4.12-3 The proposed development shall provide multiple ingress/egress access for the circulation of traffic, and emergency response issues. Said determinations shall be approved through the tentative map approval.	Applicant	Plan Review	1. LA County Fire Department
			2. LA County Fire Department
			3. Prior to Final Map Approval
MV 4.12-4 The development of this project shall comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants. Specifics for said requirements shall be established during the review and approval process of the tentative map.	Applicant	Plan Review	1. LA County Fire Department
			2. LA County Fire Department
			3. Prior to Final Map Approval
MV 4.12-5 This property is located within the area described by the Forester and Fire Warden as a Fire Zone 4, Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met.	Applicant	Plan Review	1. LA County Fire Department
			2. LA County Fire Department
			3. Prior to Issuance of Building Permit

MV 4.12-6 Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit
MV 4.12-7 Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width and indicated on the Tentative or Exhibit "A" maps. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit
MV 4.12-8 Access roads shall be maintained with a minimum of 10 feet of brush clearance on each side. Fire access roads shall have an unobstructed vertical clearance clear-to-sky with the exception of protected tree species. Protected tree species overhanging fire access roads shall be maintained to provide a vertical clearance of 13 feet, 6 inches. Applicant to obtain all necessary permits prior to the commencement of trimming of any protected tree species.	Applicant	Field Inspection	1. LA County Fire Department 2. LA County Fire Department 3. Life of project
MV 4.12-9 The maximum allowable grade shall not exceed 15 percent except where topography makes it impractical to keep within such grade; in such cases, an absolute maximum of 20 percent will be allowed for up to 150 feet in distance. The average maximum allowed grade, including topographical difficulties, shall be no more than 17 percent. Grade breaks shall not exceed 10 percent in 10 feet.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
MV 4.12-10 Requirements for access, fire flows, and hydrants are to be addressed at the Los Angeles County Subdivision Committee meeting during the subdivision tentative map stage.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
MV 4.12-11 Fire sprinkler systems shall be installed in residential and commercial occupancies consistent with applicable code and ordinance requirements. For those occupancies not requiring fire sprinkler systems, it is encouraged that fire sprinkler systems be installed. This will reduce potential fire and life losses.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit
MV 4.12-12 Prior to construction, the following items shall be addressed: a. Installation and inspection of the required all weather access to be provided as determined by either the tentative map review process or building penult issuance. b. Fire hydrants shall be installed and tested prior to the clearance for the commencement of construction.	Applicant	Plan Review/Field Inspection	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Building Permit Issuance

INSTITUTIONAL:			
MV 4.12-13 The development may require fire flows up to 8,000 gallons per minute at 20 pounds per square inch residual pressure for up to a 4-hour duration as outlined in the 2002 County of Los Angeles Fire Code Appendix III-AA. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit
MV 4.12-14 Fire hydrant spacing shall be based on fire flow requirements as outlined in the 2002 County of Los Angeles Fire Code Appendix III-BB. Additional hydrants will be required if hydrant spacing exceeds specified distances.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
MV 4.12-15 All access devices and gates shall comply with California Code of Regulations, Title 19, Article 3.05 and Article 3.16. Los Angeles County Fire Department Regulation #5.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
COMMERCIAL/HIGH-DENSITY RESIDENTIAL:			
MV 4.12-16 The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a 5-hour duration. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used. Fire flows shall be established as part of the tentative map review process with the submittal of architectural details to determine actual flow requirement. If adequate architectural detail is unavailable during the tentative map review process, maximum fire flows will be established with the ability of the fire flow to be changed during the actual architectural plan review by Fire Prevention Engineering for building permit issuance.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of a Building Permit
MV 4.12-17 Fire hydrant spacing shall be 300 feet and shall meet the following requirements: a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant. b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant. c. Additional hydrants will be required if hydrant spacing exceeds specified distances. d. When cul-de-sac depth exceeds 200 feet on a commercial street, hydrants shall be required at the corner and mid block. e. A cul-de-sac shall not be more than 500 feet in length, when serving land zoned for commercial use.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of a Building Permit
MV 4.12-18 Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval

MV 4.12-19 All on-site driveways/roadways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. The centerline of the access driveway shall be located parallel to, and within 30 feet of an exterior wall on one side of the proposed structure.	Applicant	Plan Review	1. LA County Fire Department
			2. LA County Fire Department
			3. Prior to Issuance of a Building Permit
MV 4.12-20 Driveway width for non-residential developments shall be increased when any of the following conditions will exist: a. Provide 34 feet in width, when parallel parking is allowed on one side of the access roadway/driveway. Preference is that such parking is not adjacent to the structure.	Applicant	Plan Review	1. LA County Fire Department
b. Provide 36 feet in width, when parallel parking is allowed on each side of the access roadway/driveway. For buildings in excess of 35 feet, minimum paved fire access is 28 feet. c. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans.			2. LA County Fire Department
d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in 3-inch-high letters. Driveway labeling is necessary to endure access for Fire Department use.			3. Prior to Final Map Approval
SINGLE-FAMILY/TWO-FAMILY DWELLING UNITS:			
MV 4.12-21 Single-family detached homes shall require a minimum fire flow of 1,250 gallons per minute at 20 pounds per square inch residual pressure for a 2-hour duration. Two family dwelling units (duplexes) shall require a fire flow of 1,500 gallons per minute at 20 pounds per square inch residual pressure for a 2 hour duration. When there are five or more condominium units are taking access on a single driveway, the minimum fire flow shall be increased to 1,500 gallons per minute at 20 pounds per square inch residual pressure for a 2-hour duration.	Applicant	Plan Review/Field Inspection	1. LA County Fire Department
			2. LA County Fire Department
			3. Prior to Building Permit Issuance
MV 4.12-22 Fire hydrant spacing shall be 600 feet and shall meet the following requirements: a. No portion of lot frontage shall be more than 450 feet via vehicular access from a public fire hydrant.	Applicant	Plan Review/Field Inspection	1. LA County Fire Department
b. Lots of 1 acre or more shall place no portion of a structure where it exceeds 750 feet via vehicular access from a properly spaced public fire hydrant. c. When cul-de-sac depth exceeds 450 feet on a residential street, fire hydrants shall be required at the corner and mid block.			2. LA County Fire Department
d. Additional hydrants will be required if hydrant spacing exceeds specified distances during the tentative map review process or building permit plan check.			3. Prior to Final Map Approval

MV-4.12-23 Streets or driveways within the development shall be provided with the following: a. Provide 36 feet in width on all streets where parking is allowed on both sides. b. Provide 34 feet in width on cul-de-sacs up to 700 feet in length. This allows parking on both sides of the street. c. Provide 36 feet in width on cul-de-sacs from 701 to 1,000 feet in length. This allows parking on both sides of the street. d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in 3-inch-high letters. Driveway labeling is necessary to ensure access for Fire Department use. e. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
MV 4.12-24 A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
LIMITED ACCESS DEVICES (GATES, ETC.):			
MV 4.12-25 All access devices and gates shall meet the following requirements: a. Any single-gated opening used for ingress and egress shall be a minimum of 26 feet in width, clear-to-sky. b. Any divided gate opening (when each gate is used for a single-direction of travel, i.e., ingress or egress) shall be a minimum width of 20 feet clear-to-sky. c. Gates and/or control devices shall be positioned a minimum of 50 feet from a public right-of-way, and shall be provided with a turnaround having a minimum of 32 feet of turning radius. If an intercom system is used, the 50 feet shall be measured from the right-of-way to the intercom control device. d. All limited access devices shall be of a type approved by the Fire Department. e. Gate detail plans shall be submitted for review and approval to the Fire Department as part of the tentative map submittal or prior to installation. These plans shall show all locations, widths, and details of the proposed gates.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Occupany Permit
4.13 EDUCATION			
SP 4.16-1 The Specific Plan developer shall reserve five elementary schools sites, one junior high school site and one high school site, of 7 to 10, 20 to 25, and 40 to 45 acres in size, respectively, depending upon adjacency to local public parks and joint use agreements. (*The Mission Village project includes the reservation of a 9.5-acre elementary school site* .)	Applicant	Tentative Tract Map Subdivision Review	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Final Approval of Tentative Tract Maps
SP 4.16-2 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Newhall School District. (*This measure is applicable to the Mission Village project* .)	Applicant	Verification of Compliance from School District	1. Newhall School District 2. LACDPW, Building and Safety 3. Prior to Issuance of Residential Building Permits

SP 4.16-3 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the William S. Hart Union High School District. (*This measure is applicable to the Mission Village project* .)	Applicant	Verification of Compliance from School District	1. William S Hart Unified High School District (WSHUHSD) 2. LACDPW, Building and Safety 3. Prior to Issuance of Residential Building Permits
SP 4.16-4 Not applicable.			
SP 4.16-5 Not applicable.			
MV 4.13-1 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Saugus Union School District.	Applicant	Verification of Compliance from School District	1. Castaic Union School District 2. LACDPW, Building and Safety 3. Prior to Issuance of Residential Building Permits
4.14 PARKS AND RECREATION			
SP 4.20-1 Development of the Newhall Ranch Specific Plan will provide the following acreages of parks and open area: • Ten public Neighborhood Parks totaling 55 acres; • Open Areas totaling 1,106 acres of which 186 acres are Community Parks; • High Country Special Management Area of 4,214 acres; • River Corridor Special Management Area of 819 acres; • A 15-acre lake; • An 18-hole golf course; and • A trail system consisting of: ◎ Regional River Trail; ◎ Salt Creek Corridor; ◎ Community trails; and ◎ Unimproved trails.	Applicant	Subdivision Review for Compliance with Specific Plan	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Processing of Tentative Subdivision Maps
SP 4.20-2 Prior to the construction of the proposed trail system, the Specific Plan applicant shall finalize the alignment of trails with the County Department of Parks and Recreation.	Applicant	Verification of Consultation of Department of Parks and Recreation	1. LACDRP 2. LA County Department of Parks and Recreation 3. Prior to Issuance of Grading Permit for Trails

SP 4.20-3 Trail construction shall be in accordance with the County of Los Angeles Department of Parks and Recreation trail system standards. The Specific Plan identifies two neighborhood parks within the Mission Village tract map site; however, the proposed project will provide only one neighborhood park. The credits generated by the proposed project exceed the Quimby Obligation, thus allowing only the provision for one neighborhood park within the tract map site. In addition to the above mitigation measures, the Specific Plan's neighborhood parks and the active areas of the Community Parks are required to be improved pursuant to the revised Specific Plan's list of specified park improvements. The park improvements are required to be provided in accordance with the final park plan approved by the County's Department of Parks and Recreation. See, Specific Plan, May 2003, Section 2.8, p. 2-145.	Applicant	Trails Plan Review	1. LA County Department of Parks and Recreation 2. LA County Department of Parks and Recreation
As a Board of Supervisors' imposed Condition of Approval, approximately 1,517 acres of land encompassing the Salt Creek watershed in Ventura County are required to be dedicated in fee and/or by conservation easement, as determined by the County in its sole discretion, to the joint powers authority, which is responsible for overall recreation and conservation of the Newhall Ranch High County SMA. Said land is to be managed in conjunction with and in the same manner as the High Country SMA.		Field Verification	3. Prior to Approval of Trail Plans and Verify Upon Construction Completion
4.15 LIBRARY SERVICES			
SP 4.19-1 The developer will provide funding for a maximum of two libraries (including the site(s), construction, furniture, fixtures, equipment, and materials) to the County Librarian. The developer will dedicate a maximum of two library sites for a maximum of two libraries located in Newhall Ranch in lieu of the land component of the County's library facilities mitigation fee, in accordance with the provisions of Section 22.72.090 of Section 2 of Ordinance No. 98-0068. The actual net buildable library site area required and provided by the developer will be determined by the actual size of the library building(s), the Specific Plan parking requirements, the County Building Code, and other applicable rules.	Applicant	Review of Memorandum of Understanding and Library Construction Plan	1. LA County Library
The total library building square footage to be funded by the developer will not exceed 0.35 net square feet per person. The developer's funding of construction of the library(s) and furnishings, fixtures, equipment and materials for the library(s) will be determined based on the cost factors in the library facilities mitigation fee in effect at the time of commencement of construction of the library(s).			2. LACDPW
Prior to County's issuance of the first residential building permit of Newhall Ranch to the developer, the County Librarian and the developer will mutually agree upon the library construction requirements (location, size, funding, and time of construction) based upon the projected development schedule and the population of Newhall Ranch based on the applicable number of average persons per household included in the library facilities mitigation fee in effect at the time. Such mutual agreement regarding the library construction requirements ("Library Construction Plan") and the criteria for timing the completion of the library(s) will be defined in a Memorandum of Understanding (MOU) between the developer and the County Librarian.			3. Prior to Issuance of First Residential Building Permit
Such MOU shall include an agreement by the developer to dedicate sufficient land and pay the agreed amount of fees on a schedule to allow completion of the library(s) as described below. The developer's funding for library facilities shall not exceed the developer's fee obligation at the time of construction under the developer fee schedule.			

If two libraries are to be constructed, the first library will be completed and operational by the time of County's issuance of the 8,000th residential building permit of Newhall Ranch, and the second library will be completed and operational by the time of County's issuance of the 15,000th residential building permit of Newhall Ranch. If the County Librarian decides that only one library will be constructed, the library will be completed and operational by the time of County's issuance of the 10,000th residential building permit of Newhall Ranch.			
No payment of any sort with respect to library facilities will be required under Section 2.5.3.d. of the Specific Plan in order for the developer to obtain building permits for nonresidential buildings.			
4.16 AGRICULTURAL RESOURCES			
SP 4.4-1 Not applicable.			
SP 4.4-2 Not applicable.			
MV 4.16-1 In order to minimize the premature conversion of agricultural lands and to track that conversion, prior to issuance of the first grading permit in areas of Mission Village where agricultural soils designated as prime farmland, unique farmland, and/or farmland of statewide importance exist (Pub.Resources Code section 21060.1), Newhall Land shall prepare and submit to the County a phasing map to document the phased discontinuation of existing agricultural activities located within the Mission Village project area over the course of its development.	Applicant	Review of Subdivision Map Application	1. LACDPW 2. LACDRP 3. Prior to Issuance of Grading Permit
4.17 UTILITIES			
SP 4.14-1 All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the California Code of Regulations).	Applicant	Plan Check Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit(s)
SP 4.14-2 Southern California Edison or other energy provider is to be notified of the nature and extent of future development on the Specific Plan site prior to recordation of all future subdivisions.	Applicant	Receipt of Notification to Energy Provider	1. LACDRP 2. LACDRP 3. Prior to Recordation of All Subdivisions
SP 4.14-3 All future tract maps are to comply with Southern California Edison or other energy provider guidelines for grading, construction, and development within SCE easements.	Applicant (Construction Contractor)	Plan Check	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Final Tract Map Approvals and Verify Prior to Issuance of Occupancy Permits
SP 4.14-4 Electrical infrastructure removals and relocations are to be coordinated between the Specific Plan engineer and Southern California Edison or other energy provider as each tract is designed and constructed.	Applicant (Specific Plan Engineer)	Receipt of Verification of Such Consultations	1. LACDPW 2. LACDPW 3. Prior to Final Tract Map Approval and During Construction

SP 4.14-5 All future tract maps are to be reviewed by Los Angeles County to ensure adequate accessibility to Edison or other energy provider facilities as a condition of their approvals.	Applicant	Plan Check	1. LACDPW 2. LACDPW 3. Prior to Final Tract Map Approval
SP 4.14-6 Not applicable.			
SP 4.13-1 All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the California Code of Regulations).	Applicant/Future Owners and Operators within project	Plan Check Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit(s)
SP 4.13-2 A letter from the Southern California Gas Company or other gas provider is to be obtained prior to recordation of all future subdivisions stating that service can be provided to the subdivision under construction.	Applicant	Receipt of Letter from Gas Provider	1. LACDRP 2. LACDRP 3. Prior to Recordation of Final Maps
SP 4.13-3 The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within Southern California Gas Company easements. These requirements would be explicitly defined by SCGC at the future tentative map stage.	Applicant (Construction Contractor)	Receipt and implementation of Such Requirements from SCGC	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Grading and Construction Operations
SP 4.13-4 All potential buyers or tenants of property in the vicinity of Southern California Gas Company transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.	Applicant	Include in Sale/Lease Disclosure Documents	1. LACDRP 2. LACDRP 3. Prior to Issuance of Occupancy Permits
4.18 MINERAL RESOURCES			
No mitigation measures required.			
4.19 ENVIRONMENTAL SAFETY			
SP 4.5-1 All final school locations are to comply with the California State Board of Education requirement that no schools be sited within 100 feet from the edge of the right-of-way of 100–110 kV lines; 150 feet from the 220–230 kV lines; and 250 feet from the 345 kV lines. (*The school proposed as part of the Mission Village project will not be sited within an electric transmission line restricted zone* .)	Applicant	Tentative Tract Map Review	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Approval of Tract Maps
SP 4.5-2 Only non-habitable structures shall be located within SCE easements. (*The Mission Village tract map does not locate any habitable structures within a Southern California Edison [SCE] easement* .)	Applicant	Tentative Tract Map Review	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Approval of Tract Maps

SP 4.5-3 Prior to issuance of grading permits, all abandoned oil and natural gas-related sites must be remediated to the satisfaction of the California Department of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region). (*All abandoned oil and natural gas-related sites on the Mission Village project site have been abandoned and remediated, as necessary, according to California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) standards. Furthermore, pursuant to project-specific mitigation measure MV 4.19-1, all former oil wells to be disturbed or located in an area of development on the Mission Village site shall be reabandoned according to DOGGR standards prior to the issuance of grading permits.*)	Applicant/On-Site Oil and Natural Gas Producers	Confirmation that Oil- and Natural Gas-Related Sites are Satisfactorily Remediated	1. California Department of Conservation, Division of Oil and Gas; LA County Hazardous Materials Control Program; SCAQMD; and RWQCBLAR 2. California Department of Conservation, Division of Oil and Gas; LA County Hazardous Materials Control Program; SCAQMD; and RWQCBLAR 3. Prior to Issuance of Grading Permits
SP 4.5-4 Not applicable.			
SP 4.5-5 The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements. These requirements would be explicitly defined at the future tentative map stage. (*The Mission Village tentative tract map incorporates all applicable requirements of the Southern California Gas Company [SCGC] with respect to pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements* .)	Applicant (Civil Engineer)	Grading Plan Check	1. SCGC 2. LACDPW 3. Prior to Approval of Grading Plan
SP 4.5-6 All potential buyers or tenants of property in the vicinity of SCGC transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains. (*This mitigation measure will be implemented concurrent with project development* .)	Applicant	Include this Information in CC&Rs	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. At Home Sales
SP 4.5-7 Not applicable.			
SP 4.5-8 Not applicable.			
SP 4.5-9 In accordance with the provisions of the Los Angeles County Code, Title 11, Division 4, Underground Storage of Hazardous Materials regulations, the County of Los Angeles Department of Public Works shall review, prior to the issuance of building permits by the County of Los Angeles, any plans for underground hazardous materials storage facilities (e.g., gasoline) that may be constructed or installed within the Specific Plan. (This mitigation measure will be implemented prior to the issuance of building permits.)	Applicant (Building Contractors)	Include this Requirement in Building Specifications Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permits

MV 4.19-1 During grading operation, all former oil wells located on the Mission Village development property shall be reabandoned and the sites remediated, if necessary, according to the requirements of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources, if such sites are to be disturbed or are located in an area of development.	Applicant (Civil Engineer and Well Abandonment Specialist)	Receipt of Confirmation of Reabandon-ment	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. During Grading Operations
MV 4.19-2 During grading operations, those areas of the Mission Village development property identified as formerly containing above-ground storage tanks, current agricultural storage areas and current soil staining by the Phase I Environmental Site Assessment of Proposed The Mesas East, Valencia, California (BA Environmental, February 2005), shall be investigated for the presence of petroleum hydrocarbons and hazardous materials and/or wastes, and, where necessary, shall be remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).	Applicant	Receipt and Review of Test Results or Verification of Remediation	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During grading operations
MV 4.19-3 During grading operations, all pipelines located on the Mission Village development property that will no longer be used to transport oil products shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources. The soil beneath these pipelines shall be assessed for petroleum hydrocarbons. Any identified contaminated soil shall be remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).	Applicant (Civil Engineer and Pipeline Abandonment Specialist)	Receipt of Confirmation of Reabandon-ment Receipt and Review of Test Results or Verification of Remediation	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. During Grading Operations
MV 4.19-4 During grading operations, all groundwater monitoring wells and production water wells not intended for future use shall be abandoned according to applicable federal, state, and local regulations.	Applicant (Civil Engineer and Pipeline Abandonment Specialist)	Receipt of Confirmation of Reabandon-ment Receipt and Review of Test Results or Verification of Remediation	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. During Grading Operations

MV 4.19-5 Prior to demolition or rehabilitation, all electrical poles and facilities to be demolished or rehabilitated shall be surveyed to determine if they contain PCBs. If PCBs are present, they shall be removed and disposed of by a licensed and certified PCB removal contractor, in accordance with all federal, state, and local regulations.	Applicant	Receipt and Review of Test Results or Verification of Remediation	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. During Grading Operations
MV 4.19-6 Prior to the issuance of grading permits, all ponds located on the project site that may have been used for the treatment or disposal of hazardous wastes shall be tested for environmental hazards and remediated, if necessary, in accordance with all federal, state, and local regulations.	Applicant	Receipt and Review of Test Results or Verification of Remediation	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. During Grading Operations
MV 4.19-7 Areas of visible soil staining not planned for excavation, or located in an area planned to be raised in grade, shall be assessed for environmental hazards and treated, as necessary, in accordance with all federal, state, and local regulations. Areas of visible soil staining that are scheduled to be excavated shall have any visibly impacted soil disposed of in accordance with all federal, state, and local regulations.	Applicant	Receipt and Review of Test Results or Verification of Remediation	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. During Grading Operations
MV 4.19-8 In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, underground storage tanks, sumps, debris, asbestos, septic tanks, cesspools or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities in the vicinity of the find shall cease immediately until the project site is evaluated by a qualified professional. Work shall not resume until appropriate actions recommended by the professional have been implemented and it has been demonstrated that the identified contaminants have been remediated or removed from the project site in accordance with applicable law.	Applicant (Building Contractors)	Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. During All Phases of Construction
MV 4.19-9 Soils excavated for construction of the unlined water quality control basin will not be used for construction of the basin. If discolored soil is encountered, it will be excavated and will not be used in construction of the basin.	Applicant (Building Contractors)	Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. During All Phases of Construction

MV 4.19-10 In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, debris, or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities shall cease immediately until the affected area is evaluated by a qualified professional. A remediation plan shall be developed in consultation with the appropriate regulatory authorities and the remediation identified shall be completed. Work shall not resume in the affected area until appropriate actions have been implemented in accordance with the remediation plan. The remediation action plan shall include the following: • Remediation goals and cleanup criteria that could include, but are not necessarily limited to, excavation and on-site treatment, excavation and off-site treatment, and/or removal of contaminated soil and/or groundwater; • A detailed description of the access points and haul-out routes for remedial activities; remediation methods and procedures; mitigation of dust; minimization or avoidance of disturbance to sensitive ecosystems; and verification soil sampling and analysis. • Included in the discussion shall be information on disposal sites, transport and disposal methods, as well as recordkeeping methods for documenting remediation, regulatory compliance, and health and safety programs for on-site workers; and • Removal of oil development equipment and debris.	Applicant (Building Contractors)	Include this Requirement in Building Specifications Field Verification	1. LACDPW, Building and Safety
			2. LACDPW, Building and Safety
			3. During All Phases of Construction
MV 4.19-11 A Soil Management Plan for the residential development envelopes and recreational construction areas shall be developed and implemented, as appropriate. The objective of the Soil Management Plan is to provide guidance for the proper handling, on-site management, and disposal of impacted soil that may be encountered during construction activities (i.e., excavation and grading). The plan shall include practices that are consistent with the California Division of Occupational Safety and Health regulations, California Code of Regulations, title 8, as well as Certified Unified Program Agency remediation standards that are protective of the planned use. Appropriately trained professionals will be on site during preparation, grading, and related earthwork activities to monitor soil conditions encountered. In order to confirm the absence or presence of hazardous substances associated with former land use, a sampling strategy shall be implemented. The sampling strategy shall include procedures regarding logging/sampling and laboratory analyses. The Soil Management Plan will outline guidelines for the following: • Identifying impacted soil; • Assessing impacted soil; • Soil excavation; • Impacted soil storage; • Verification sampling; and • Impacted soil characterization and disposal. In the event that potentially contaminated soils are encountered within the footprint of construction, soils will be tested and stockpiled. The Certified Unified Program Agency will determine whether further assessment is warranted. The Certified Unified Program Agency shall determine and oversee the handling and disposal of impacted soils.	Applicant (Building Contractors)	Include this Requirement in Building Specifications Field Verification	1. LACDPW, Building and Safety
			2. LACDPW, Building and Safety
			3. During All Phases of Construction

MV 4.19-12 To reduce potentially hazardous conditions and minimize the impacts from handling potentially hazardous materials, the owner shall include the following in its construction contract documents prior to the initiation of construction activities: •The Contractor(s) shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains per the County's NPDES guidelines and as outlined in the Stormwater Pollution and Prevention Plan; and •The Contractor(s) shall prepare a Health and Safety Plan. The plan shall include measures to be taken in the event of an accidental spill. In addition, the Contractor(s) shall store all reserve fuel supplies only within the confines of a designated construction staging area, refuel equipment only within the designated construction staging area, and regularly inspect all construction equipment for leaks.	Applicant (Building Contractors)	Include this Requirement in Building Specifications Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. During All Phases of Construction
MV 4.19-13 Prior to the initiation of grading activities, low level PCE impacted soil located on the Mission Village project site, as identified in Final EIR Appendix F4.19, shall be remediated pursuant to the practices set forth in the Soil Management Plan.	Applicant (Building Contractors)	Include this Requirement in Building Specifications Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Grading
MV 4.19-14 Prior to the initiation of grading activities, surficial contamination, including asphalt, asphaltic sand, and scattered tar clumps located at former oil drilling locations, and the asphaltic sand located within the washes connected to Middle Canyon and Lyon Canyon, respectively, shall be remediated pursuant to the practices set forth in the Soil Management Plan.	Applicant (Building Contractors)	Include this Requirement in Building Specifications Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Grading
MV 4.19-15 During grading activities, any asphalt improved road and/or residual evidence of roads improved by the application of oil to the roadbed shall be remediated pursuant to the practices set forth in the Soil Management Plan and the contaminated soil is to be properly disposed of off-site.	Applicant (Building Contractors)	Include this Requirement in Building Specifications Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3.During Grading

MV 4.19-16 During grading activities, any unidentified structures or pipelines shall be properly assessed and/or remediated in accordance pursuant to the practices set forth in the Soil Management Plan.	Applicant (Building Contractors)	Include this Requirement in Building Specifications Field Verification	1. LACDPW, Building and Safety
			2. LACDPW, Building and Safety
			3.During Grading
4.20 CULTURAL/PALEONTOLOGICAL RESOURCES			
SP 4.3-1 Not applicable.			
SP 4.3-2 Not applicable.			
SP 4.3-3 In the unlikely event that additional artifacts are found during grading within the development area or future roadway extensions, an archaeologist will be notified to stabilize, recover and evaluate such finds.	Applicant (Archaeologist)	Include this Measure in Subdivision Map Conditions if appropriate	1. LA County Department of Regional Planning
			2. LA County Department of Regional Planning
			3. During Grading
SP 4.3-4 As part of an inspection testing program, a Los Angeles County Natural History Museum-approved inspector is to be on site to salvage scientifically significant fossil remains. The duration of these inspections depends on the potential for the discovery of fossils, the rate of excavation, and the abundance of fossils. Geological formations (like the Saugus Formation) with a high potential will initially require full time monitoring during grading activities. Geologic formations (like the Quaternary terrace deposits) with a moderate potential will initially require half-time monitoring. If fossil production is lower than expected, the duration of monitoring efforts should be reduced. Because of known presence of microvertebrates in the Saugus Formation, samples of at least 2,000 pounds of rock shall be taken from likely horizons, including localities 13, 13A, 14, and 23. These samples can be stockpiled to allow processing later to avoid delays in grading activities. The frequency of these samples will be determined based on field conditions.	Applicant (Archaeologist)	LA County Natural History Museum-Approved Inspector Present	1. LA County Department of Regional Planning
Should the excavations yield significant paleontological resources, excavation is to be stopped or redirected until the extent of the find is established and the resources are salvaged. Because of the long duration of the Specific Plan, a reassessment of the paleontological potential of each rock unit will be used to develop mitigation plans for subsequent subdivisions. The report shall include an itemized inventory of the fossils, pertinent geologic and stratigraphic data, field notes of the collectors and include recommendations for future monitoring efforts in those rock units. Prior to grading, an agreement shall be reached with a suitable public, non-profit scientific repository, such as the Los Angeles County Museum of Natural History or similar institution, regarding acceptance of fossil collections.			2. LA County Department of Regional Planning
		During Grading Activities	3. During Grading Activities in the Pico Formation, Saugus Formation, Quaternary Terrace Deposits, and Quaternary Older Alluvium

MV 4.20-1 Although no other significant cultural resources were observed or recorded, all grading activities and surface modifications must be confined to only those areas of absolute necessity to reduce any form of impact on unrecorded (buried) cultural resources that may exist within the confines of the project area. In the event that previously undetected archaeological, paleontological, and/or historical resources are found during construction, activity in the immediate area of the find shall stop and a qualified archaeologist or paleontologist, as applicable, shall be contacted to evaluate the resource(s). If the find is determined to be a historical or unique archaeological resource, as defined by CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue on other parts of the construction site while historical/archaeological mitigation takes place, pursuant to State CEQA Guidelines Section 15064.5(f) and Public Resources Code Section 21083.2(i).	Applicant (Archaeologist)	Construction Activity Stopped	1. LA County Department of Regional Planning
		Qualified Archaeologist Contacted	2. LA County Department of Regional Planning
			3. During Grading Activities, as appropriate
MV 4.20-2 Following recordation of the applicable unit of the Mission Village tract map, the Asistencia de San Francisco (CA-LAN-962H) site shall be dedicated to The Archaeological Conservancy.	Applicant	Dedication of site	1. LA County Department of Regional Planning
			2. LA County Department of Regional Planning
			3. Following applicable map recordation
MV 4.20-3 Scientific specimens are to become the property of a public, nonprofit educational institution, such as the Los Angeles County Museum of Natural History (or similar institution). Most institutions are now requiring, as conditions for accepting the materials, that significant fossils be prepared, identified to a reasonable level, and catalogued before donation. Therefore, to meet these requirements, prior to the start of Project-related grading, an agreement shall be reached with a suitable scientific repository regarding acceptance of the fossil collection.	Applicant	During Grading Activities	1. LA County Department of Regional Planning
			2. LA County Department of Regional Planning
			3. During Grading Activities in the Pico Formation, Saugus Formation, Quaternary Terrace Deposits, and Quaternary Older Alluvium

MV 4.20-4 A trained paleontologist acceptable to Los Angeles County shall be retained to monitor and salvage scientifically significant fossil remains. The duration of these inspections depends on the potential for the discovery of fossils, the rate of excavation, and the abundance of fossils. (a) The Saugus and Pico Formations have a high potential to yield paleontological resources and will require continuous monitoring during all grading activities. This may require use of multiple paleontologists working on the site at the same time if simultaneous ground disturbing activities are occurring over an extensive area to assure all areas of excavation are being fully monitored for the presence of paleontological resources. The number of required monitors shall be determined by Project's monitoring paleontologist. (b) The older dissected Pleistocene formations have a moderate potential to yield paleontological resources and will require half-time monitoring during all grading activities by a qualified paleontologist(s). Periodic review of the paleontological potential assigned to each rock unit shall be conducted at the end of each phase of grading. This reassessment of potential will be used to develop mitigation plans for future phases of development. If fossil production is lower than expected, the duration of the monitoring efforts should be reduced to less than continuous monitoring during all grading activities.	Applicant	Include this Measure in Subdivision Map Conditions if appropriate	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During Grading
MV 4.20-5 The paleontologist, in consultation with the grading contractor, developer, and Los Angeles County inspector, shall have the power to divert temporarily or direct grading efforts in the area of an exposed fossil to allow evaluation and, if necessary, salvage of exposed fossils.	Applicant	Include this Measure in Subdivision Map Conditions if appropriate	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During Grading
4.21 FLOODPLAIN MODIFICATIONS			
MV 4.21-1 Post-peak stormwater runoff discharges from storm drainage systems must be controlled to minimize localized erosion impacts to River geomorphology and riparian habitat. Discharge flows would be regulated using water control features that must capture the runoff from small, frequent flows (i.e., one- and two-year events). Water and hydromodification control features must be designed in accordance with DPW criteria. Where applicable, energy dissipation structures must be incorporated at drainage outlets to the Santa Clara River to minimize discharge velocities and potential localized erosion.	Applicant (Project Engineer)	Plan check	1. LACDPW 2. LACDPW 3. Prior to Final Map Approval
MV 4.21-2 Where practical, the proposed Santa Clara River bridge crossing shall minimize the number and size of piers and/or columns to minimize localized impacts to River and/or tributary geomorphology and riparian resources.	Applicant (Project Engineer)	Plan check	1. LACDPW 2. LACDPW 3. Prior to issuance of Bridge permit
MV 4.21-3 Structural features such as outlets, bank stabilization, grade stabilization structures, bridge abutments, culverts, and other features that may be subjected to River or tributary flows will be constructed of erosion resistant materials such as concrete, soil cement, or secured riprap to ensure long-term stability and reduce the need for routine maintenance and/or rehabilitation/replacement activities and be subject to approval by DPW.	Applicant (Project Engineer)	Plan check	1. LACDPW 2. LACDPW 3. Prior to issuance of building permit

MV 4.21-4 Prior to building permit, in-stream tributary channel design features for Lion Canyon drainage will be incorporated to control potential hydromodification impacts to geomorphology and riparian resources. The design will be based on erosion potential and other hydrologic modeling to determine appropriate equilibrium slope in the post-development condition as described in the Subregional Stormwater Mitigation Plan and be subject to approval by DPW.	Applicant (Project Engineer)	Plan check	1. LACDPW 2. LACDPW 3. Prior to issuance of building permit
MV 4.21-5 Sediment/debris control structures must be constructed downstream of natural watersheds to protect developed area drainage systems from debris flows. The design capacity for sediment/debris control structures must take into account the classifications stated in the debris production maps provided in Appendix A of the DPW 1991 Hydrology Manual. Sediment/debris control structure capacity and transport rates must be based on the specification stated in the DPW Sedimentation Manual.	Applicant (Project Engineer)	Plan check	1. LACDPW 2. LACDPW 3. Prior to Final Map Approval
MV 4.21-6 A Geomorphology Monitoring and Management Plan (Plan) will be prepared to ensure that the modified/re-engineered Lion Canyon drainage comply with the mitigation objectives and design goals outlined in the Newhall Ranch Tributary Channel Design Guidelines (PWA 2008). Specifically, the Plan shall include the measures to be implemented to ensure the integrity of the structural elements and a state of "constrained dynamic equilibrium. " The Plan shall specify the following: (1) a framework to collect baseline data to characterize conditions immediately after construction; (2) a post-development monitoring program; (3) a framework to develop erosion and sedimentation threshold parameters and performance standards that activate adaptive management measures across a series of potential future scenarios; and, (4) contingency plans and appropriate remedial measures in the event that management efforts are not successful. The Plan shall be subject to final approval by the U.S. Army Corps of Engineers, CDFG, and DPW.	Applicant (Project Engineer and geologist)	Review of Geomorphology Monitoring and Management Plan	1. USACE, CDFG, LACDPW 2. USACE, CDFG, LACDPW 3. Prior to Issuance of Grading Permit in Lion Canyon
4.22 WATER QUALITY			
SP 4.2-1 All on- and off-site flood control improvements necessary to serve the NRSP are to be constructed to the satisfaction of the County of Los Angeles Department of Public Works Flood Control Division.	Applicant (Construction superintendant)	Field verification	1. LACDPW 2. LACDPW 3. During construction
SP 4.2-2 All necessary permits or letters of exemption from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the Regional Water Quality Control Board for Specific Plan-related development are to be obtained prior to construction of drainage improvements. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in [NRSP Program EIR] Section 4.6, Biological Resources, **Mitigation Measures 4.6-1** through **4.6-10** (restoration) and **4.6-11** through **4.6-16** (enhancement).	Applicant (Project Engineer)	Review of Tentative Map	1. LACDPW 2. LACDPW 3. Prior to Approval of Tentative Maps
SP 4.2-3 All necessary streambed agreement(s) are to be obtained from the California Department of Fish and Game wherever grading activities alter the flow of streams under CDFG jurisdiction. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in [NRSP Program EIR] Section 4.6, Biological Resources, **Mitigation Measures 4.6-1** through **4.6-10** (restoration) and **4.6-11** through **4.6-16** (enhancement).	Applicant (Project Engineer)	Review of Tentative Map	1. LACDPW 2. LACDPW 3. Prior to Approval of Tentative Maps
SP 4.2-4 Conditional Letters of Map Revision (CLOMR) relative to adjustments to the 100-year FIA flood plain are to be obtained by the applicant after the proposed drainage facilities are constructed.	Applicant (Project Engineer)	Review of Tentative Map	1. LACDPW, ACOE 2. LACDPW, ACOE 3. After Construction of Drainage Facilities

SP 4.2-5 Prior to the approval and recordation of each subdivision map, a Hydrology Plan, Drainage Plan, and Grading Plan (including an Erosion Control Plan if required) for each subdivision must be prepared by the applicant of the subdivision map to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after site development. These plans shall be prepared to the satisfaction of the County of Los Angeles Department of Public Works.	Applicant	Review of Hydrology Plan, Drainage Plan, and Grading Plan	1. LACDPW 2. LACDPW 3. Prior to map recordation
SP 4.2-6 Install permanent erosion control measures, such as desilting and debris basins, drainage swales, slope drains, storm drain inlet/outlet protection, and sediment traps in order to prevent sediment and debris from the upper reaches of the drainage areas which occur on the Newhall Ranch site from entering storm drainage improvements. These erosion control measures shall be installed to the satisfaction of the County of Los Angeles Department of Public Works.	Applicant (Construction superintendant)	Field verification	1. LACDPW 2. LACDPW 3. During construction
SP 4.2-7 The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the County of Los Angeles Department of Public Works. These requirements currently include preparation of an Urban Storm Water Mitigation Plan (USWMP) containing design features and BMPs appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of an SWPPP containing design features and BMPs appropriate and applicable to the subdivision. The County of Los Angeles Department of Public Works shall monitor compliance with those NPDES requirements.	Applicant	Review of USWMP and SWPPP	1. LACDPW 2. LACDPW 3. During construction
SP 4.2-8 The applicant for any subdivision map permitting construction shall comply with all appropriate requirements of the County of Los Angeles Standard Urban Stormwater Mitigation Plan (SUSMP) requirements, and comply with the State Water Resources Control Board (SWRCB) issued General Permit for Construction Activity Storm Water (SWRCB Order 99-08-DWQ), as it may be amended from time to time or replaced by other applicable stormwater permits.	Applicant (Construction superintendant)	Field verification	1. LACDPW, RWQCB 2. LACDPW, RWQCB 3. During construction
MV 4.22-1 Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to LACDPW for review and approval of drainage plans showing the incorporation into the project of those water quality and hydrologic control project design features (i.e., the post-development water quality and hydrologic control BMPs)(the "PDFs"), identified in this Section 4.22, which PDFs shall be designed to meet the standards set forth in this Section 4.22, including the sizing, capacity, and volume reduction performance standards set forth herein, as summarized in Table 4.22-17.	Applicant	Review of Drainage Plan	1. LACDPW 2. LACDPW 3. Prior to issuance of building permit

MV 4.22-2 Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to planning staff for review a Landscape and Integrated Pest Management Plan, identified in this Section 4.22, which shall be designed to meet the standards set forth as follows.	Applicant	Review of Landscape and IPM Plan	1. LACDRP
A Landscape and Integrated Pest Management Plan shall be developed and implemented for common area landscaping within the Mission Village project that addresses integrated pest management (IPM) and pesticide and fertilizer application guidelines. IPM is a strategy that focuses on long term prevention or suppression of pest problems (i.e., insects, diseases and weeds) through a combination of techniques including: using pest-resistant plants; biological controls; cultural practices; habitat modification; and the judicious use of pesticides according to treatment thresholds, when monitoring indicates pesticides are needed because pest populations exceed established thresholds. The Landscape and Integrated Pest Management Plan will address the following components:			2. LACDRP
1. Pest identification. 2. Practices to prevent pest incidence and reduce pest buildup. 3. Monitoring to examine vegetation and surrounding areas for pests to evaluate trends and to identify when controls are needed. 4. Establishment of action thresholds that trigger control actions. 5. Pest control methods – cultural, mechanical, environmental, biological, and appropriate pesticides. 6. Pesticide management – safety (e.g., Material Safety Data Sheets, precautionary statements, protective equipment); regulatory requirements; spill mitigation; groundwater and surface water protection measures associated with pesticide use; and pesticide applicator certifications, licenses, and training (i.e., all pesticide applicators must be certified by the California Department of Pesticide Regulation). 7. Fertilizer management – soil assessment, fertilizer types, application methods, and storage and handling.			3. Prior to issuance of building permit
4.23 GLOBAL CLIMATE CHANGE			
MV 4.23-1 All residential buildings on the project site that are enabled by approval of the proposed project shall be designed to provide improved insulation and ducting, low E glass, high efficiency air conditioning units, and radiant barriers in attic spaces, as needed, or equivalent to ensure that all residential buildings operate at levels 15 percent better than the standards required by the 2008 version of Title 24. Notwithstanding this measure, all residential buildings shall be designed to comply with the then-operative Title 24 standards applicable at the time building permit applications are filed. For example, if new standards are adopted that supersede the 2008 Title 24 standards, the residential buildings shall be designed to comply with those newer standards and, if necessary, exceed those standards by an increment that is equivalent to a 15 percent exceedance of the 2008 Title 24 standards.	Applicant	Plan Check	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits

MV 4.23-2 All commercial and public buildings on the project site that are enabled by approval of the proposed project shall be designed to provide improved insulation and ducting, low E glass, high efficiency HVAC equipment, and energy efficient lighting design with occupancy sensors as needed, or equivalent to ensure that all commercial and public buildings operate at levels 15 percent better than the standards required by the 2008 version of Title 24. Notwithstanding this measure, all nonresidential buildings shall be designed to comply with the then-operative Title 24 standards applicable at the time building permit applications are filed. For example, if new standards are adopted that supersede the 2008 Title 24 standards, the nonresidential buildings shall be designed to comply with those newer standards and, if necessary, exceed those standards by an increment that is equivalent to a 15 percent exceedance of the 2008 Title 24 standards.	Applicant	Plan Check	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits
MV 4.23-3 The project applicant or designee shall produce or cause to be produced renewable electricity, or secure greenhouse gas offsets or credits from a public agency (e.g., CARB; SCAQMD) endorsed market, equivalent to the installation of one photovoltaic (i.e., solar) power system no smaller than 2.0 kilowatts, when undertaking the design and construction of each single-family detached residential unit on the project site.	Applicant	Production of Payment to renewable electricity	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits
MV 4.23-4 The project applicant or designee shall produce or cause to be produced renewable electricity, or secure greenhouse gas offsets or credits from a public agency (e.g., CARB; SCAQMD) endorsed market, equivalent to the installation of one photovoltaic (i.e., solar) power system no smaller than 2.0 kilowatts, on each 1,600 square feet of nonresidential roof area provided on the project site.	Applicant	Production of Payment to renewable electricity	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits
MV 4.23-5 Consistent with the Governor's Million Solar Roofs Plan, the project applicant or designee, acting as the seller of any single family residence constructed as part of the development of at least 50 homes that are intended or offered for sale, shall offer a solar energy system option to all customers that enter negotiations to purchase a new production home constructed in Mission Village on land for which an application for a tentative subdivision map has been deemed complete. The seller shall disclose the total installed cost of the solar energy system option, and the estimated cost savings.	Applicant	Prior to Escrow Negotiations	1. LACDPW 2. LACDPW 3. Prior to Entering into Escrow with Potential Single Family Home Buyers
MV 4.23-6 The project applicant shall use solar water heating for all pools located at the Mission Village recreation centers.	Applicant	Plan Check and Field Verification	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits for the Recreation Centers
MV 4.23-7 The project applicant, in accordance with Los Angeles County requirements, will design and construct the approximately 13,500 square feet fire station and 36,000 square feet public library so as to achieve LEED silver certification. In addition to the seven global climate change mitigation measures identified above, mitigation measures recommended in connection with other sections (i.e., air quality; biological resources; traffic) of the Mission Village Draft EIR would reduce the proposed project's GHG emissions and/or improve the project's capacity to respond to the uncertain effects of global climate change. As these measures are recommended for adoption and incorporation into a mitigation monitoring and reporting program, these measures can be relied upon in this analysis as feasible measures designed to reduce GHG emissions and the impact of global climate change on the project.	Applicant	Plan Check	1. LACDPW 2. LACDPW 3. Prior to Issuance of the Building Permit for the Fire Station