
**Dudek, "Draft Newhall Ranch Resource Management and
Development Plan" (October 2008)**

**DRAFT
NEWHALL RANCH
RESOURCE MANAGEMENT AND
DEVELOPMENT PLAN**

Prepared for:

The Newhall Land and Farming Company
23823 Valencia Boulevard
Valencia, California 91355

Prepared by:

DUDEK
25152 Springfield Court, Suite 180
Valencia, California 91355
Contact: Sherri Miller
661.705.4561

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ACRONYMS AND ABBREVIATIONS

AMSL	above mean sea level
APLIC	Avian Power Line Interaction Committee
BMP	best management practice
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CBI	Conservation Biology Institute
CC&Rs	Covenants, Conditions, and Restrictions
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cfs	cubic feet per second
CLAOTO	County of Los Angeles Oak Tree Ordinance
CLWA	Castaic Lake Water Agency
CMIP	Comprehensive Mitigation Implementation Plan
CNDDB	California Natural Diversity Database
Corps	U.S. Army Corps of Engineers
CUP	Conditional Use Permit
CWA	Clean Water Act
dbh	diameter at breast height
DP	design principle
DPW	Department of Public Works
DRI	Debris Retaining Inlet
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency

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ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMZ	Fuel Modification Zone
fps	feet per second
GO	Goal and Objective
HARC	Hybrid Assessment of Riparian Condition
IPM	Integrated Pest Management
JPA	Joint Powers Authority
NEPA	National Environmental Policy Act
NLMO	Natural Land Management Organization
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
OHWM	ordinary high-water mark
lf	linear feet
RMDP	Resource Management and Development Plan
RMP	Resource Management Plan
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SCP	Spineflower Conservation Plan
SEA	Significant Ecological Area
SMA	Special Management Area
SPCA	Society for the Prevention of Cruelty to Animals
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
TRM	turf reinforcement mat
USDA	U.S. Department of Agriculture

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USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VCC	Valencia Commerce Center
WDR	Waste Discharge Requirement
WEAP	Worker Environmental Awareness Program

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1.0 INTRODUCTION

1.1 Overview

The Newhall Ranch Resource Management and Development Plan (RMDP) is a conservation, mitigation, and permitting plan for the long-term management of sensitive biological resources within the 11,999-acre Newhall Ranch Specific Plan (Specific Plan) (County of Los Angeles 2003a), located in unincorporated Los Angeles County, California. The RMDP is intended to direct both resource management and development in the Specific Plan area.

The Specific Plan was approved by Los Angeles County in May 2003 to guide development of a new community composed of a broad range of residential, mixed-use, and non-residential uses within distinct villages on the Newhall Ranch property site. Subsequent development plans, subdivision maps, and federal and state permitting, consultations, and agreements will be required to implement build-out of the Specific Plan, which is projected to occur over the next 20 to 25 years. To address Project and cumulative impacts to regulated resources (jurisdictional waters and state- and federally listed species), the U.S. Army Corps of Engineers (Corps) and California Department of Fish and Game (CDFG) are analyzing jointly the effects of a proposed “Project” that includes implementation of this RMDP and a Spineflower Conservation Plan (SCP) (Dudek 2007d). The analysis is contained in an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) prepared pursuant to National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). The Corps and CDFG are the lead agencies for the purposes of the EIS/EIR.

The resource management component of the RMDP will guide future resource conservation, mitigation, and permitting needed for the long-term management of sensitive biological resources within the Specific Plan. It will be implemented in conjunction with the development plan component of the RMDP. Regarding development in the Specific Plan area, the RMDP would consist of development-related infrastructure improvements in or adjacent to the Santa Clara River and tributaries located in the RMDP study area, which are needed to implement the approved Specific Plan. The RMDP infrastructure improvements are comprised of various flood control features, bridges/road crossings, stream bank stabilization, drainage facilities, roads, building pads, utility corridors, pipeline and utility river crossings, nature trails, the discharge outfall for the previously approved Newhall Ranch Water Reclamation Plant (WRP), and drainage facility maintenance activities.

Proposed infrastructure improvements and required maintenance activities will require permits, agreements, and authorizations from the Corps, the U.S. Fish and Wildlife Service (USFWS), and the CDFG. The RMDP infrastructure improvements and maintenance activities involve

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Corps, USFWS, and CDFG permitting because the activities would affect waters, riverbeds, or banks within the jurisdictional limits of the Corps and CDFG or would potentially affect listed threatened or endangered species, thereby requiring USFWS and/or CDFG approval. The Project applicant is The Newhall Land and Farming Company (Newhall Land or applicant).

1.2 Overview of the Previously Approved Resource Management Plan

This RMDP is intended to build on the Newhall Ranch Specific Plan's Resource Management Plan (RMP) (Section 2.6 of the Specific Plan). The RMP was approved by the Board of Supervisors of Los Angeles County on May 27, 2003, as part of the Board's adoption of the Specific Plan and its certification of the Newhall Ranch Specific Plan Program Environmental Impact Report (EIR) (County of Los Angeles 2003b).

The previously adopted RMP set forth mitigation and management standards for sensitive biological resources located within the boundary of the approved Specific Plan. The RMP also established standards governing public access, recreational use, management, and ownership of the Newhall Ranch River Corridor Special Management Area (River Corridor SMA), the High Country Special Management Area (High Country SMA), and the Open Area portions of the Specific Plan area. The River Corridor SMA and the High Country SMA retain their local County designation as Significant Ecological Areas (SEAs) under the approved Specific Plan. The River Corridor SMA is still designated as SEA 23, and the High Country SMA remains designated as SEA 20. The Salt Creek area, adjacent to the westerly boundary of the Specific Plan site, is also to be managed in conjunction with, and in the same manner as, the High Country SMA.

The previously approved RMP provides guidance for managing the transition areas between the development and open space areas, and establishes a special study mitigation overlay and preserve program for the San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*; spineflower). The spineflower is a state-listed endangered plant species and a federal candidate species.

The RMP was prepared at a conceptual level of detail only; it also expressly acknowledged that future conservation, mitigation, and permitting activities within the Specific Plan area would be subject to federal and state permits, consultations, and agreements, which would be implemented through more detailed planning. The RMDP is one of the detailed implementation plans contemplated by the previously approved RMP. The RMDP will guide future resource conservation, mitigation, and permitting for the long-term management of sensitive biological

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resources in conjunction with the infrastructure improvements and facilities approved under the Specific Plan.

1.3 Contents of the Resource Management and Development Plan

The contents of the RMDP are briefly described below.

Section 1.0 provides an overview of the RMDP, its study area, and its purpose/need. *Section 2.0* identifies the goals and objectives of the RMDP. *Section 3.0* discusses the regulatory framework and permitting process for the RMDP. *Section 4.0* describes the existing environmental setting and approved land uses within the RMDP study area. *Section 5.0* describes the RMDP resource management design principles and methodology. *Section 6.0* provides an overview of the RMDP development components, including the infrastructure and facilities necessary for the execution of the approved Specific Plan, and as approved pursuant to the joint CDFG/Corps EIS/EIR. *Section 7.0* identifies the mitigation and management activities based on the resources within or adjacent to the Specific Plan site. *Section 8.0* discusses the mitigation monitoring and maintenance actions required by the RMDP. *Section 9.0* identifies the parties responsible for implementation of the RMDP. *Section 10.0* describes adaptive management techniques and concepts applicable to the RMDP. *Section 11.0* sets forth the funding mechanisms of the RMDP. *Section 12.0* contains the RMDP reporting processes, and *Section 13.0* lists the references used in preparing the RMDP.

The text of the RMDP is supplemented by the following appendices: *Appendix A – Maintenance Manual*, a description of Best Management Practices (BMPs) and mitigation measures associated with maintenance of infrastructure facilities within the RMDP; *Appendix B – Mitigation Matrix*, a compilation of mitigation measures and their relatedness to each of the RMDP preserve areas; *Appendix C – Species Preserve Report*, a report of special-status species known or expected to occur within the RMDP preserve area; *Appendix D – Comprehensive Mitigation Implementation Plan (CMIP)*, a description of implementation procedures for preserve dedication and restoration mitigation activities and a conceptual example of correlated impact and mitigation for each tentative map project; *Appendix E – Mitigation Feasibility Study*, an examination of mitigation opportunities within the RMDP preserve areas; and *Appendix F – Wildlife Habitat Buffers and Connectivity White Paper*, an evaluation of wildlife habitat buffers and connectivity.

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1.4 RMDP Study Area

The RMDP study area is located in the Santa Clara River Valley in unincorporated northwestern Los Angeles County (*Figures 1 and 2*). The RMDP encompasses the same area as the boundary of the previously approved Newhall Ranch Specific Plan, except that it includes Specific Plan-related traffic/utility infrastructure and the Salt Creek area in Ventura County, adjacent to the Specific Plan. The study area is depicted on *Figure 3*, along with proposed open space designations and development areas. The sensitive biological areas within this study area encompass the Specific Plan's River Corridor SMA, High Country SMA, Salt Creek area, Open Area, and oak resources.

It should be noted that the Valencia Commerce Center (VCC) and Entrada planning areas are not included in the RMDP. These planning areas are only included in the SCP (Dudek 2007d) to address the spineflower preserve areas within the applicant's land holdings in Los Angeles County (*Figure 4*). The SCP has been prepared to facilitate comprehensive conservation of spineflower on all of the applicant's land holdings that contain known spineflower populations.

Combined, the RMDP and SCP study areas constitute the Project area for purposes of the RMDP/SCP EIS/EIR. *Figures 5A and 5B* depict the entire Project area with point locations of special-status plants and animals (for animals, only listed and/or fully protected animals are shown). The Project principally addresses impacts to these special-status species and the jurisdictional resources depicted on *Figure 2*. On a regional level, the City of Santa Clarita is located to the east of the Project area, and the Los Angeles County/Ventura County jurisdictional boundary line is to the west. The Los Padres National Forest is located to the north of the Project area, the Angeles National Forest lies to the north and east, and the Santa Susana Mountains are to the south.

1.5 Project Purpose and Need/Project Objectives

The northern Los Angeles County region has experienced, and continues to experience, significant growth resulting in a high demand for housing and jobs, and the overall regional need for large-scale residential, nonresidential, and commercial development to accommodate approved and planned growth in the region. To facilitate the orderly accommodation of the high demand for housing and jobs, the Specific Plan (County of Los Angeles 2003a) was approved by the Los Angeles County Board of Supervisors on May 27, 2003.



IMAGE SOURCE: USGS 24K Quad

FIGURE 1

Newhall Ranch - Resource Management and Development Plan



Regional Map

**Newhall Ranch
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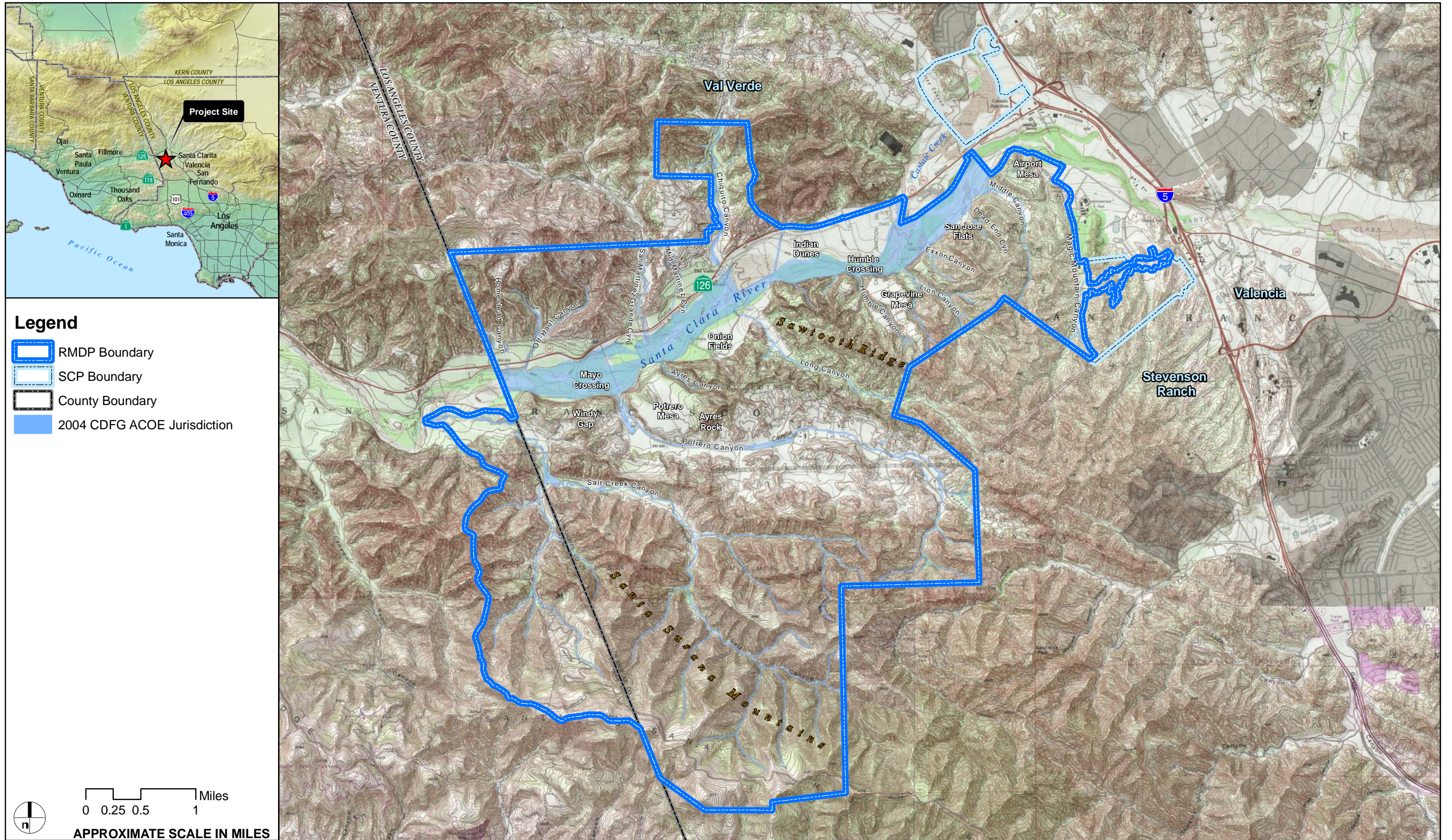
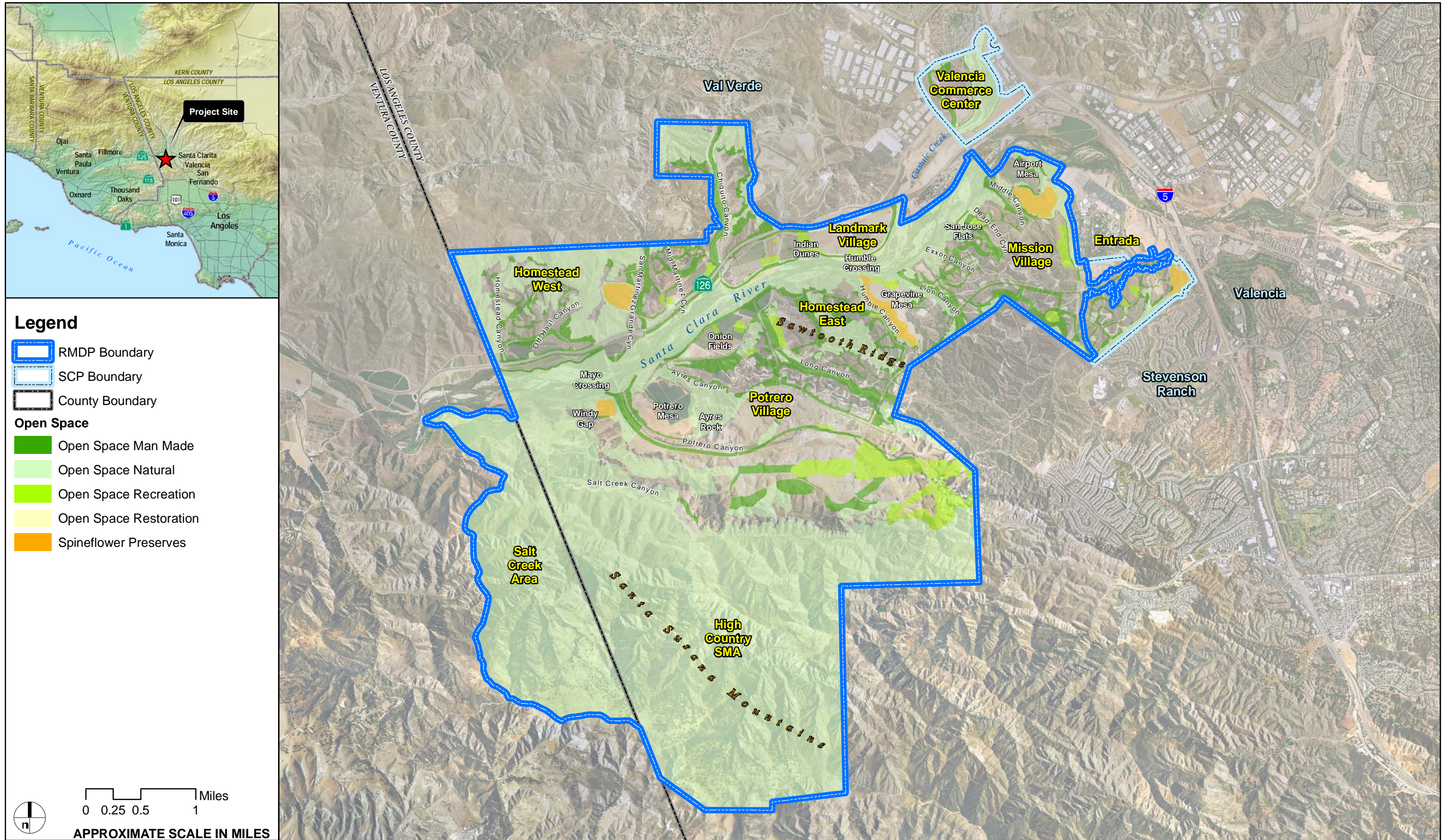


FIGURE 2

Newhall Ranch - Resource Management and Development Plan

Vicinity Map

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AERIAL SOURCE: AirphotoUSA, 2007

FIGURE 3

Newhall Ranch - Resource Management and Development Plan

RMDP Study Area

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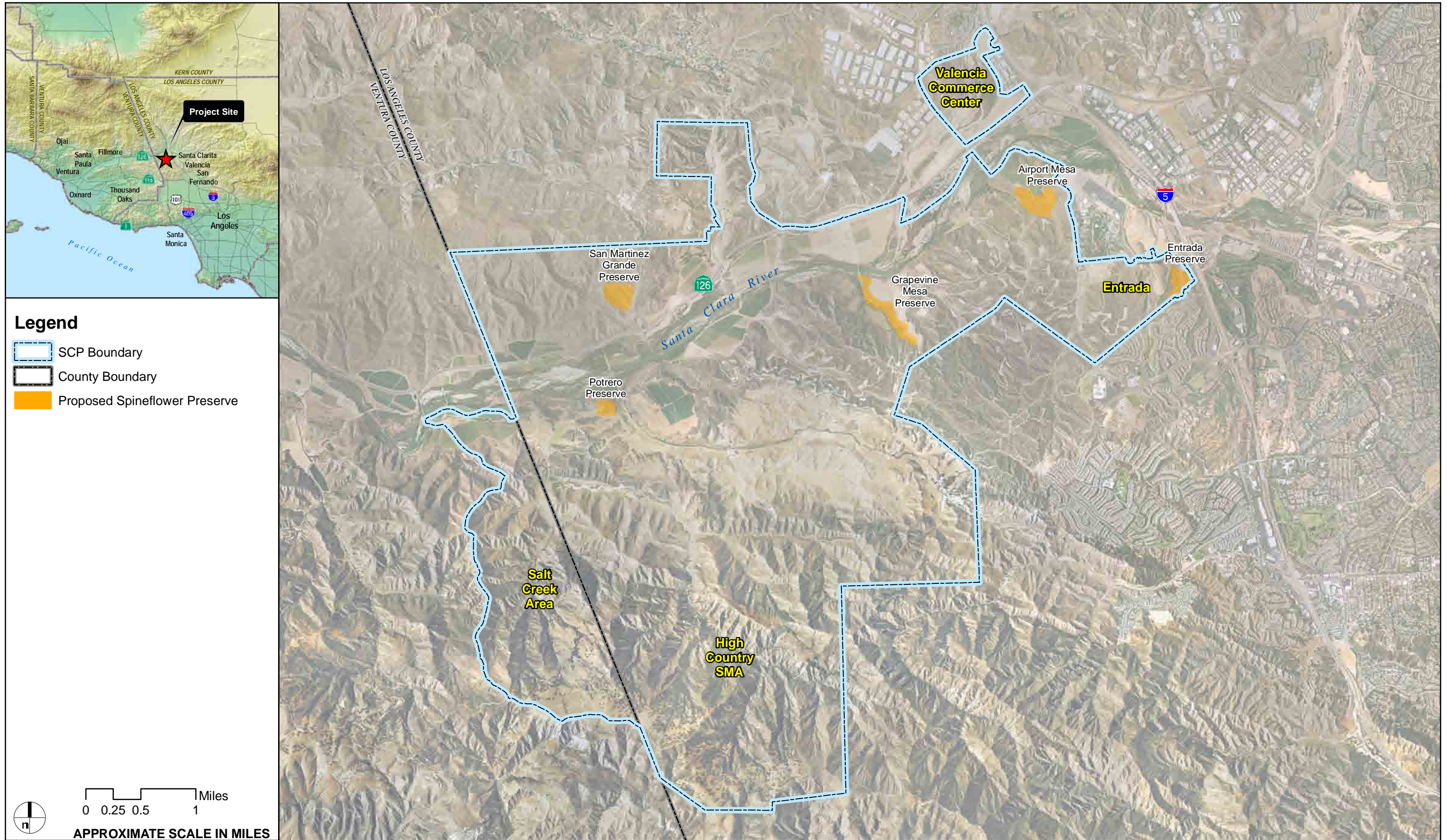


FIGURE 4

Newhall Ranch - Resource Management and Development Plan

SCP Study Area

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Legend

- RMDP Boundary
- SCP Boundary
- County Line

Special Status Wildlife:

Listed and Fully Protected Species

- California Gnatcatcher
- Least Bell's Vireo
- Least Bell's Vireo Nest
- White-Tailed Kite
- White-Tailed Kite Nest
- Willow Flycatcher
- Swainson's Hawk
- Golden Eagle
- Arroyo Toad Tadpole
- Unarmored Threespine Stickleback

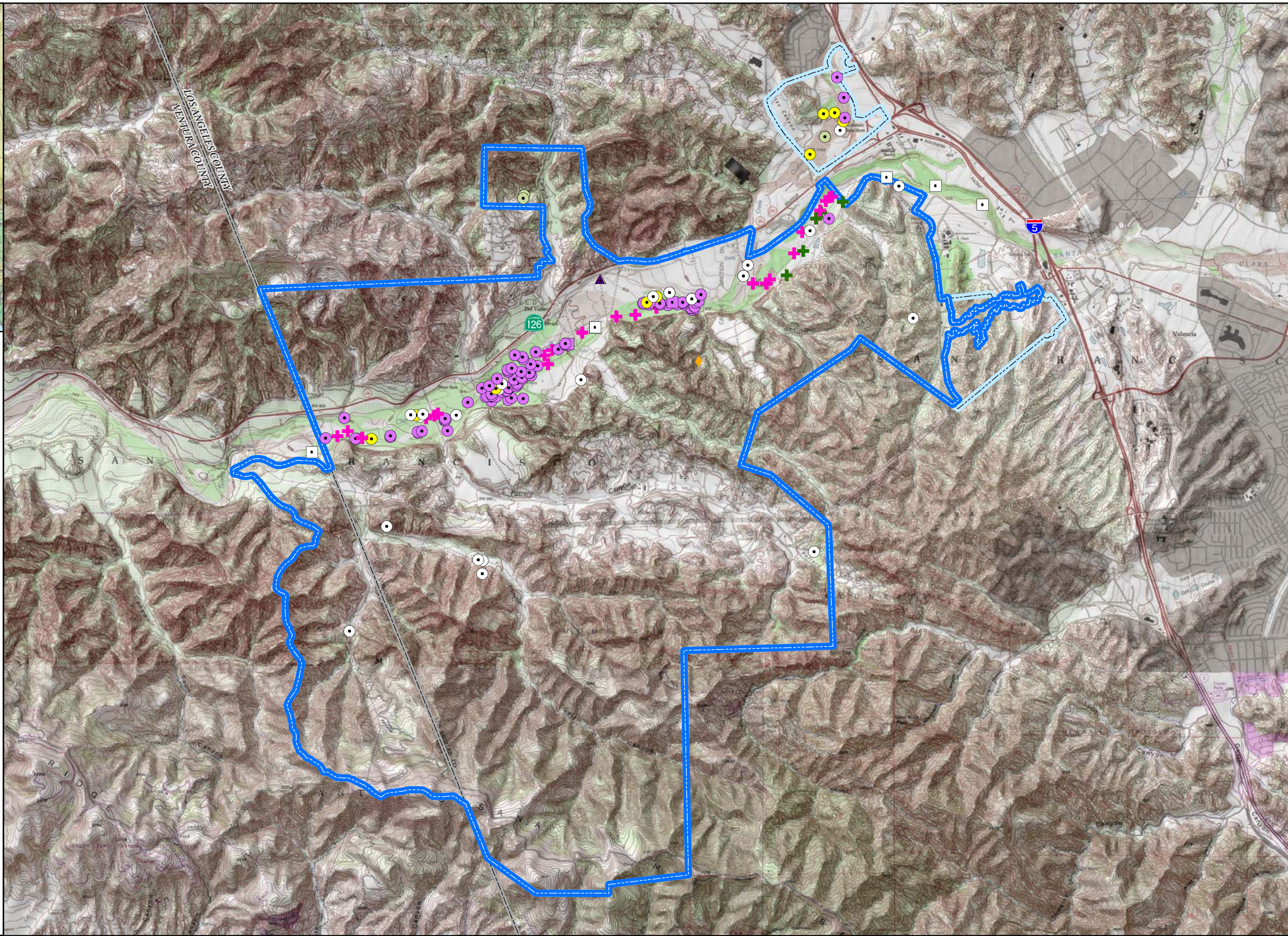
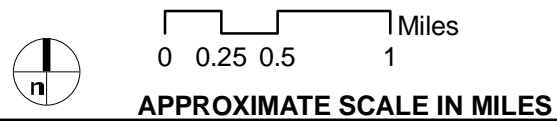


IMAGE SOURCE: USGS 24K Quad

FIGURE 5A

Newhall Ranch - Resource Management and Development Plan

RMDP/SCP - Special Status Wildlife Species Occurrences



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Legend

- RMDP Boundary
- SCP Boundary
- County Boundary

Special-status Plants

- Late-Flowered Mariposa Lily
- Plummer's Mariposa Lily
- Slender Mariposa Lily
- Undescribed Everlasting
- Ojai Navarretia
- Undescribed Sunflower
- San Fernando Valley Spineflower

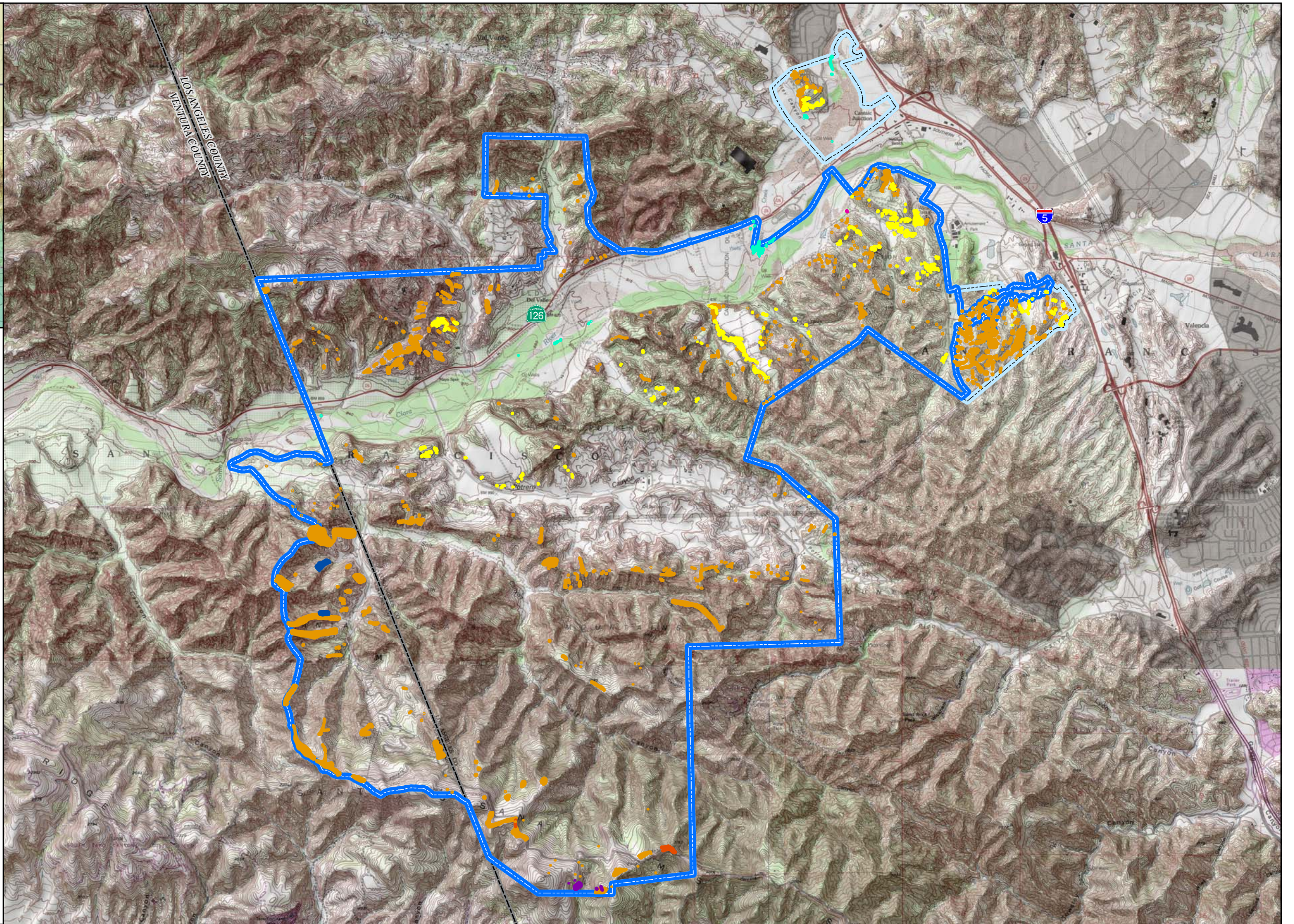
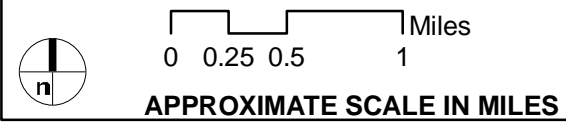


IMAGE SOURCE: USGS 24K Quad

FIGURE 5B

Newhall Ranch - Resource Management and Development Plan
RMDP/SCP Special-status Plant Species Occurrences

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The County has determined that build-out of the Specific Plan will foster regional economic development and job creation by providing 20,885 homes (excluding second units), including affordable housing, and approximately 20,000 jobs. In addition, the County has required the applicant to set aside significant open space areas for the benefit of its residents and the region. These areas are located in and adjacent to the Specific Plan area, and include the River Corridor SMA, High Country SMA, Salt Creek area, designated Open Areas, spineflower preserve areas, and oak resources. The County has further determined that the Specific Plan will provide a tax base to support public services and approximately 20,000 jobs to the Santa Clarita Valley. By providing residential, commercial, mixed-use, and nonresidential uses, and by setting aside significant open space acreage, the County has determined that implementation of the Specific Plan will facilitate a balanced development where residents may both live and work and where sensitive biological resources are conserved, managed, and protected in perpetuity.

The purpose and need for the proposed Project under NEPA, and the objectives of the proposed Project under CEQA, are as follows:

To practicably and feasibly achieve the basic objectives of the Specific Plan (County of Los Angeles 2003a), thereby helping meet the regional demand for housing and jobs;

The RMDP component of the proposed Project would address the long-term management of sensitive biological resources in conjunction with the construction and maintenance of flood control facilities, stream bank stabilization, modified tributary drainages, drainage facilities, roads, building pads, utility corridor, pipeline and utility river crossings, nature trails, bridges and road-crossing culverts, WRP discharge outfall, and drainage facility maintenance activities by the Los Angeles County Department of Public Works (DPW) (or other appropriate entity), all of which are needed to implement the approved Specific Plan in a manner that complies with federal and state environmental protection requirements specified in various permits, agreements, and authorizations; and

The SCP component of the proposed Project would develop and implement a practicable and feasible plan that would permanently protect and manage a system of preserves designed to maximize the long-term persistence of the spineflower within the applicant's land holdings containing known spineflower populations, and to authorize the take of spineflower in areas located outside of designated preserves.

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2.0 RMDP GOALS AND OBJECTIVES

The previously approved RMP provided the initial framework for implementing the Specific Plan objectives pertinent to resource management. These objectives were to:

1. Protect wetland and endangered species in the Santa Clara River;
2. Preserve the Santa Clara River Corridor and adjacent uplands containing significant natural resources for their resource value, open area, and recreational use;
3. Retain major Open Areas and their natural vegetation as a wildlife or ecological reserve;
4. Preserve significant stands of trees;
5. Preserve the site of the historical Asistencia (San Fernando Mission Annex);
6. Identify and protect significant resources within the two Los Angeles County SEAs;
7. Preserve or minimally impact the most significant ridgelines and other major topographical landforms; and
8. Promote water conservation through design guidelines that encourage use of drought-tolerant and native plants.

In order to satisfy the Specific Plan's biological resource management objectives listed above, the RMDP provides additional objectives aimed at the ongoing conservation of sensitive biological resources during and following construction of development approved under the Specific Plan.

Therefore, the overall goal of the RMDP is to provide a coordinated resource management and development plan, which, when implemented, would avoid or mitigate impacts to sensitive biological resources within the approved Specific Plan area, while permitting necessary infrastructure improvements. To implement this goal, the additional RMDP objectives are as follows:

RMDP Goals and Objectives (GOs)

- GO 1 Assemble and manage a multicomponent permanent preserve, in conjunction with the existing regional preserve system. This ensures that allowable Specific Plan land uses remain compatible with the long-term conservation and management of sensitive biological, scenic, and other natural resources, that biological diversity is maintained, and that the survival and recovery of sensitive habitats and species are ensured.
- GO 2 Design and monitor transition areas between approved RMDP development and preserve areas, such that edge effects are minimized during and following construction.

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- GO 3 Design and monitor drainage and transportation facilities, such that direct and indirect impacts to biological and water quality resources (e.g., hydrology and wildlife movement) are minimized.
- GO 4 Replace impacted resources (e.g., wetlands and oak trees) through the restoration and enhancement of like resources.
- GO 5 Maintain or increase riparian functions and values within the Santa Clara River and its major tributaries.
- GO 6 Maintain or enhance important wildlife corridors and habitat corridors.
- GO 7 Conserve endangered species' habitats.
- GO 8 Provide necessary documentation of RMDP implementation to resource agencies and the County of Los Angeles.
- GO 9 Provide monitoring and maintenance, adaptive management techniques, and funding for RMDP mitigation components.

Achievement of these additional RMDP objectives would result in greater resource conservation than currently exists under the approved Specific Plan.

Other Project purposes and objectives would be accomplished with implementation of the proposed Project. Those purposes and objectives are described below.

An important Project objective and purpose is to manage on-site resources under a single owner or small group of owners. The size and single ownership of the Project area provide a unique opportunity to develop an overall plan for the conservation and management of sensitive resources in conjunction with previously approved or planned development.

In addition, issuance of a long-term individual section 404 Permit and a Master Lake/Streambed Alteration Agreement within the RMDP area would streamline the permitting processes for qualified RMDP infrastructure projects, minimize duplication of effort, ensure consistency with overlapping jurisdiction and responsibilities between the Corps and CDFG, and facilitate long-term, region-based planning and mitigation efforts for impacts to the affected riparian habitats. The proposed section 404 Permit and Master Lake/Streambed Alteration Agreement would allow the RMDP Project components to be implemented in a comprehensive manner that considers project-specific and region-wide conditions. The permits also would provide long-term,

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conditional authorization for ongoing and future maintenance activities by DPW or other appropriate entity.

Benefits of the proposed RMDP include the assemblage and management of a permanent preserve as designated in the approved Specific Plan, which would take into account the existing regional preserve surrounding the Specific Plan area. This managed preserve would ensure that allowable Specific Plan land uses remain compatible with the long-term conservation and management of sensitive biological and other natural resources in and adjacent to the Specific Plan.

The RMDP and SCP components of the proposed Project would build on the Specific Plan's program for the protection of large areas of land within the 977-acre River Corridor SMA and the 4,205-acre High Country SMA. In addition, the 1,517-acre portion of the Salt Creek watershed and wildlife corridor in Ventura County, adjacent to the Specific Plan, would be dedicated to the public in perpetuity, and this dedication area would be managed in conjunction with the High Country SMA. Further, the applicant proposes to grant a conservation easement to CDFG over approximately 167.6 acres of the applicant's land holdings in Los Angeles County with known spineflower populations. This grant would be accompanied by the SCP, which provides the management and monitoring framework to ensure the long-term persistence of core spineflower occurrences within the SCP study area. The spineflower preserve areas are a component of the 3,420-acre Open Area located within interstitial areas between development. Approximately 1,921 acres of the Open Area are expected to support native habitat resources. These large areas of sensitive native habitats generally are associated with the natural drainage areas and major landforms of the Project area. Through a combination of natural lands preservation, restored native habitat areas, and recreational land uses, the Open Area provides for linkage and connectivity between the proposed preserve areas within the Specific Plan. As a whole, the Project area open space includes natural (preserved) open space within the High Country SMA; River Corridor SMA; the Salt Creek area, adjacent to the Specific Plan boundary; and designated and manufactured Open Area, including the spineflower preserve areas; and other specified open areas associated with the development. Combined, the Specific Plan, including the Salt Creek area, comprises approximately 10,000 acres of open space. The assembly and management of an on-site, permanent open space preserve represent an important overall objective of the proposed Project.

The proposed Project includes the establishment of a habitat restoration and enhancement program described in the Specific Plan, which would assist in the rehabilitation of areas of native habitat that have been disturbed by past activities. Such disturbances include grazing, roads, oil and natural gas operations, and invasion by non-native species such as giant reed (*Arundo donax*) and tamarisk (*Tamarix* spp.).

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Construction of bank stabilization along the Santa Clara River would protect Project development areas from flooding and potential erosion. In many locations, bank stabilization would be installed in non-jurisdictional areas, thereby reducing impacts to the Santa Clara River and resulting in the creation of additional riparian habitat, as well as the restoration and enhancement of such habitat.

Flood control and drainage facilities would be designed to accommodate storm flows from the Specific Plan site during construction and after build-out, thereby reducing flooding and erosion potential. Proposed flood control and drainage facilities would be maintained by DPW or other appropriate entity. In general, maintenance activities would include regular facility inspections, removal of sediment and vegetation in accordance with approved maintenance procedures, and facility repairs in accordance with provisions of the RMDP.

The economic benefits of the proposed Project are a result of the efficiencies built into the federal and state regulatory framework and permitting process that would allow for long-range planning, habitat protection, preserve design, and construction of residential, commercial, and non-residential uses, as well as infrastructure and public service amenities.

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3.0 REGULATORY FRAMEWORK AND PERMITTING PROCESS

The following section identifies the applicant's permit objectives and summarizes the regulatory framework and permitting process for the Newhall Ranch RMDP.

3.1 Applicant's Permit Objectives

The applicant is requesting that the Corps issue a section 404 Permit under the Federal Clean Water Act (33 U.S.C. 1251–1387) and that CDFG issue a Master Lake/Streambed Alteration Agreement under Fish and Game Code section 1600 et seq., as well as two Incidental Take Permits under the California Endangered Species Act (CESA), Fish and Game Code section 2081(b). The requested Project approvals would facilitate the future development of the Specific Plan and portions of the Entrada and VCC planning areas. The permits would authorize the construction and maintenance activities depicted in the RMDP. Requested Project approvals also would:

- Streamline the permitting process if there is a need for ongoing authorizations for individual projects or components through the issuance of a single section 404 Permit and a Master Lake/Streambed Alteration Agreement, rather than case-by-case permitting.
- Include endangered species mitigation requirements and incidental take authorizations for existing listed and unlisted species in the permit process.
- Standardize the mitigation applicable for Corps- and CDFG-regulated activities.
- Authorize all regulated activities to be carried out by parties other than the applicant, subject to the terms and conditions of the federal and state permits.
- Authorize flood control maintenance activities, subject to the terms and conditions of the federal and state permits.

Although the Corps acknowledges the applicant's requested Project approvals as described above, it can only issue a section 404 Permit that: (1) authorizes activities that meet the requirements under the section 404(b)(1) guidelines and are not contrary to the public interest, (2) provides assurances that the authorized discharges into waters of the United States would be completed in accordance with the permit conditions and applicable laws and regulations, and (3) provides the Corps with the necessary flexibility and administrative remedies to address changed environmental conditions, modifications in laws and regulations, and compliance problems.

The Corps is also evaluating the RMDP component of the proposed Project for compliance with section 404(b)(1) guidelines. The Corps will use the results of the environmental impact analysis in the Newhall Ranch RMDP-SCP EIS/EIR and input from the public and commenting agencies

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in reaching a decision on whether to issue the section 404 Permit and, if so, what types of conditions are necessary. Thus, no decision has been made to issue a section 404 Permit for the RMDP component of the proposed Project at this time.

CDFG also acknowledges the applicant's requested Project approvals and its desire to establish a streamlined process for a Master Lake/Streambed Alteration Agreement and an Incidental Take Permit under CESA. CDFG would execute the requested approvals, provided they meet CDFG's requirements to protect and conserve fish and wildlife resources of the State of California under Fish and Game Code section 1600 et seq., to protect threatened or endangered species under CESA, and to avoid take of fully protected species under Fish and Game Code sections 3511, 4700, 5050, and 5155. Under CEQA, CDFG must avoid or substantially reduce, to the extent feasible, all significant direct and indirect environmental impacts resulting from approval and implementation of the proposed Project.

3.2 Overview of the Applicant's Proposed Permitting Process

Under the applicant's proposed permitting process, all proposed Project activities described in this section would be addressed under a single section 404 Permit issued by the Corps, a Candidate Conservation Agreement approved by USFWS, and a Master Lake/Streambed Alteration Agreement with CDFG and two Incidental Take Permits issued by CDFG. To the extent possible, where Corps and CDFG jurisdictions overlap, these authorizations would have the same and/or compatible provisions to protect environmental resources within the jurisdiction of the Corps and CDFG. The section 404 Permit and Master Lake/Streambed Alteration Agreement would provide authorization for all Project activities identified in the RMDP, provided that the Project activities described herein are carried out in accordance with the conditions set forth in all federal and state permits, agreements, and authorizations.

Under the proposed permitting process, when individual Project activities are implemented, those activities would be verified as consistent with the RMDP, SCP, and the permits and agreements approved by the applicable agencies, which would ensure on a case-by-case basis that: (1) individual proposed Project activities and their resulting environmental impacts are consistent with those described in the Newhall Ranch RMDP-SCP EIS/EIR, (2) permit conditions are appropriately applied to each individual Project activity, and (3) the cumulative impacts of the individual Project authorizations are consistent with the findings in the Newhall Ranch RMDP-SCP EIS/EIR.

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3.3 Corps Section 404 Regulatory Setting

3.3.1 Section 404 Permit

Section 404 of the CWA authorizes the Secretary of the Army, acting through the Corps, to issue permits regulating the discharge of dredged or fill materials into the “navigable waters at specified disposal sites.” Section 502 of the CWA further defines “navigable waters” as “waters of the United States, including territorial seas.” “Waters of the United States” are broadly defined in 33 CFR, section 328.3(a)¹ to include navigable waters, perennial and intermittent streams, lakes, rivers, and ponds, as well as wetlands, marshes, and wet meadows. Specifically, section 328.3(a) defines “waters of the United States,” as follows:

All waters which are currently used, or were used in the past, or may potentially be susceptible to used in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide

- All interstate waters, including interstate wetlands
- All other waters such as intrastate 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:
 - Which are or could be used by interstate or foreign travelers for recreational or other purposes
 - From which fish or shellfish are or could be taken and sold in interstate or foreign commerce, or
 - Which are or could be used for industrial purpose by industries in interstate commerce.
- All impoundments of waters otherwise defined as waters of the United States under the definition
- Tributaries of waters identified in paragraphs 1 through 4 of this section

¹ This regulation, 33 C.F.R Section 328.3, and the definitions contained therein, have been the subject of recent litigation. In addition, the U.S. Supreme Court has recently limited the scope and extent of the Corps' jurisdiction over "navigable waters" and "waters of the United States" under the CWA. See, e.g., *Solid Waste Agency of Northern Cook City. v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) ("SWANCC"); *Rapanos v. United States*, 126 S.Ct. 2208 (2006). Despite the impact of these recent decisions, the definitions continue to provide guidance to the extent that they establish an outer limit for the extent of the Corps' jurisdiction over "waters of the United States," and, therefore, are referenced here for that purpose.

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- The territorial seas
- Wetlands adjacent to waters identified in the above paragraphs (other than waters that are themselves wetlands).

The lateral limits of the Corps' section 404 jurisdiction in non-tidal waters are defined by the "ordinary high-water mark" (OHWM), unless adjacent wetlands are present. The OHWM is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or presence of debris (33 CFR 328.3(e)). As such, waters are recognized in the field by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within, or adjacent to, waters of the United States, the lateral limits of the Corps' jurisdiction will extend beyond the OHWM to the outer edge of the wetlands. The upstream limit of jurisdiction in the absence of adjacent wetlands is the point beyond which the OHWM is no longer perceptible (33 CFR 328.4; 51 FR 41217).

The CWA section 404(b)(1) guidelines govern the issuance of permits authorizing the placement of fill material into waters of the United States, and state that:

[No] discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences (40 CFR 230.10(a)).

Under the section 404(b)(1) guidelines, the applicant must demonstrate avoidance or minimization of impacts to waters of the United States to the maximum extent practicable. Under the above requirements, the Corps can only issue a section 404 Permit for the "least environmentally damaging practicable alternative" (LEDPA). In addition, the Corps is prohibited from issuing a permit that is contrary to the public interest (33 CFR 320.4).

Section 401 of the CWA requires an applicant requesting a federal permit (including a section 404 Permit) for an activity that may result in any discharge into navigable waters, to provide state certification that the proposed activity will not violate state and federal water quality standards.

In addition to the above regulations on discharges of dredged or fill material into waters of the United States, CWA section 404 extends additional protection to certain rare and/or sensitive aquatic habitats. These are termed "special aquatic sites," and include six categories: sanctuaries

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and refuges, wetlands, mudflats, vegetated shallows, coral reefs, and riffle/pool complexes (40 CFR 230.40–45).

For proposed discharges into these special aquatic sites, the section 404(b)(1) guidelines require consideration of whether the activity associated with the proposed discharge is dependent on access or proximity to, or siting within, a special aquatic site to fulfill its basic project purpose. If an activity is determined not to be water-dependent, the section 404(b)(1) guidelines establish the following two presumptions (40 CFR 230.10(a)(3)) that the applicant is required to rebut in addition to satisfying the alternatives analysis requirements:

- Practicable alternatives not involving discharges of fill material into special aquatic sites are presumed to be available; and
- All practicable alternatives to the proposed discharge not involving a discharge into a special aquatic site are presumed to have less adverse impacts on the aquatic ecosystem.

For projects that are not water dependent, the applicant must rebut these presumptions in order to demonstrate compliance with the section 404(b)(1) guidelines.

Of the six categories of special aquatic sites, only wetlands are at issue with respect to the proposed Project. The CWA defines wetlands as:

Those areas that are inundated or saturated by surface or groundwater 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 (33 CFR 328.3).

The Corps has developed a field technique to identify wetlands, which is often referred to as the “three-parameter technique” (Corps 1987). This method involves a procedure to identify the three requisite characteristics of a section 404 jurisdictional wetland:

- Hydrophytic vegetation—more than 50% of dominant plants are adapted to anaerobic soil conditions;
- Hydric soils—soils classified as hydric or that exhibit characteristics of a reducing soil environment; and
- Wetland hydrology—inundation or soil saturation during at least 5% of the growing season (in Southern California, this is equal to 18 days).

The Corps’ (1987) wetlands delineation manual describes an approach to identify field indicators of the above characteristics. In general, all three characteristics must be evident by field

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indicators, and their presence must be determined independent of the other characteristics. Positive identification of wetlands based on the presence of fewer than three characteristics can only occur when one or more parameters is absent due to normal seasonal variation in environmental conditions (“Problem Areas”), or due to recent human activities (“Atypical Situations”).

3.3.2 Section 404 Permit Process

The section 404 Permit process for the proposed Project began with the issuance of the Corps’ Public Notice (announcing the receipt of a section 404 Permit application) and scoping meetings for the EIS/EIR. Based upon the information in the Newhall Ranch RMDP-SCP EIS/EIR, public comments, and input from various agencies, the Corps will conduct a permit evaluation considering the probable Project and cumulative impacts of the proposed Project on the public interest. The decision will reflect the national concern for both protection and utilization of important aquatic resources and the applicable legal requirements. The benefit that reasonably may be expected to accrue from the proposed actions will be balanced against their reasonably foreseeable detriments.

In summary, the Corps will:

- Determine if the proposed actions are consistent with section 404(b)(1) guidelines.
- Consult with the USFWS and National Oceanic and Atmospheric Administration (NOAA) Fisheries Service to determine if the proposed actions would adversely affect threatened and endangered species or their critical habitat under the provisions of Endangered Species Act section 7 (16 U.S.C. § 1531 et seq.).
- Coordinate with the State Historic Preservation Officer to ensure compliance with National Historic Preservation Act section 106.
- Consider all agency and public comments on the Public Notice and EIS/EIR in the permit decision.

A section 404 Permit would not be valid until the applicant receives a section 401 water quality certification or waiver from the RWQCB. The water quality certification, denial, or waiver generally occurs concurrently with the Corps’ permit decision. The Corps anticipates that any permit issued for the proposed actions would likely be a provisional permit until completion of the State of California’s process because the RWQCB cannot take action on a request for certification or waiver for the proposed section 404 Permit without compliance with CEQA (i.e., certification of a Final EIR and adoption of CEQA findings by CDFG).

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The permit process proposed by the Corps consists of two major steps: (1) an evaluation of the proposed Project followed by a decision and (2) individual project verifications during the life of the permit. The key steps are as follows:

- Upon completion of the NEPA review, section 7 consultation, permit evaluation, and agency coordination, the Corps would issue a provisional permit, which would become an individual section 404 Permit after all regulatory authorizations are obtained, with a duration of up to 20 years.
- Upon CDFG's certification of the Final EIS/EIR and adoption of CEQA findings, the RWQCB would issue a waiver or section 401 water quality certification. The latter would become a condition of the Corps' section 404 Permit.
- The applicant would need to submit a request for verification of authorization to the Corps for each proposed project element described in the Final EIS/EIR. Project elements can only be implemented when the Corps has issued a written consistency verification to the applicant. A Consistency Verification Letter request would be submitted to the Corps 45 calendar days prior to the planned activities. The Corps would be required to respond within the 45-day period, notifying the operator that the project was consistent with the Final EIS/EIR, 404 Permit, and the RMDP. In the absence of a response, and with operator-documented proof of receipt of the request by the Corps, then the verification may be assumed issued and the project may proceed.

Project Modification

If the applicant modifies a project element significantly from that described in the Final EIS/EIR, a request to modify the section 404 Permit would be submitted to the Corps with an explanation for the modification and descriptions of the following items: (1) new impacts associated with the modification and their significance, (2) changes in the overall environmental impacts due to the modification of an individual project element, and (3) conformance with the environmental protection elements of the Final EIS/EIR and section 404 Permit conditions. Significant deviation from the Final EIS/EIR also may trigger the need for a Supplemental EIS/EIR if new significant or substantially more severe environmental impacts could occur.

Third-Party Use of Permit

Parties other than the applicant could seek authorization for section 404 activities that are included in the section 404 Permit by following the same procedure previously described for the Operator. The request must include a statement that the party will abide by the conditions of the section 404 Permit and any subsequent modifications to that permit.

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Annual Reports

The applicant would be required to submit an Annual Permit Status Letter Report to the Corps by April 1 of each year. For this Project, the applicant also has proposed to submit an Annual Mitigation Status Report and a Mitigation Accounting Form to the Corps and CDFG by April 1 of each year. Under the provisions of the section 404 Permit program (33 CFR § 325.7), the Corps has the authority to reevaluate the circumstances and conditions of the section 404 Permit, and may initiate action to modify, suspend, or revoke the permit as may be made necessary by considerations of the public interest.

Maintenance

Prior to any maintenance activities, DPW or other management entity would submit a Maintenance Notification to the Corps. The Maintenance Notification would be submitted to the Corps 30 calendar days prior to the planned activities. The Corps would be required to respond within the 30-day period, notifying DPW or other management entity that: (1) the maintenance activities can proceed as planned because they are consistent with the Final EIS/EIR and the conditions of the section 404 Permit or (2) the activities cannot proceed as planned.

For maintenance activities that are not included in the section 404 Permit, a Permit Modification application may be submitted to the Corps. The Corps would have the discretion to modify the section 404 Permit and its conditions to include the new proposed projects, or to issue a separate nationwide or individual permit, as appropriate.

If DPW or other management entity modifies a maintenance activity from the Final EIS/EIR, a request to modify the section 404 Permit would be submitted to the Corps with an explanation of the modification and descriptions of the following items: (1) new impacts associated with the modification, (2) changes in the overall environmental impacts due to the modification of an individual project, and (3) conformance with the environmental protection elements of the Final EIS/EIR and section 404 Permit conditions. The Corps would review the requested modifications, and would have the discretion to modify the section 404 Permit and its conditions to include the new maintenance activity after review by the appropriate resource and regulatory agencies, or to issue a separate nationwide or individual permit, as appropriate.

3.3.3 NEPA Action

The Corps is the lead agency under NEPA responsible for review of the environmental impacts of the proposed Project. In that capacity, the Corps must assess, and is analyzing in the Newhall Ranch RMDP-SCP EIS/EIR, the potential for significant direct and indirect impacts on the environment that may result from approval and implementation of the proposed RMDP and SCP components of the proposed Project, and issuance of the requested section 404 Permit. The

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Corps' responsibilities include the evaluation of a range of reasonable alternatives to the proposed Project, and the identification of feasible mitigation measures to minimize identified adverse effects of the proposed Project.

3.4 USFWS Regulatory Setting

3.4.1 Federal Endangered Species Act of 1973

The federal ESA (16 U.S.C. § 1531 et seq.) and the implementing regulations (50 CFR 17.1 et seq.) include provisions for the protection and management of federally listed threatened or endangered plants and animals and their designated critical habitats. Generally, the USFWS regulates upland and freshwater species and the NOAA Fisheries Service oversees provisions for protection of anadromous, marine, and estuarine species. ESA section 4 requires USFWS and/or NOAA Fisheries Service to make determinations on whether any species should be listed as an endangered or threatened species and to designate critical habitat for endangered and threatened species (16 U.S.C. § 1533). ESA section 7 requires federal agencies to consult with USFWS and/or NOAA Fisheries Service and obtain a Biological Opinion prior to carrying out any federal program or agency activity that may adversely affect threatened or endangered species. The section 7 consultation and Biological Opinion process includes an evaluation of whether a project is likely to jeopardize the continued existence of any endangered or threatened species or result in the “destruction or adverse modification” of critical habitat, and requires the inclusion of reasonable and prudent measures in the implementation of a project or agency activity in order to minimize any impact (16 U.S.C. § 1536).

With regard to the proposed Project, the Corps would comply with these requirements through consultation with USFWS and NOAA Fisheries Service. In December 2007, the Corps initiated consultation, and requested USFWS' Biological Opinion on impacts to five federally listed species (least Bell's vireo, unarmored threespine stickleback, arroyo toad, southwestern willow flycatcher, and California condor). In addition, the Corps will confer with and request a Biological Opinion from USFWS regarding the proposed Project's impacts to two additional federally listed threatened species not found in the Project area during focused surveys (California red-legged frog and coastal California gnatcatcher). This is because suitable habitat for these two species exists on the Project area, and because the two species are known to inhabit areas in the vicinity of the Project area. As a result, the potential exists for these two additional species to establish populations on site in the future and for the proposed Project to adversely affect these two species. (Please refer to the Biological Assessment for the proposed Project (URS 2008a), which is found in Appendix 4.5 of the EIS/EIR.)

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3.4.2 USFWS Processes

The USFWS reviews the Biological Assessment submitted by the Corps for federally listed species. Within 135 days, the USFWS will determine whether the project activities would jeopardize a federally listed species and issue either a Biological Opinion or Jeopardy Decision. The Biological Opinion will then become conditions of the Corps 404 permit.

Should a new species become federally listed that is known to occur, or at least has moderate potential to occur, within the Project area, the applicant would coordinate with the Corps and USFWS to determine whether surveys for that species are necessary. If the USFWS and the Corps determine that the Project activities would affect the newly listed species, it is anticipated that the USFWS would amend the Biological Opinion.

In addition, the USFWS would review the applicant's proposed Candidate Conservation Agreement and associated SCP.

3.4.3 NEPA Action

There is no NEPA action associated with the issuance of the Biological Opinion(s).

3.5 CDFG Regulatory Setting

3.5.1 Fish and Game Code, Section 1600–1616

Fish and Game Code section 1602 (Chapter 6, Fish and Wildlife Protection and Conservation) states that it is unlawful for any person to “substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake . . .” without first notifying CDFG of that activity. Thereafter, if CDFG determines and informs the entity that the activity will not substantially adversely affect any existing fish or wildlife resources, the entity may commence the activity. If, however, CDFG determines that the activity may substantially adversely affect an existing fish or wildlife resource, before the entity may perform any activity, a Master Lake/Streambed Alteration Agreement, which includes reasonable measures necessary to protect the resource, may be required from CDFG in order to permit the entity to conduct the activities (California Fish and Game Code, section 1602).

Master Lake/Streambed Alteration Agreements are typically required for activities such as excavation or placement of fill within a stream channel, vegetation clearing, installation (and sometimes operation) of structures that divert the flow of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement. A stream is defined in Title 14, California Code of Regulations, section 1.72 as:

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[A] body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.

The term “streambed” is interpreted by CDFG to encompass all portions of the bed, banks, and channel of any stream, including intermittent and ephemeral streams, extending laterally to the upland edge of riparian vegetation.² In the case of watercourses with vegetated floodplains, such as the Santa Clara River, this CDFG definition often results in an asserted jurisdictional area that is much wider than the active channel of the stream. The upstream limit of CDFG’s asserted jurisdiction is the point upstream of which there is no evidence of a defined bed and bank, and riparian vegetation is not present.

It should be noted that the Corps’ CWA section 404 jurisdiction is a subset of CDFG’s Fish and Game Code section 1600 jurisdiction. Although the two may be coterminous, as is the case in many smaller, ephemeral streams lacking riparian plant communities, the CDFG jurisdictional area will never be smaller than that defined by the Corps’ “ordinary high-water mark” criterion.

3.5.2 Master Lake/Streambed Alteration Agreement Process

The development and issuance of a CDFG Master Lake/Streambed Alteration Agreement would follow the same general procedures described above for the section 404 Permit, including all noticing and agency coordination requirements, and all Project-specific and annual reports. The CDFG forms will be utilized by both CDFG and Corps for submittals, although in the case of CDFG, the submittal shall be termed a Subnotification to be consistent with Fish and Game Code section 1605. A summary of CDFG’s process is provided below.

The proposed Master Lake/Streambed Alteration Agreement would include avoidance, minimization and mitigation measures, all or some of which the applicant must implement for a specifically covered activity, and maintenance procedures that the applicant must follow in completing a specifically covered activity. The measures and procedures applied to a covered activity would be those that CDFG and the applicant agree are necessary to protect fish and wildlife resources from activities that could cause a substantially adverse affect.

² The applicant does not agree that the CDFG has jurisdiction under Fish and Game Code, Section 1600 et seq. over contiguous riparian areas in those areas where the riparian vegetation extends beyond the banks of the river or stream. Despite this disagreement, for purposes of this document, the CDFG has calculated its jurisdiction to include the broader CDFG interpretation.

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The Master Lake/Streambed Alteration Agreement³ is a long-term agreement (i.e., greater than five years) authorized and governed by Fish and Game Code, section 1605 (g).

Prior to initiating a specific activity covered by the Master Lake/Streambed Alteration Agreement, the applicant would seek authorization from CDFG to begin the activity. The authorization request would be in writing, describe the activity, include construction plans when appropriate, and identify the avoidance, minimization, and mitigation measures and maintenance procedures identified in the Master Lake/Streambed Alteration Agreement that the applicant intends to apply to the activity.

A Subnotification would be submitted to CDFG 45 calendar days prior to the planned activities. Upon receipt of a Subnotification request, CDFG would first determine whether the activity is covered by the Master Lake/Streambed Alteration Agreement. The CDFG would be required to respond within the 45-day period, notifying the operator if the project was consistent with the Final EIS/EIR, Master Lake/Streambed Alteration Agreement, 2081 Permit(s), and the RMDP. In the absence of a response, and with operator-documented proof of receipt of the request by CDFG, then the Subnotification may be assumed issued and the project may proceed.

If the activity is not covered, the applicant may request CDFG to amend the Master Lake/Streambed Alteration Agreement to include the activity after CDFG completes any necessary additional environmental review under CEQA. If the activity is covered, CDFG would determine whether the avoidance, minimization, and mitigation measures and maintenance procedures identified in the authorization request are necessary and adequate to protect fish and wildlife resources which the activity could substantially adversely affect.

If the measures and procedures are necessary and adequate, CDFG would authorize the activity without additional environmental review under CEQA. If CDFG identifies a measure or procedure that is not necessary, CDFG would exclude that measure or procedure. If CDFG determines that the measures and procedures are not adequate, CDFG would include additional measures that the applicant must apply to the activity described in the authorization request and complete any necessary additional environmental review under CEQA before authorizing the activity. Any additional measures and/or procedures CDFG requires may or may not be identified in the Master Lake/Streambed Alteration Agreement. If the applicant disagrees with any of those additional measures, CDFG and applicant would follow the process set forth in the Master Lake/Streambed Alteration Agreement LSAA and/or Fish and Game Code section 1605 (g)(3).

³ The applicant has submitted its application to CDFG for the Master Lake/Streambed Alteration Agreement as well as the proposed agreement. Please refer to *Appendix 2.0* of the EIS/EIR for a copy of the proposed agreement.

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If CDFG determines that individual projects and mitigation are not consistent, then CDFG would deny the request in writing with an explanation of the decision.

Minor Amendment

The applicant may submit a Subnotification request for a minor amendment to the Master Lake/Streambed Alteration Agreement for any project that has been denied, or for a project identified in the Final EIS/EIR that has been modified beyond the approved Project limits. The request for a minor amendment must be submitted with appropriate plans and mitigation information sufficient for CDFG to make a determination. If CDFG determines that the project would have no additional substantial adverse effects on fish and wildlife resources, CDFG would deem the mitigation information to be satisfactory under the Master Lake/Streambed Alteration Agreement, and approve the minor amendment after completion of any additional CEQA compliance, if any. If CDFG determines that the project would have additional substantial adverse effects on fish and wildlife resources, CDFG would not deem the mitigation information satisfactory under the Master Lake/Streambed Alteration Agreement, and would deny the request for authorization of a minor amendment.

Major Amendment

If a request for a minor amendment is denied or if the applicant desires to go forward with a project that has not been identified in the Final EIS/EIR, the applicant may request a major amendment (Amendment) to the Master Lake/Streambed Alteration Agreement, which would include appropriate plans and mitigation information sufficient for CDFG to make a determination. If the project identified in the request for major amendment is consistent with the Final EIS/EIR and any substantial adverse effects to fish and wildlife can be mitigated to CDFG's satisfaction according to the Final EIS/EIR mitigation measures, CDFG could approve the request for a major amendment after completion of any additional required CEQA compliance. If the new project, or project for which a request for Amendment was denied, would impact areas not covered in the Final EIS/EIR, the CDFG may require additional compensatory mitigation and any other necessary measures. If the applicant disagrees with any of those additional measures, CDFG and applicant would follow the process set forth in the Master Lake/Streambed Alteration Agreement and/or in Fish and Game Code section 1605 (g)(3).

3.5.3 CESA "Take" Authorizations

The proposed Project activities may affect some species listed as threatened or endangered under CESA. Under CESA, CDFG can authorize the incidental take of these species through issuance of an Incidental Take Permit pursuant to Fish and Game Code section 2081 (b) and (c). The implementing regulations under CESA (14 CCR 783.0 et seq.), and the overall permitting standards articulated in CESA, allow CDFG to issue Incidental Take Permits for projects as

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proposed if: (1) the impacts are minimized and fully mitigated, mitigation measures must be roughly proportional to the impact to the species, and, where various measures are available, the measures maintain the applicant's objectives to the maximum extent possible; (2) the measures are capable of successful implementation; (3) the applicant ensures adequate funding for monitoring and implementation of measures; and (4) the issuance of the permit would not jeopardize the continued existence of the species.

Where a species also is listed under the federal ESA, and a federal agency has issued take authorizations under that law, separate consultation and incidental take under section 2081 can be avoided if CDFG makes a determination that these authorizations are consistent with state law. These authorizations, called Consistency Determinations, are issued pursuant to Fish and Game Code section 2080.1. The applicant has submitted applications to CDFG for issuance of two section 2081 Incidental Take Permits. The first application covers CESA-listed wildlife species observed in the Project area (western yellow-billed cuckoo, southwestern willow flycatcher, and least Bell's vireo), special-status wildlife species observed in the Project area (arroyo toad, tricolored blackbird, and western burrowing owl), and un-described plant and wildlife species observed in the Project area (sunflower, everlasting, and spring snail). The second application covers the CESA-listed San Fernando Valley spineflower only.

In addition to species that are listed under CESA, CEQA contains a provision that allows lead agencies, such as CDFG, to treat non-listed, but otherwise rare, threatened, or endangered species as though they were in fact listed (State CEQA Guidelines, 14 CCR 15380). CDFG expects that these species would be included in its CESA take authorizations. A detailed discussion of special-status species found within the Project area is provided in Section 4.5, Biological Resources, of the Newhall Ranch RMDP-SCP EIS/EIR.

There is also a class of species covered by state law known as "fully protected species" (Fish and Game Code, sections 3511, 4700, 5056, and 5515). Presently, the take of fully protected species incidental to otherwise lawful development is not permitted under state law. In addition, CDFG has no authority to authorize the take of fully protected species. Because take of fully protected species is prohibited and may not be authorized, all potential take of fully protected species will be avoided.

The Master Lake/Streambed Alteration Agreement incorporates, by reference, the 2081 permits issued for the incidental take of species pursuant to CESA. Subnotifications are to include a listing of any species potentially occurring within a Project area, and where applicable, mitigation measures to be implemented to ensure Project consistency with the EIS/EIR, Master Lake/Streambed Alteration Agreement, and 2081 permit conditions.

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3.5.4 CEQA Actions

CDFG is the lead agency under CEQA responsible for review of the environmental impacts of the proposed Project. In that capacity, CDFG must assess, and is analyzing in the Newhall Ranch RMDP-SCP EIS/EIR, the potential for significant direct and indirect impacts on the environment that may result from approval of the RMDP and SCP components of the proposed Project, and issuance of the Master Lake/Streambed Alteration Agreement and Incidental Take Permit(s). That analysis includes significant environmental impacts within CDFG's permitting authority, and impacts to other natural resources within CDFG's jurisdiction as the State of California's trustee for fish and wildlife resources, resulting from approval and implementation of the proposed Project. Where any such impacts are significant, CEQA's substantive mandate requires CDFG to avoid or substantially lessen those impacts to the extent feasible. In this respect, the EIS/EIR, RMDP, and SCP include feasible mitigation measures that would avoid or substantially lessen significant Project-related environmental impacts, including impacts on natural resources held in trust for the people of California.

3.6 Other Permits and Approvals

In addition to the Corps, USFWS, and CDFG permitting requirements, other permits or approvals may be required to implement the proposed Project. Specifically, regulatory agencies, known as responsible agencies under CEQA, may identify the need for additional permits and approvals for the proposed Project. The other permits and approvals, which are known to be needed or may be needed, are as follows:

- Specific Plan amendments, conditional use permits, tentative tract map approvals, zone changes, oak tree removal permits, and parking permits from Los Angeles County
- Grading and building permits from Los Angeles County
- Encroachment permits from Caltrans and Federal Highway Administration (FHWA) for bridge and roadwork involving Caltrans and FHWA facilities
- Encroachment permits from Southern California Edison for transmission line right-of-way access, and from DPW for channel and road work access
- Individual National Pollution Discharge Elimination System (NPDES) permits for construction dewatering activities
- Stormwater mitigation plan approvals from Los Angeles RWQCB
- 401 Water Quality Certification, waiver of certification, or Waste Discharge Requirements (WDRs) from the Los Angeles RWQCB in lieu of 401 Certification, as necessary for the Corps 404 permit.

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The above description of other required permits and approvals is not intended to provide a complete and final listing of future agency actions, permits, and approvals required to implement the proposed Project. Other additional permits/approvals may be required in the future.

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4.0 EXISTING ENVIRONMENTAL SETTING AND APPROVED LAND USES

4.1 Environmental Setting and Existing Land Uses

This section describes the existing and planned environmental setting in the RMDP study area. In addition, the existing and planned land uses are described, including ongoing agricultural operations within the study area.

4.1.1 Newhall Ranch Specific Plan Area

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 Ayres Rock adjacent to Potrero Mesa.

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 coastal 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, chemise 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 this reach of 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*) (59 FR 4845–4867). The River also provides habitat for the state- and federally listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*). The River itself

Newhall Ranch Resource Management and Development Plan

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, which is composed of diverse oak woodland habitats that function as a wildlife corridor/linkage between the San Gabriel Mountains and the Santa Monica Mountains, and (2) the River Corridor SMA, which is composed of aquatic habitat within the Santa Clara River corridor that supports the endangered unarmored threespine stickleback and other listed and special-status 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, and 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.

Surrounding land uses to the north of the Specific Plan site include rural residential uses in the Val Verde and San Martinez Grande areas, a landfill in Chiquito Canyon, commercial business parks in the VCC planning area, residential and commercial uses in the Castaic corridor, oil and natural gas production, and undeveloped land. To the west, land uses include agricultural operations, undeveloped land, and oil and natural gas production. To the east, land uses include commercial/recreational uses at and around Six Flags Magic Mountain Amusement Park (including hotels, restaurants, and gas stations), residential uses at Stevenson Ranch, the Valencia WRP, a California Highway Patrol station, and undeveloped land. To the south, the land is undeveloped.

4.1.2 Valencia Commerce Center Planning Area

The VCC planning area is dominated by north/south trending ridges that lie north of Castaic Creek, near the confluence with Hasley Canyon. Site elevations range from just under 1,000 feet

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AMSL in the Castaic Creek bottom, to just over 1,500 feet AMSL at the top of the western ridge. The ridges are generally rounded at the top with slopes that vary from steep to gentle. Aside from the ridges, the two major wash areas on the VCC planning area—Castaic Creek and Hasley Canyon—contain numerous benches and braided channels with associated riparian/wash scrub habitats.

Native and naturalized habitats within the VCC planning area include representative examples of those plant communities found in the Santa Susana, Topa, and Liebre mountains and the Santa Clara River and Castaic Creek ecosystems. Upland habitats dominate the landscape within the study area (e.g., coastal scrub and California annual grasslands); however, Castaic Creek and Hasley Canyon support a variety of riparian plant communities (e.g., herbaceous wetland, southern cottonwood–willow riparian forest, and mulefat scrub). No observations of any coastal and valley freshwater marsh or seep areas were made in the study area.

Historically, the applicant has leased portions of the VCC planning area for sand and gravel production, cattle grazing, and agricultural operations; only agricultural operations are currently ongoing. Southern California Edison and Southern California Gas Company also have distribution lines and access roads within on-site easements. There is existing commercial/industrial development located adjacent to the VCC planning area, as the planning area is a portion of the larger, partially developed VCC commercial/industrial complex.

4.1.3 Entrada Planning Area

The southern portion of the Entrada planning area is dominated by several north/south trending ridges. A narrow panhandle (roughly 100 meters wide) extends along the western portion of the site (east of Airport Mesa) to an agricultural field adjacent to the Santa Clara River. The northeastern portion of the site contains a large agricultural field with fragments of remnant oak woodlands, California sagebrush scrub, and California buckwheat scrub. Site elevations range from approximately 1,000 feet AMSL along the Santa Clara River, to approximately 1,550 feet AMSL on the ridges in the southwestern portion of the site.

Slope gradients range from moderate to very steep in the hillside areas, to very gentle within the ephemeral drainages and associated mesas. Distinctive geographic features include the north/south trending ridges on the southern portion of the site, and a wash that drains north through the site to a concrete-lined drainage channel that passes through the Six Flags Magic Mountain Amusement Park.

Native and naturalized habitats within the Entrada planning area are representative of those found in this region and provide examples of those plant communities found in the Santa Susana

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Mountains and the Santa Clara River ecosystems. Coastal scrub, undifferentiated chaparral, big sagebrush scrub, and California annual grasslands are the major upland plant communities on the site. Ephemeral and intermittent drainages on site provide habitat for alluvial scrubs. While upland habitats dominate the landscape within the site, immediately adjacent to the site are areas that support a variety of riparian plant communities. These include southern cottonwood–willow riparian forest, southern willow scrub, mulefat scrub, arrow weed scrub, and coastal and valley freshwater marsh and seeps.

The applicant leases portions of the Entrada planning area for cattle grazing and agricultural operations. Grazing activities have had an effect on much of the natural habitat on site. Scrub habitats have been displaced by California annual grasslands, apparently as a result of grazing. Southern California Edison and Southern California Gas Company have transmission lines within easements along the southern portion of the Entrada planning area, all of which are actively maintained. The Six Flags Magic Mountain Amusement Park is to the north of the Entrada planning area, and an existing residential development is located to the south.

4.2 Planned Land Uses

The RMDP Study Area is located within the Santa Clarita Valley Planning Area of the Los Angeles County General Plan. The Specific Plan received final approval from Los Angeles County on May 27, 2003. The VCC planning area, approved by the County in 1991, includes 12 million square feet of industrial/commercial buildings; approximately six million square feet of buildings have been constructed to date. The Entrada planning area is planned for residential, commercial, non-residential, and open space uses but is still in the early stages of local planning.

The planned land uses associated with the approved Specific Plan and land uses within the VCC and Entrada planning areas are described below.

4.2.1 Newhall Ranch Specific Plan Land Uses

The Specific Plan is a total of approximately 11,999 acres. The acreage of land uses within the Specific Plan is listed in *Table 1*, and the land use areas are shown in *Figure 6*. The Land Use Plan describes the land use designations that include Residential (five types), Mixed-Use, Commercial, Business Park, Visitor-Serving, Open Area, and the River Corridor and High Country SMAs. These land uses are all linked by a system of roadways and trails. Land use overlays are included on the Land Use Plan to show approximate locations of public facilities such as schools, fire stations, the new WRP, and recreation uses such as parks (County of Los Angeles 2003a).

Newhall Ranch Resource Management and Development Plan

**Table 1
Acreage of Each Approved Land Use in the Specific Plan**

Approved Land Use	Acres
Open space	8,236
Residential/commercial/non-residential	3,763
Total	11,999

SOURCE: County of Los Angeles 2003a

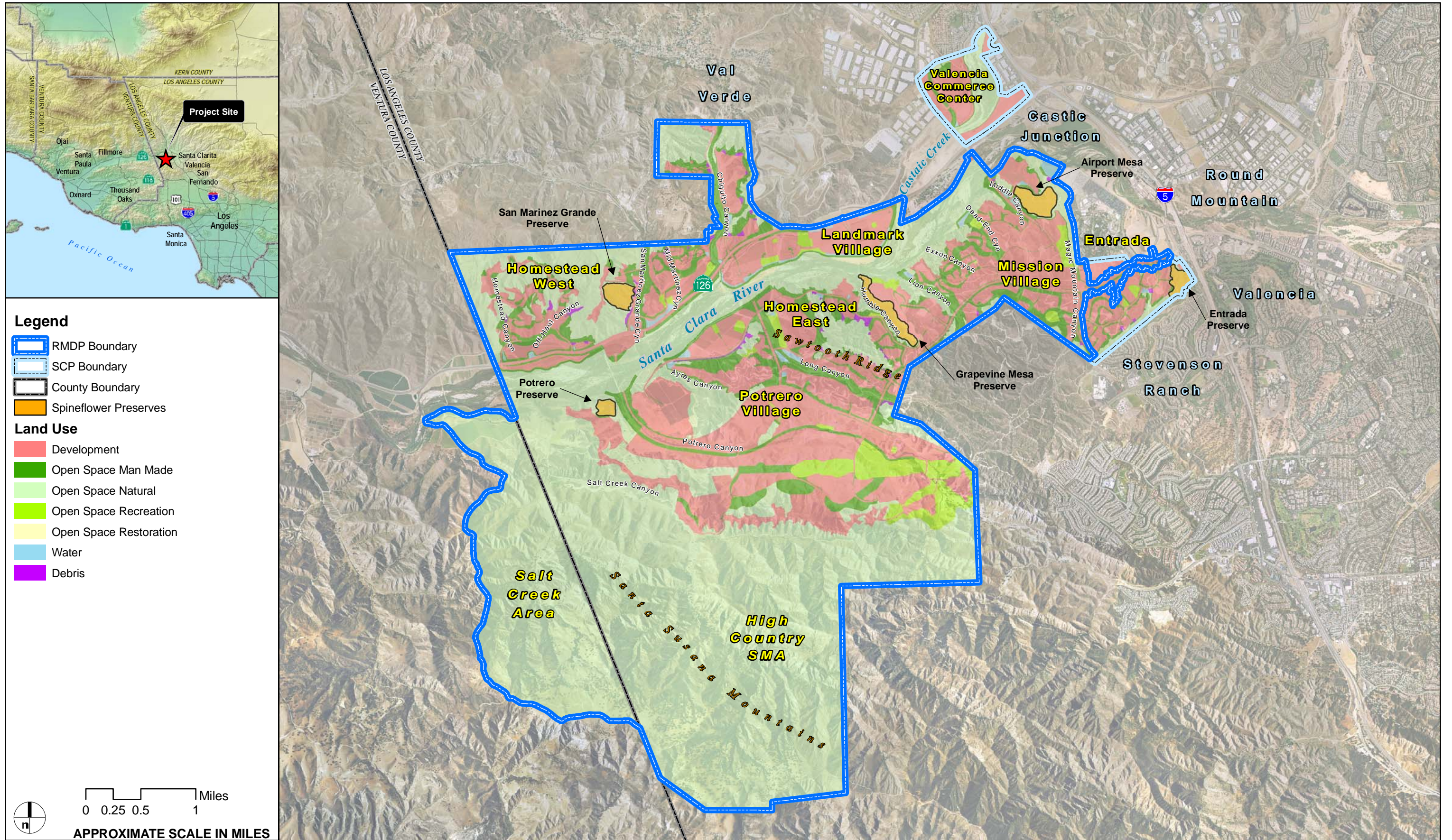
4.2.1.1 Backbone Infrastructure

The design concepts for major infrastructure systems proposed to serve development on the Specific Plan site are provided in the approved Specific Plan (County of Los Angeles 2003a). Infrastructure systems include on-site roadways and circulation, trails, drainage, potable water, reclaimed water, and sanitary sewer facilities. The approved Specific Plan's backbone infrastructure is summarized below. Impacts to CDFG/Corps jurisdiction related to these features are incorporated, to the extent feasible, into the RMDP Development Components Description, *Section 6.0*.

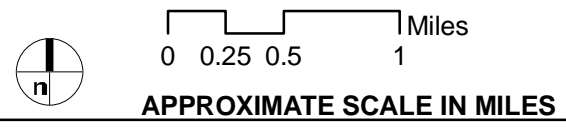
The Conceptual Backbone Drainage Plan of the approved Specific Plan anticipates that storm flows through the site would largely follow existing drainage patterns, and would be conveyed through the site in open, soft-bottom drainage channels and closed drainage systems. Other drainage improvements to be implemented as a result of the Specific Plan include catch basins, inlet and outlet structures, and water quality basins. While the Santa Clara River would generally remain in a natural condition, the Specific Plan called for installation of bank stabilization along portions of the River for bridge abutments and for various development projects, including residential, commercial, and business park uses. The location of bank stabilization along the Santa Clara River was identified at the Specific Plan level, and would generally be located in non-jurisdictional upland areas adjacent to the River in order to avoid or minimize impacts to the River, create new riverbed areas, and increase, restore, and enhance riparian habitat. The Specific Plan incorporated three types of bank stabilization for the River and its tributaries: buried soil cement, ungrouted riprap, and limited gunite lining.

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- Legend**
- RMDP Boundary
 - SCP Boundary
 - County Boundary
 - Spineflower Preserves
- Land Use**
- Development
 - Open Space Man Made
 - Open Space Natural
 - Open Space Recreation
 - Open Space Restoration
 - Water
 - Debris



AERIAL SOURCE: AirphotoUSA, 2007

FIGURE 6

Newhall Ranch - Resource Management and Development Plan
Newhall Ranch Specific Plan Land Use Map



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Under the approved Master Circulation Plan, primary access to the Specific Plan site is currently provided via SR-126, which is presently a four-lane highway between the Los Angeles County/Ventura County line and its connection to I-5, located approximately one mile east of the Specific Plan site. In addition, Chiquito Canyon Road/Del Valle Road is an existing two-lane road designated as a Limited Secondary Highway in the Santa Clarita Valley Area Plan (County of Los Angeles 1990a). San Martinez Grande Road is an existing local road, which provides access to portions of the Specific Plan site north of SR-126. The Specific Plan calls for improvements to several existing roadways in the Specific Plan area, including SR-126, Magic Mountain Parkway, Potrero Valley Road, Commerce Center Drive, Chiquito Canyon Road/Del Valle Road, San Martinez Grande Road, Valencia Boulevard, and Pico Canyon Road.

The approved Master Trails Plan (County of Los Angeles 2003a) provides a comprehensive bicycle, pedestrian, and equestrian trails system throughout the Specific Plan area, and includes potential connections to regional trail systems within the Santa Clarita Valley. The trails would provide access to Open Areas and the River Corridor and High Country SMAs, and connections between living areas, shopping, employment, entertainment, schools, and civic and recreational facilities. The trails system provides a hierarchy of trails, including the Regional River Trail, community trails, local trails, pathways, and unimproved trails.

The approved Conceptual Backbone Water Plan (County of Los Angeles 2003a) identifies conceptual on-site water storage and distribution systems to provide adequate fire and domestic water service to the Specific Plan site. The Specific Plan site is within the service area of the Castaic Lake Water Agency (CLWA), a wholesale water agency in the Santa Clarita Valley. Valencia Water Company, which currently serves Valencia and parts of the Newhall and Castaic communities, would provide retail water service for the Specific Plan area. The domestic water demands for the Specific Plan are based on the projections for the specific land uses and their intensities, balanced with historical use factors.

The applicant would meet the potable demands of the Specific Plan by first using the applicant's groundwater pumped from the local alluvial aquifer in Los Angeles County, which is presently committed to agriculture uses. The water that has been historically available for agricultural production would continue to be available until it is phased out by development on the Specific Plan site. By conditions imposed by Los Angeles County, the amount of groundwater converted to urban uses cannot exceed the amount currently used by the applicant for agricultural purposes. A second source to meet Specific Plan potable demand is the applicant's securing of additional water supplies under contract with Nickel Family, LLC in Kern County. The Nickel water would only be needed on the Specific Plan site in years when all of the applicant's agricultural water has been used, which is estimated to occur after the 20th year of project construction. Up to that

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point in time, the unused Nickel water would be available for storage in groundwater banking programs, which could then be used as a dry-year supplemental supply.

Two sources of non-potable supplies have been identified to meet the Specific Plan's non-potable demand, recycled water from the Specific Plan's WRP and existing upstream WRPs. Recycled water from the Specific Plan's WRP that is in excess of demand would be discharged to the Santa Clara River at the outfall facility described in the RMDP.

The approved Conceptual Backbone Sewer Plan sets forth a conceptual system for sewage collection that includes the Newhall Ranch WRP, a collection system with pump stations, and both gravity and force mains/siphons. All facilities of the sanitary sewer system would be designed and constructed for maintenance by the County of Los Angeles and/or the Sanitation Districts in accordance with their criteria, procedures, and requirements.

The approved Specific Plan's recreation and Open Area components consist of parks, golf course, a community lake, trails, and three major open areas. Approved parks include 10 neighborhood parks dispersed throughout the Specific Plan and three approved community parks, including the 141-acre Oak Valley community park. A man-made community lake and golf course are approved as part of the Potrero Valley Village. The 15-acre lake and 180-acre golf course are to be situated in the central portion of the Potrero Valley Village to provide recreational amenities for the entire community. The approved Specific Plan's Open Area land use designation provides opportunities for active and passive recreation within the Specific Plan site. The Open Area designation encompasses approximately 3,420 acres of land through the central portion of the Specific Plan's development areas. The Open Area includes community parks, significant landforms and ridges, creeks and drainages, oak woodland and savannahs, utility and trail system easements; spineflower preserve areas; and often functions as a transition between Specific Plan development areas and the River Corridor and High Country SMAs.

4.2.1.2 Conservation and Special Management Areas

The Specific Plan Land Use Plan designates a total of approximately 5,182 acres for the River Corridor and High Country SMAs (*Figure 3*). The River Corridor SMA is generally 1,500 to 2,000 feet wide and is located along the north and south sides of the Santa Clara River. The High Country SMA is located in the southern portion of the Specific Plan site. The SMAs are designed primarily to protect the existing natural resources within Los Angeles County's Significant Ecological Areas, SEA 20 and SEA 23. Limited public access through the SMAs would be provided by the trail system to be developed, consistent with the Specific Plan Master Trails Plan. The two SMAs/SEAs, and other important preserve/conservation areas on and adjacent to the Specific Plan site, are summarized below.

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The 977-acre River Corridor SMA includes the Santa Clara River within the Specific Plan site and associated habitats. The value of the River Corridor SMA is derived from the inherent value of its wetland and riparian habitats and associated species, and from its function as a regional east–west wildlife corridor.

The largest land use designation of the Newhall Ranch Specific Plan Land Use Plan is the 4,205-acre High Country SMA. The High Country SMA is located in the southern portion of the 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.

As part of its approval of the Specific Plan in 2003, the Los Angeles County Board of Supervisors imposed an off-site condition requiring the applicant to dedicate to the public the remaining 1,517-acre portion of the Salt Creek watershed in Ventura County, adjacent to the western boundary of the Specific Plan site. Although the Salt Creek area was identified as an off-site area during the Specific Plan approval process by Los Angeles County, the area is within the RMDP boundary, and is considered to be on site for purposes of this plan.

Two conservation easements already have been granted to CDFG for the purpose of conserving populations of spineflower found on the Specific Plan site. The easements are located on the south side of the River, and include a 45-acre preserve at Airport Mesa (east of Middle Canyon), and a 46-acre preserve at Grapevine Mesa (east of Humble Canyon).

The Specific Plan’s previously approved Resource Management Plan includes the approved Spineflower Special Study Mitigation Overlay. Impacts to known spineflower populations within the overlay zone are to be avoided or minimized. The purpose of the overlay zone is to identify those locations within the Specific Plan site where spineflower preserves are to be established to protect spineflower populations, in consultation with Los Angeles County and CDFG. Spineflower preserves are to be configured such that open space connections can be made to the designated Open Areas, the River Corridor SMA, or the High Country SMA to the extent practicable. The proposed SCP, an element of the proposed Project, implements the requirements of the Specific Plan’s mitigation overlay zone and spineflower mitigation program. These requirements are applicable to three designated areas on the Specific Plan site: Airport Mesa, Grapevine Mesa, and San Martinez Grande (*Figure 4*). The proposed SCP also addresses two additional spineflower preserve areas that were not designated at the time the Specific Plan was approved in May 2003, namely the Potrero Preserve Area and the Entrada Preserve Area (outside of the RMDP boundary), both of which are within the SCP study area (*Figure 4*).

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4.2.1.3 Conceptual Grading Plan

The Specific Plan includes a Conceptual Grading Plan which identified the graded and ungraded areas within the Specific Plan site. The grading would balance cut and fill areas and entail mass grading for development areas, final grading for development pads, remedial grading based on site-specific soils and geologic investigations, and custom grading, with plans subject to Los Angeles County DPW Building and Safety review and approval.

4.2.2 Valencia Commerce Center Planning Area

The SCP component of the proposed Project, if approved, would facilitate previously approved development in the VCC planning area. The VCC planning area consists of approximately 333 acres of an undeveloped portion of the partially developed VCC industrial park/commercial center, which was the subject of an EIR certified by Los Angeles County in April 1990 (County of Los Angeles 1990b). The applicant has recently submitted to Los Angeles County a tentative parcel map (Tentative Parcel Map No. 18108) needed to complete build-out of the VCC industrial park/commercial center project. *Table 2* describes the acreage devoted to approved land uses within the VCC planning area. *Figure 7* depicts the approved land uses, open space, and the industrial/commercial development uses within the SCP portion of the VCC planning area.

Table 2
Approved Land Uses within VCC Planning Area

Approved Land Use	Acres
Open Space	154.3
Commercial	72.5
Industrial	91.5
Public Facilities	14.5
Total	332.8

4.2.3 Entrada Planning Area

The applicant is seeking approval from Los Angeles County for planned residential, non-residential, commercial, and open space uses within the Entrada planning area. The Entrada planning area consists of approximately 392 acres. The SCP, if approved, would facilitate the proposed land uses shown in *Table 3*. *Figure 8* illustrates the proposed land use plan for the Entrada planning area.

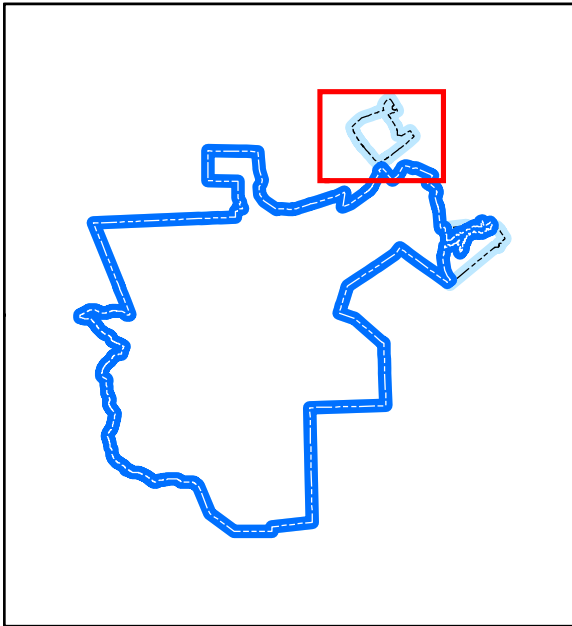
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Table 3
Proposed Land Uses within the Entrada Planning Area




Projected Land Use	Acres
Open Space	129.5
Residential	
Single-family	68.8
Multifamily	45.1
Commercial	32.2
Public Facility	40.5
Total	316.1

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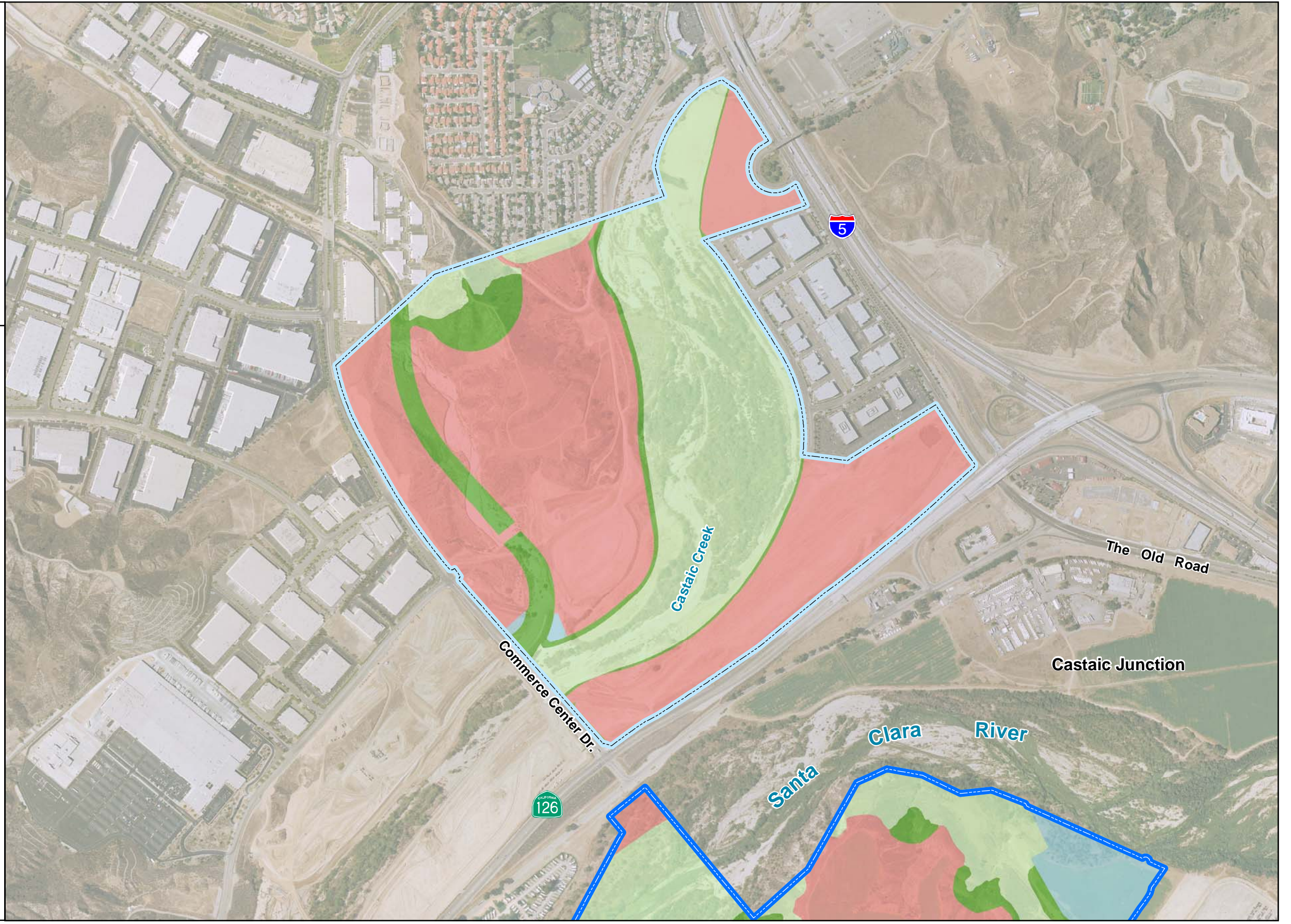
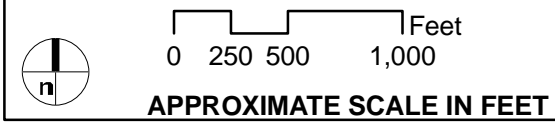


Legend

-  RMDP Boundary
-  SCP Boundary
-  County Boundary

Land Use

-  Development
-  Open Space Man Made
-  Open Space Natural
-  Open Space Recreation
-  Open Space Restoration
-  Water
-  Debris



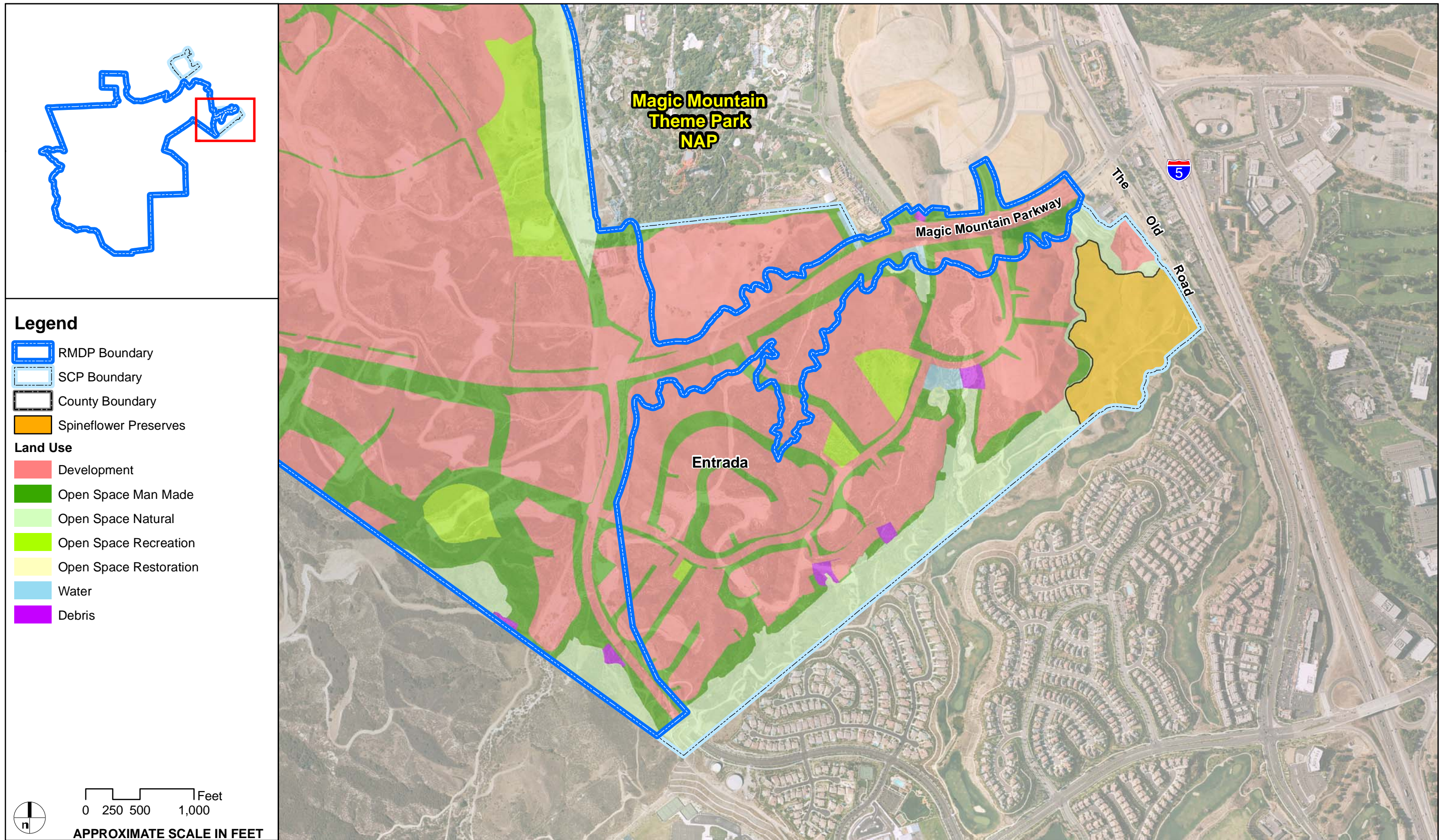
AERIAL SOURCE: AirphotoUSA, 2007

FIGURE 7

Newhall Ranch - Resource Management and Development Plan
Valencia Commerce Center Land Use Map



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Legend

- RMDP Boundary
- SCP Boundary
- County Boundary
- Spineflower Preserves
- Land Use**
- Development
- Open Space Man Made
- Open Space Natural
- Open Space Recreation
- Open Space Restoration
- Water
- Debris

0 250 500 1,000 Feet
 APPROXIMATE SCALE IN FEET

AERIAL SOURCE: AirphotoUSA, 2007

FIGURE 8

Newhall Ranch - Resource Management and Development Plan

Entrada Land Use Map



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5.0 RESOURCE MANAGEMENT DESIGN PRINCIPLES AND METHODOLOGY

Consideration of the sensitive biological resources in the Newhall Ranch Specific Plan area was incorporated into the early stages of the planning process. While the Specific Plan provides the framework for avoidance, minimization, and mitigation of impacts to sensitive biological resources, the RMDP represents the next step of that process in that it provides greater detail as to how impacts to resources are avoided, minimized, and mitigated, with consideration of long-term management requirements. The RMDP has been designed using a multidisciplinary approach that includes evaluation of factors such as biology, land use, cultural resources, geology, topography, hydrology, soils, and infrastructure. The result is the formulation of a conservation strategy that allows for the development of the Specific Plan site in a way that avoids or minimizes significant effects on waters, jurisdictional streams and drainages, and sensitive biological resources, principally through implementation of the RMDP.

This section of the RMDP establishes the design principles and methodology for development within the study area such that natural resources can be effectively managed for long-term preservation. The first subsection deals with design principles for the resource preserve system; the second with the design principles of development components, with particular focus on infrastructure; the third subsection discusses the methods by which resources are protected in the context of development; and the fourth subsection deals with the procedures for implementation of the RMDP.

5.1 Preserve Design Considerations

The principal method of protection of natural resources within the RMDP study area shall be through the establishment of a permanent preserve system. The following subsections describe the process for determining the location and configuration of the preserve system. Greater details regarding the preserve, including resources and proposed management measures, are provided in *Section 5.3.2* and throughout *Section 7.0*.

5.1.1 Avoidance/Minimization

The principal data used to design the RMDP include the mapping and evaluation of biological habitats and species within the RMDP site, while also considering the related Spineflower Conservation Plan. Resources were ranked based on sensitivity and quality, with highly sensitive resources targeted for preservation (i.e., avoidance). Development has been targeted to those areas of lower resource quality (such as those areas disturbed by historical oil and gas, agriculture, and ranching activities, or areas of limited natural habitat value) to the extent

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feasible, while still implementing the Newhall Ranch Specific Plan. Public accessibility of each resource area also was considered. Areas of limited access were viewed as more effective preserves because future impacts from the public could be avoided. Transportation linkages, utility corridors, and other public facilities (i.e., linear infrastructure necessary to connect development areas in accordance with the Newhall Ranch Specific Plan) are the primary activities affecting some areas of higher resource quality.

5.1.2 On-Site Linkages and Design Specifics

Considerable focus was given to the design of linkages between preserved resource blocks within the Specific Plan. Linkages were designed with two goals: (1) preservation of a single large block of habitat to connect the major regional resource areas and (2) provision for transitional areas between development and open space that minimizes impacts along development edges. Specific design considerations have been identified for transition areas and the development of drainage and transportation facilities, such that impacts to sensitive biological resources are minimized. Substantial attention has been paid to indirect impact, or edge effects, in these designs.

Dudek completed a review of scientific literature and an analysis of the proposed Project related to protection of both resident habitat for wildlife as well as wildlife movement following build-out of Newhall Ranch with implementation of this RMDP. The white paper on wildlife habitat buffers and connectivity (Dudek 2008a) compiles scientific literature regarding species requirements and the region's biological linkages and corridors as well as analyzes the effects of Project implementation on species guilds. Guilds are groups of species with similar habitat requirements, home ranges, and mobility (vagility) (Singleton and Lehmkuhl 1999). The paper discusses the relative abilities of the species within the different guilds to move through the landscape, and in particular through wildlife crossings, corridors, and linkages. The results of the analysis in terms of which species guilds are expected to reside and move through the various portions of the Project area are discussed in *Section 7.0*. The following standards were used to design transition areas on the basis of analysis presented in the *Wildlife Habitat Buffers and Connectivity White Paper (Appendix F)*:

1. Trails are provided between development and the edge of the River Corridor in all locations where there is no steep grade separation between the two areas SMA.
2. Native riparian plants shall be incorporated into the landscaping of the transition areas between the River Corridor SMA and adjacent development areas, where feasible, to promote their long-term survival.

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3. Roads and bridges that cross the River Corridor SMA must have adequate barriers at their perimeters to discourage access to the River Corridor SMA.
4. Drainages with flows greater than 2,000 cfs will have soft bottoms, except at Chiquito Canyon Drainage in the vicinity of SR-126, where physical constraints require improvement of the full creek-bed section. Where bank stabilization is required to protect development areas, it shall be composed of ungrouted rock or buried bank stabilization, except at bridge crossings and other locations where public health and safety requirements necessitate concrete or other types of bank stabilization.
5. An approximately 100-foot-wide buffer adjacent to the Santa Clara River between the top river-side of bank stabilization and development will be established. The County Planning process and review will determine the ultimate width of the buffer to adequately protect the riparian resources within the River Corridor SMA. The buffer area may be used for public infrastructure, such as flood control access; sewer, water, and utility easements; bridge abutments; trails; and parks, subject to findings of consistency with the Specific Plan.

5.1.3 Regional Linkages

Due to the location of the Specific Plan area, regional preserve design or landscape-scale habitat connectivity also was considered. The RMDP offers the potential for significant habitat contributions to a Santa Susana Mountains open area and to key segments for preserve connectivity along the Santa Clara River and across the Santa Clara River to the Los Padres and Angeles National Forests, located to the north (*Figures 9 and 10*). Penrod et al. (2006) considered the Project area, along with regional open space conservation areas and initiatives such as “SOAR,”⁴ in recommending a linkage design that would connect the Santa Monica Mountains, the 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 target animals could take to travel between these open space areas. The least cost analysis incorporates available information for movement-limiting variables such as elevation, vegetation, topography, and road density. The “least cost path” is the most direct or optimum route utilizing suitable habitat and minimizing costs (e.g., energy costs, risk of mortality), but does not represent all potential routes available to a species that may be more costly, but feasible alternatives. Dispersing animals are often young adults, and behaviorally these animals may take

⁴ Save Open-Space and Agricultural Resources (SOAR) is a non-profit organization which 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.

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routes that do not ensure the least cost or the highest rate of survivability or they may be inhibited from using such routes by adults. However, these least cost analyses quantitatively identify idealized linkages and corridors that would allow for the most efficient long-range dispersal and migration movement for wildlife between larger conservation areas.

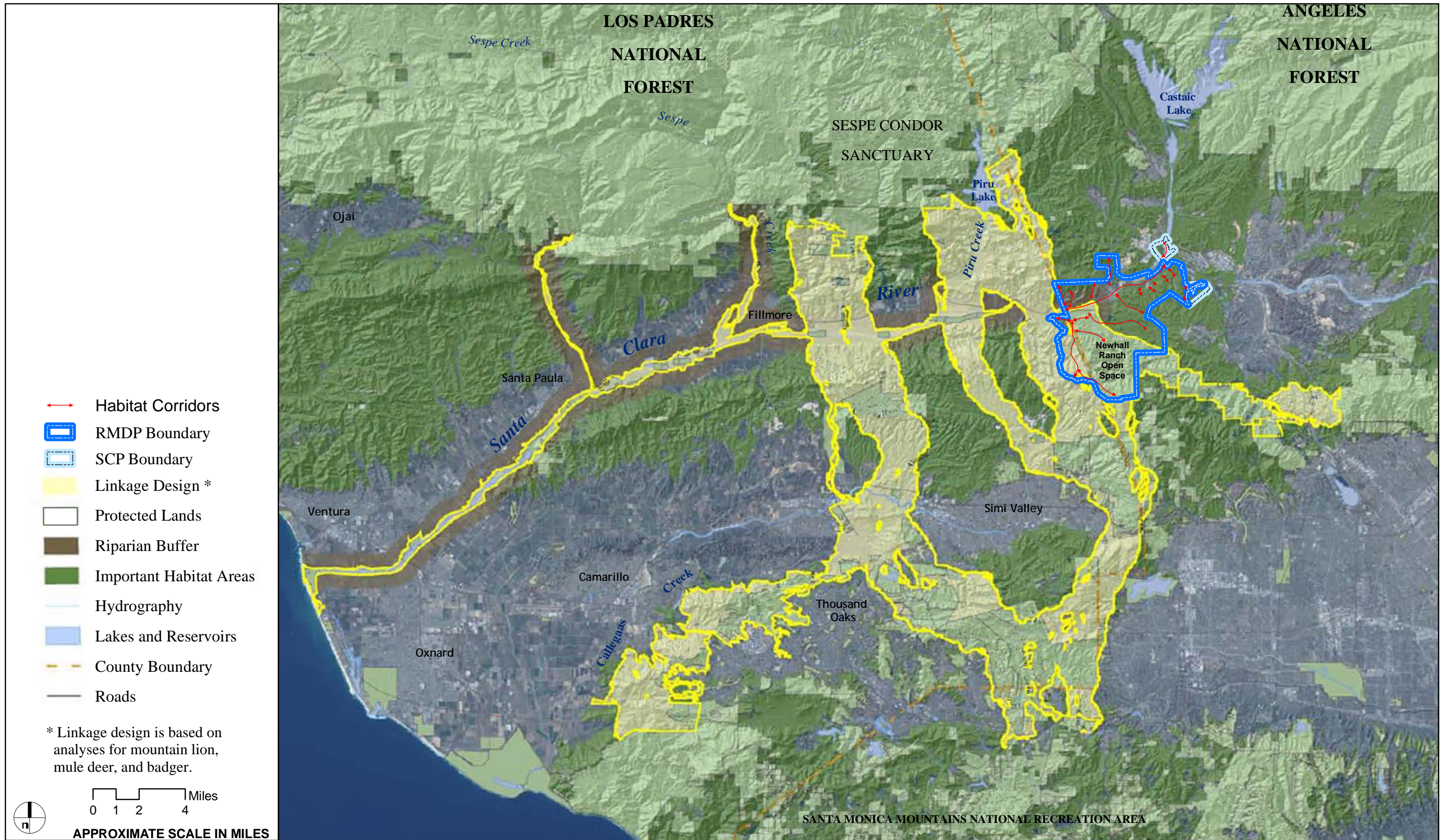
The Project area has the potential to comprise an important part of the least cost path linkage design identified by Penrod et al. (2006). The potential exists for corridors within the Project to provide a key part of the east–west linkage that crosses I-5 and to connect to the Angeles National Forest in the San Gabriel Mountains to the east and Ventura County SOAR open space to the southwest. The Project can 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 Angeles National Forest to the north.

5.2 Development Design Considerations

In order to develop the RMDP area in accordance with the Newhall Ranch Specific Plan, an array of infrastructure must be designed and constructed in a manner which protects natural resources. Before initiating the design process an understanding of infrastructure requirements and natural conditions is necessary. Many of the infrastructure requirements have been presented in *Section 4.2*, such as the Master Circulation Plan of the Newhall Ranch Specific Plan. Presented here are greater technical details for those development components which will potentially affect existing hydrologic conditions.

5.2.1 Overview of Flood Protection Requirements and Design Criteria

Lands adjacent to the Santa Clara River and Chiquito Canyon, San Martinez Canyon, Potrero Canyon, and Long Canyon tributaries are located in mapped Federal Emergency Management Agency (FEMA) 100-year floodplain and in the DPW Capital Floodplain. According to the County Floodplain Ordinance, land development in the Capital Floodplain can occur if appropriate flood-protective measures are implemented according to DPW requirements.

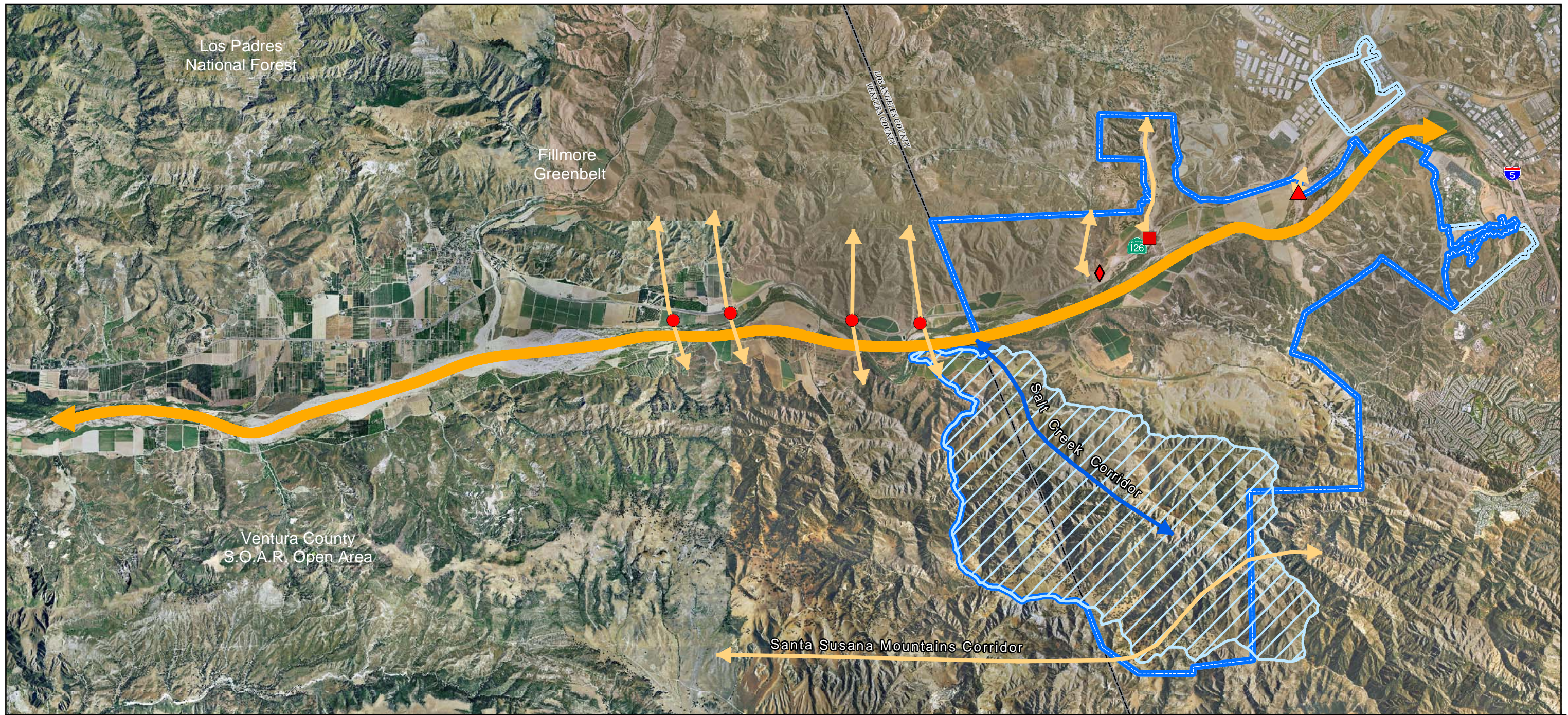


SOURCE: South Coast Wildlands, 2006

FIGURE 9

Newhall Ranch - Resource Management and Development Plan
South Coast Wildlands Open Space Connectivity and Linkage

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AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 10

Newhall Ranch - Resource Management and Development Plan
Wildlife Connectivity Crossings

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In the Santa Clarita Valley, flood control is typically achieved by installation of bank stabilization along the banks of watercourses. DPW requires that: (1) the elevation of the bank stabilization must contain the Capital Flood discharge,⁵ (2) the bank stabilization must be readily accessible for inspection and emergency repair, and (3) it must be constructed of a material resistant to erosive flows. DPW also has determined that the Santa Clara River basin is a major source of sediment for coastal beaches and that groundwater recharge provides a significant amount of groundwater for the Santa Clarita Valley and should be maintained. Based on these needs, DPW developed a drainage policy for the Santa Clara River (County of Los Angeles 1993), which states that the design of flood protection facilities for the Santa Clara River shall provide soft-bottom waterways with levees.

Future development associated with the Specific Plan near the Project area watercourses would require construction of bank stabilization to protect facilities and development from erosion and floodwater inundation. Consistent with agency requirements, bank stabilization can be located either within the nearby watercourse, along the bank, or outside the watercourse, in an upland location. From an engineering perspective, protecting a land development project from flooding does not require that the bank stabilization be installed within the watercourse, only that the appropriate elevation be achieved to contain the design flood, and that sufficient protection be provided to effectively deflect or contain erosive flood flows. However, under the RMDP, bank stabilization along the River generally would be located in non-jurisdictional upland areas adjacent to the River in order to avoid or reduce impacts to the River, create new riverbed areas, and increase riparian habitat.

The design methodology to be used for the drainage tributaries within the RMDP study area is intended to create stable tributary drainages, consistent with the following objectives: (a) accommodate runoff flows from existing conditions and future development, (b) stabilize the tributary channel bed and banks so they do not degrade, (c) preserve the waterway and canyon characteristics, (d) protect proposed development and infrastructure from erosion and excessive shifts in the drainages, (e) minimize riparian and bank disturbance during construction, (f) allow for construction access and maintenance activities, (g) develop recreational facilities that offer engagement with natural resources while protecting resources from potential adverse effects, and (h) preserve and/or replace biological resources and maintain or increase biological functions and services through preservation, creation, and enhancement activities.

⁵ The Capital Flood is runoff from a 50-year frequency design storm falling on a saturated (soil moisture at field capacity) watershed. A 50-year frequency design storm has a probability of 1/50 of being equaled or exceeded in any year (County of Los Angeles 1993).

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5.2.2 Description of Existing Hydrologic Setting within RMDP Study Area

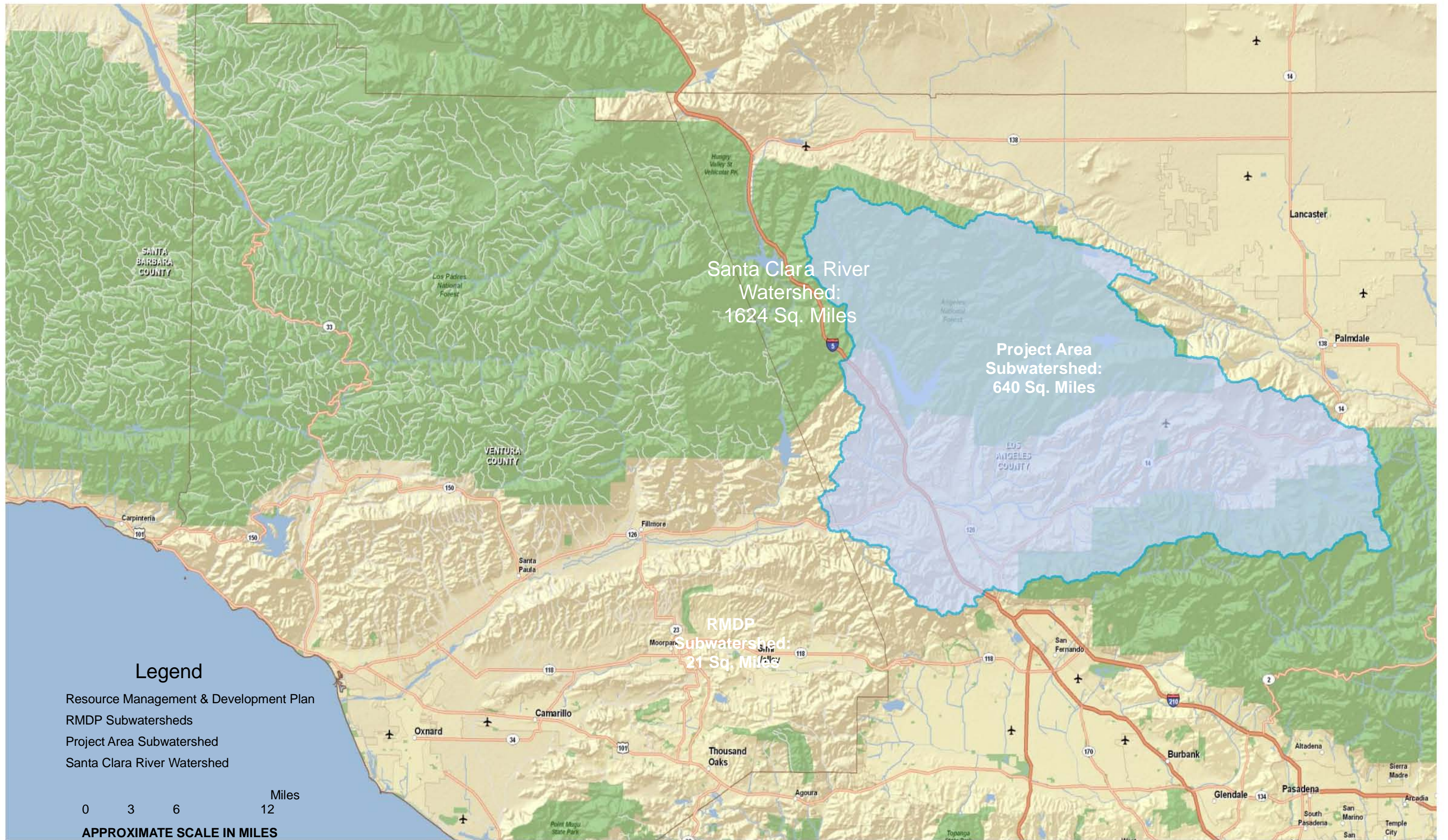
Below is a summary description of the existing Santa Clara River watershed and associated tributary drainage areas within the RMDP boundary of the proposed Project.

Santa Clara River Hydrology

The RMDP study area is located within the Santa Clara River Hydrologic Basin and associated watershed, which is 1,634 square miles in area. The portion of the Santa Clara River watershed that is located generally upstream or east of the Ventura County/Los Angeles County jurisdictional line is approximately 640 square miles in size, and drains portions of the Los Padres National Forest from the north, the Angeles National Forest from the north and northeast, and the Santa Susana Mountains from the south and southeast. The RMDP study area comprises approximately 19.6 square miles (about 3%) of the 640-square mile watershed. *Figure 11* depicts the entire Santa Clara River watershed, including the upper watershed located within Los Angeles County. *Figure 12* shows the watershed's tributaries to the Santa Clara River within the RMDP study area.

The Santa Clara River, which is the largest river system in Southern California that remains in a relatively natural state, is the largest watercourse within the RMDP study area. The River originates in the San Gabriel Mountains in Los Angeles County and flows in a westerly direction through Ventura County before discharging to the Pacific Ocean. The River extends approximately 5.5 miles from east to west across the RMDP study area (*Figure 3*). Major tributaries in the Santa Clara River watershed include Castaic and San Francisquito creeks in Los Angeles County and Sespe, Piru, and Santa Paula creeks in Ventura County. Approximately 40% of the Santa Clara River watershed is located in Los Angeles County and 60% is in Ventura County. Much of the watershed is in mountainous terrain within either the Angeles National Forest or the Los Padres National Forest (RWQCB 2006).

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 river 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 westernmost 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 downstream of the City of Santa Clarita. Castaic Lake is a California Department of Water Resources (DWR)-owned reservoir located on Castaic Creek.

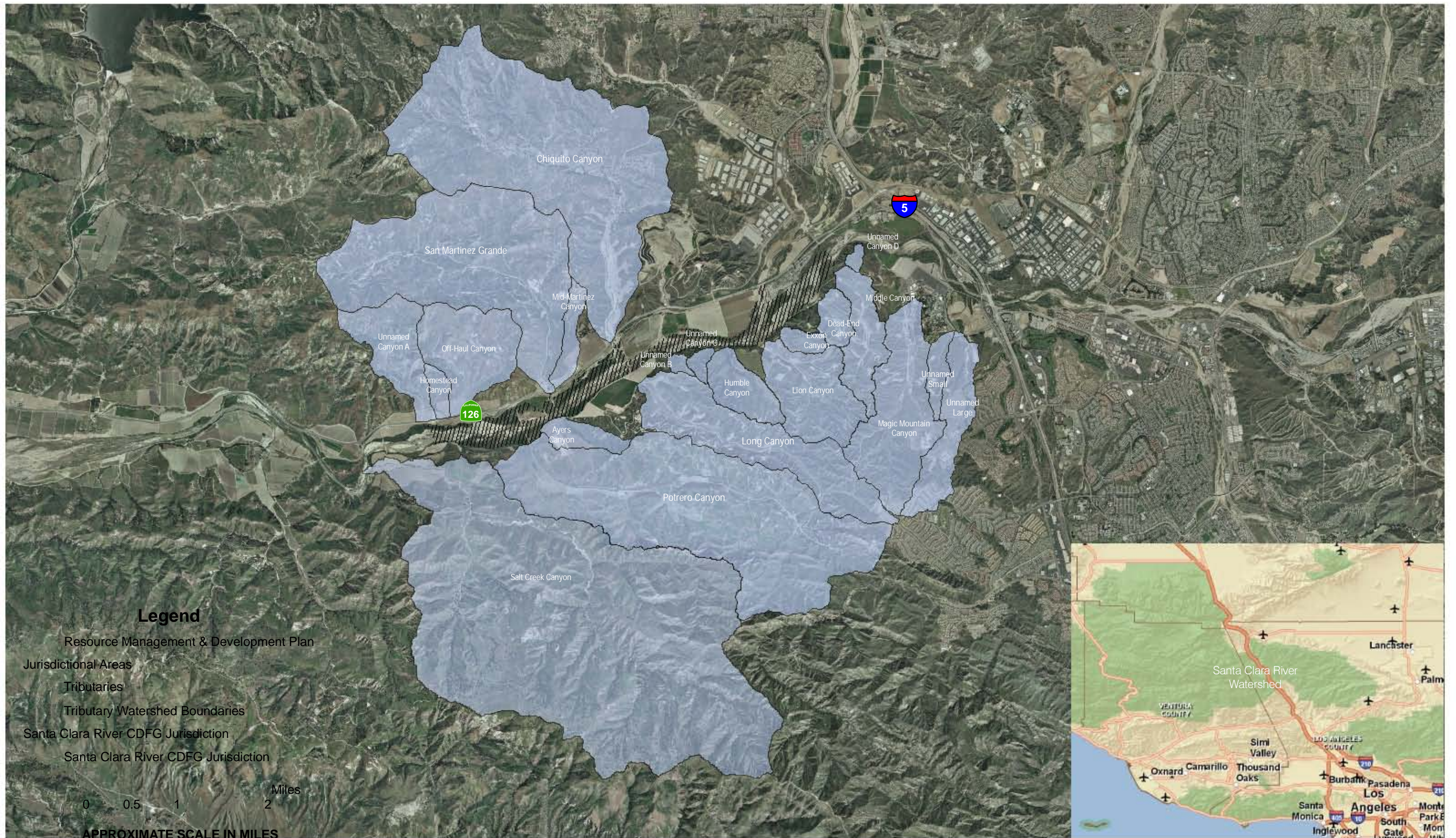


SOURCE: PACE - October 2007

FIGURE 11

Santa Clara River Watershed

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SOURCE:

FIGURE 12

Upper Watershed in Los Angeles County and RMDP Study Area

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San Francisquito Canyon Creek is an intermittent stream located within the watershed that lies adjacent to Bouquet Canyon to the southeast. The braided Santa Clara River main stem consists of sandy and gravelly soils and is highly permeable over much of its length, which results in surface water infiltration into the groundwater basin.

The principal sources of water contributing to the base flow of the Santa Clara River are: (a) groundwater from the alluvial aquifer basin in Santa Clara Valley, Los Angeles County, which seeps into the riverbed near, and downstream of, the mouth of San Francisquito Creek, (b) 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, which creates surface flows in the elevated discharge channel and eventually the Santa Clara River for some distance from the outfall, and the Valencia WRP, located immediately downstream of I-5, which creates surface flows extending through the RMDP study area, and (c) in some years, DWR-released flood flows from Castaic Lake into Castaic Creek during winter and spring months (CH2MHill 2005).

Because of the effluent discharges to the Santa Clara River and other water sources, the braided river main stem continues to flow perennially until upstream of the confluence with Piru Creek, where it generally becomes dry due to highly permeable soils. Perennial flows generally return downstream of the confluence with Hopper Canyon Creek in Ventura County and continue through Piru, Sespe, and Santa Paula Creeks, and into the Oxnard Plain in Ventura County. Five additional wastewater treatment facilities in the lower reaches of the River in Ventura County also discharge secondary- and tertiary-treated water to the River (RWQCB 2006).

Santa Clara River Habitats

The braided, active river main stem is largely barren of vegetation due to scouring by seasonable storm flows. However, vegetation types on the adjacent terraces, which vary based on elevation relative to the active channel bottom and flood frequency, consist of emergent herbaceous, woody shrubs, and trees. Within the RMDP study area, the Santa Clara River corridor supports three general categories of habitat: (a) aquatic habitats, consisting of flowing or ponded water, (b) wetland habitats, consisting of emergent herbs rooted in ponded water or saturated soils along the margins of the active channel, and (c) riparian habitat, consisting of woody vegetation along the margins of the active channel and on the floodplain. Both year-round and seasonal aquatic habitats are provided and are subject to periodic disturbances from winter storm 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 (County of Los Angeles 2003b).

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Tributary Hydrology

The RMDP study area includes 22 tributary drainages to the Santa Clara River. The tributary drainages are located within an area that is generally delineated by SR-126 and the lower portions of Chiquito Canyon, San Martinez Grande Canyon, and Homestead Canyon to the north, the Six Flags Magic Mountain Amusement Park to the east, the crest of the Santa Susana Mountains to the south, and the Los Angeles County/Ventura County jurisdictional line to the west. *Table 4* describes each of the tributary drainages based on their existing watershed characteristics within the boundary of the RMDP study area.

**Table 4
Existing Tributary Drainage Characteristics**

Drainage Areas	Existing Characteristics				
	Total Watershed Area ¹ (Acres)	Total Length ² of Drainage Jurisdiction (Feet)	Soils Group	Slope (%)	Hydrologic Seasonality (E//I/P) ⁶
Modified Drainages					
Chiquito Canyon	3,106	7,605	C	2.39	E, I, P
Lion Canyon	539	4,761	B	4.60	E
Long Canyon	1,271	9,829	C	3.00	E
Potrero Canyon	3,025	25,381	C	3.10	E, I, P
San Martinez Grande Canyon	2,322	5,170	C	1.90	E, I
Modified Drainages Subtotal	10,263	52,746	N/A	N/A	N/A
Unimproved/Converted Drainages					
Agricultural Ditch	-	1,810	C	-	E
Ayers Canyon	147	2,464	B, C	4.40	P
Dead-End Canyon	124	1,076	C	6.10	E
Exxon Canyon	16	2,193	B	9.20	E
Homestead Canyon	75	3,606	C	5.40	E
Humble Canyon	261	4,863	C	7.00	E, I
Middle Canyon	340	7,967	C	3.70	E, I
Mid-Martinez Canyon	105	3,729	B	6.50	E
Off-Haul Canyon	587	4,223	C	7.10	E
Salt Creek Canyon	5,859	25,830	C, D	3.40	E, I, P
Magic Mountain Canyon	847	4,813	C	3.40	E
Unnamed Entrada 1	103	2,020	C	2.70	E
Unnamed Entrada 2	401	3,126	B	3.10	E, I
Unnamed Canyon A	445	1,293	C	3.40	E

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Table 4 (Continued)

Drainage Areas	Existing Characteristics				
	Total Watershed Area ¹ (Acres)	Total Length ² of Drainage Jurisdiction (Feet)	Soils Group	Slope (%)	Hydrologic Seasonality (E/I/P) ⁶
Unnamed Canyon B	29	1,574	C	15.20	E
Unnamed Canyon C	43	1,272	C	7.30	E
Unnamed Canyon D	28	1,240	B	11.60	E
<i>Unimproved/Converted Drainages Subtotal</i>	9,410	73,099	N/A	N/A	N/A
Total	19,673	125,845	N/A	N/A	N/A

¹ The topography of the tributary drainage areas is characterized by a gently sloping valley floor surrounded by hills ranging from rolling to rugged and steep with numerous smaller canyons, connecting to a narrow alluvial valley associated with the main stem of the drainage.

² This reflects the total length of drainage jurisdiction.

³ "C" is the classification for the hydrologic soil group C, which means "higher runoff potential."

⁴ "B" is the classification for the hydrologic soil group B, which means "lower runoff potential."

⁵ "D" is the classification for the hydrologic soil group D, which means "highest runoff potential."

⁶ "E" represents ephemeral (flows present in response to runoff events and for brief duration); "I" represents intermittent (flows present during the wet season only); "P" represents perennial season hydrology (flows present year-round).

SOURCE: PACE 2006; ENTRIX 2007.

All of the tributary drainages within the RMDP boundary are unimproved, with the exception of five drainage crossings under SR-126 as a result of the SR-126 roadway widening project completed by Caltrans.

Several of the on-site drainages have been mapped as blue-line streams by the U.S. Geological Survey (USGS). While it is the intent of the USGS to indicate that blue-line streams are flowing perennial streams, in arid states such as California, and particularly in Southern California, this is not always the case. Aside from the lower portions of Salt and Potrero canyons, each of the tributary drainages within the RMDP boundary is classified as intermittent⁶ or ephemeral (URS 2008b).

The majority of the tributary drainages are characterized by a gently sloping valley floor surrounded by hills ranging from rolling to rugged and steep. There are numerous smaller tributary canyons that dissect the watershed, connecting to the narrow alluvial valley associated with the main stem drainage. Generally, the soils in the tributary watersheds are characterized as silty clay loams from both the Castaic and Saugus formations. Also, the soils within the tributary watersheds can be predominately classified as being in hydrologic soil group C (higher runoff

⁶ Intermittent drainages carry flows due to seasonal high groundwater in addition to storm flows.

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potential) with the exception of areas adjacent to the main stem drainages that are group A (lowest runoff potential) and group B (lower runoff potential) in the lower reaches.⁷

5.2.3 Development Design Principles

Using this information regarding design requirements and existing conditions, a set of development design principles were drafted to become a basis for evaluation of potential design alternatives. The design principles are basic resource protection measures that generally avoid or minimize adverse impacts to resources that have been identified in the RMDP goals and objectives and preserve design principles as requiring protection. Resources here are referred to in a general manner; more specific resource protection (e.g., for specific jurisdictional wetlands types or species listed as threatened or endangered) is discussed as part of mitigation in *Section 7.0*.

These development design principles (DPs) are an extension of the RMDP goals and objectives (GOs) listed in *Section 2.0*, relating specifically to these infrastructure improvements that will affect regulated resources. *Section 6.0* provides the development components description and, as part of that description, evaluates compliance with these DPs and RMDP GOs with reference to DP and GO numbers, respectively. Although compliant with these principles, RMDP components may cause adverse impacts; therefore, mitigation measures for significant unavoidable impacts are proposed. Those measures are discussed in *Section 7.0*.

RMDP Development Design Principles (DPs)

- DP 1 Avoid or minimize impacts to special-status biological resources to the extent feasible by utilizing the least damaging practicable alternative.
- DP 2 Provide long-term hydrologic stability and water quality protection through minimized alteration of existing hydrologic and water quality conditions.
- DP 3 Avoid or minimize alteration of potential wildlife movement corridors by locating or designing infrastructure that avoids existing regional habitat linkages and allows continued habitat connectivity on site.
- DP 4 Design drainage facilities with open channels wherever 100-year storm flows are more than 2,000 cubic feet per second (cfs).

⁷ Soils are classified by the U.S. Department of Agriculture, Natural Resource Conservation Service, into four Hydrologic Soil Groups based on the soil's runoff potential. The four Hydrologic Soils Groups are A, B, C and D. Soil Group A is generally the lowest runoff potential and Soil Group D the highest runoff potential (USDA 1969).

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- DP 5 Minimize the need for ongoing maintenance, especially in the River Corridor SMA, High Country SMA, Salt Creek area, Open Area, and other areas with a direct hydrologic or physical connection with these preserve areas.
- DP 6 Develop maintenance practices that avoid or minimize potential adverse effects, such as establishment of exotic, invasive species and sedimentation or erosion.
- DP 7 Develop recreational facilities that offer engagement with natural resources while protecting resources from potential adverse effects.
- DP 8 Include, as a component of development, preservation and/or replacement of biological resources, and maintain or increase biological functions and services through preservation, creation, and enhancement activities.

5.3 Resource Protection

5.3.1 Overview

Resource protection is provided in accordance with the Newhall Ranch Specific Plan RMP as well as state and federal wetlands and endangered species regulations. Resource protection occurs through 1) establishment and management of a preserve system, 2) implementation of development designs that are in accordance with resource protection design principles, and 3) implementation of mitigation measures for significant, unavoidable impacts. *Sections 5.1 and 5.2* establish the methodology for establishing a preserve system and designing development components. This section describes the resource protection that is afforded by implementation of these preserve and development design principles.

5.3.2 Preservation

The Specific Plan development is located in more disturbed upland areas in the north–central portion of the Specific Plan, which is north and south of the Santa Clara River. The RMDP provides for resource preservation of substantial blocks of habitat and resources through avoidance of impacts. These blocks of habitat include the River Corridor SMA, High Country SMA, and the Salt Creek area. These large areas of sensitive native habitats and special-status species are generally associated with the natural drainage areas of the Specific Plan site and major landforms to provide for linkage between preserves and connectivity with the designated Open Areas within the Specific Plan area. Impacts to sensitive resources are further minimized through preservation of oak resources in the River Corridor SMA, High Country SMA, and the Open Area. Preservation and minimization measures within these areas, along with the implementation of design techniques, monitoring, maintenance, and management activities,

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provide for an enhanced preserve configuration, reduced edge effects, and minimized impact severity.

Detailed descriptions of the four resource preserves are presented in detail in *Section 7.0*. Each of the preserve areas protects a critical set of resources which effectively ensures the long-term survival of multiple species and habitats and the continuation of natural ecological processes.

River Corridor SMA

The 977-acre River Corridor SMA includes preservation areas along the Santa Clara River, a regionally significant biological resource. Its value is derived from the inherent value of its wetland and riparian habitats and associated species, and from its function as a regional wildlife corridor. Federally listed endangered species and numerous other special-status species have been observed or detected in riparian habitats of the River. Special-status wildlife species which occur within the River Corridor SMA include the state- and federally listed endangered unarmored threespine stickleback, the state- and federally listed endangered southwestern willow flycatcher, and the state- and federally listed endangered least Bell's vireo, among others.

The River Corridor SMA also comprises a portion of the County's SEA 23. As part of the development of the Specific Plan, a River Corridor SMA has been delineated that is sufficiently wide to handle the capital flood while retaining nearly all of the riparian vegetation existing along the River.

In addition, the Santa Clara River is an important riparian corridor that connects the Specific Plan with habitat to the east and west. 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.

High Country SMA

The 4,205-acre High Country SMA is located in an unincorporated portion of the Santa Clara River Valley on the north slopes of the Santa Susana Mountains. Site elevations range from 800 feet AMSL in the Santa Clara River bottom in Ventura County, to approximately 3,500 feet AMSL on the ridgeline of the Santa Susana Mountains along the southern boundary. This study area is dominated by rugged terrain, the main feature being a south-to-north drainage area for Salt Creek and its associated tributaries. Native and naturalized habitats within the study 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 in this area. These plant communities support a diverse array of special-status plant and wildlife species

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including various species of oak trees, slender mariposa lily, southwestern pond turtle, arroyo chub, coastal western whiptail, coast horned lizard, Cooper's hawk, short-eared owl, Southern California rufous-crowned sparrow, mountain lion, and American badger. Furthermore, preservation of the High Country SMA provides regional connectivity which is a principal objective of the RMP and RMDP.

Salt Creek Area

The 1,517-acre Salt Creek Area augments the High Country SMA by preserving the portion of the Salt Creek watershed within Ventura County. The ecology of the area is very similar to the High Country supporting similar specific such as short-eared owl, loggerhead shrike, white-tailed kite, Cooper's hawk, Southern California rufous-crowned sparrow, prairie falcon, and slender mariposa lily.

Open Area

The 3,420-acre Open Area is integrated with the development in a manner which protects significant natural resources. The areas also will provide open area and community identification for Newhall Ranch residents. The Open Area designation includes community parks, prominent ridges, bluffs, slopes, creek beds, and utility and trail system easements and will often function as a transition between development areas and the SMAs.

Included in the Open Area are:

- Community parks
- Major drainages, which are those with flows of 2,000 cubic feet per second or more
- Significant landforms, such as the river bluffs, Sawtooth Ridge, and Ayres Rock
- Spineflower preserves
- Oak woodlands and grasses that are not part of the SMAs
- Cultural sites.

Open Area is configured to protect significant landforms and natural resources, providing an opportunity to integrate the proposed development within its natural context. The Open Area supports an array of upland and wetland native habitats that will be preserved and will also support areas that will be suitable for native habitat restoration following development. Special-status species supported or expected to be supported within the Open Area include, but are not limited to, horned lark, Lawrence's goldfinch, least Bell's vireo, Nuttall's woodpecker, Southern California rufous-crowned sparrow, southwestern pond turtle, tricolored blackbird, two-striped garter snake, western spadefoot toad, white-tailed kite, willow flycatcher, yellow warbler, arroyo

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chub, Santa Ana sucker, western burrowing owl, Cooper's hawk, golden eagle, loggerhead shrike, and San Fernando Valley spineflower.

Spineflower preserves are included in the Specific Plan's RMP in a "Special Study Mitigation Overlay and Preserve Program," and are incorporated within the Open Area. The mitigation program was established in consultation with both Los Angeles County and CDFG to conserve spineflower and minimize the Specific Plan's impacts to the spineflower. Two conservation easements, covering over 64 acres, already have been granted to CDFG. The conservation easements provide mitigation for certain impacts to the spineflower by providing conservation easements on the Specific Plan property to protect the spineflower and its habitat. Additionally, within the conservation easements, buffer areas surrounding spineflower populations are created on the Specific Plan property.

Under the SCP component of the proposed Project, the applicant proposes to place conservation easements over five preserve areas within the study area. The five preserve areas total approximately 167.6 acres and include about 68.5% of the occupied spineflower area cumulatively observed in 2002 through 2007.

5.3.3 Linkages

As previously stated, linkages were designed to provide a large block of preserve habitat between major resource areas and minimize impacts along the transition areas. Consideration was given to the suitability of linkages for wildlife and for genetic exchange of spineflower.

Thirteen potential corridors within the Project area were identified in this analysis (*Figure 13*):

1. Santa Clara River Corridor
2. Salt Creek Confluence
3. Salt Creek–High Country
4. East Fork Salt Creek
5. Potrero Canyon–Salt Creek
6. Potrero Canyon
7. Long Canyon
8. Short Canyons–River Corridor
 - a. Humble Canyon
 - b. Lion Canyon

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- c. Exxon Canyon
 - d. Dead End Canyon
 - e. Middle Canyon
 - f. Magic Mountain Canyon
9. Chiquito Canyon
 10. San Martinez Grande Canyon
 11. Off-Haul Canyon
 12. Homestead Canyon
 13. Castaic/Hasley Corridor.

The Santa Clara River, Castaic/Hasley, Salt Creek Confluence, Salt Creek–High Country, and East Fork Salt Creek corridors function as landscape-level habitat linkages that provide both permanent resident and movement habitat for the various wildlife species guilds. The Santa Clara River is a critical habitat linkage in the Project area because it provides significant north–south and east–west habitat connectivity as well as resident habitat for many wildlife species. The River corridor connects downstream and upstream areas, including tributary drainages, such as Salt Creek and Castaic Creek that allow wildlife access to uplands from the River. Although the RMDP includes the construction of bridges and bank stabilization within the Santa Clara River corridor, the Flood Technical Report (PACE 2006) found that there would be no significant impacts in water flows, velocities, depth, sedimentation, or floodplain and channel conditions downstream of the Project area as a result of the proposed Project improvements.

These hydrologic effects were also found to be insufficient to alter the amount, location, and nature of aquatic and riparian habitats within the Project area and downstream into Ventura County over the long term. The technical analysis further determined that the River would still retain sufficient width to allow natural fluvial processes to continue; post-development widths of the River floodplain would range from about 1,000 to 2,000 feet wide. As a result, the mosaic of habitats in the River that support various special-status species would be maintained, and the populations of the species within and immediately adjacent to the River corridor would not be substantially affected. Therefore, habitat connectivity in the River corridor for the Aquatic and Semi-Aquatic guild species would not be substantially affected. Likewise, any other species using the River corridor for movement or habitat connectivity would not be substantially affected.

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Legend

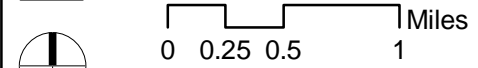
- RMDP Boundary
- SCP Boundary

Regional Habitat Linkages

- 1 - Santa Clara River Corridor
- 2 - Salt Creek Confluence
- 3 - Salt Creek High Country
- 4 - East Fork Salt Creek
- 5 - Potrero Canyon Salt Creek
- 6 - Potrero Canyon
- 7 - Long Canyon
- 8a - Humble Canyon
- 8b - Lion Canyon
- 8c - Exxon Canyon
- 8d - Dead End Canyon
- 8e - Middle Canyon
- 8f - Magic Mountain Canyon
- 9 - Chiquito Canyon
- 10 - San Martinez Grande Canyon
- 11 - Off-Haul Canyon
- 12 - Homestead Canyon
- 13- Castaic/Hasley Corridor

Slope

- Less than 25 Percent Slope
- 25 Percent Slope or Greater



APPROXIMATE SCALE IN MILES

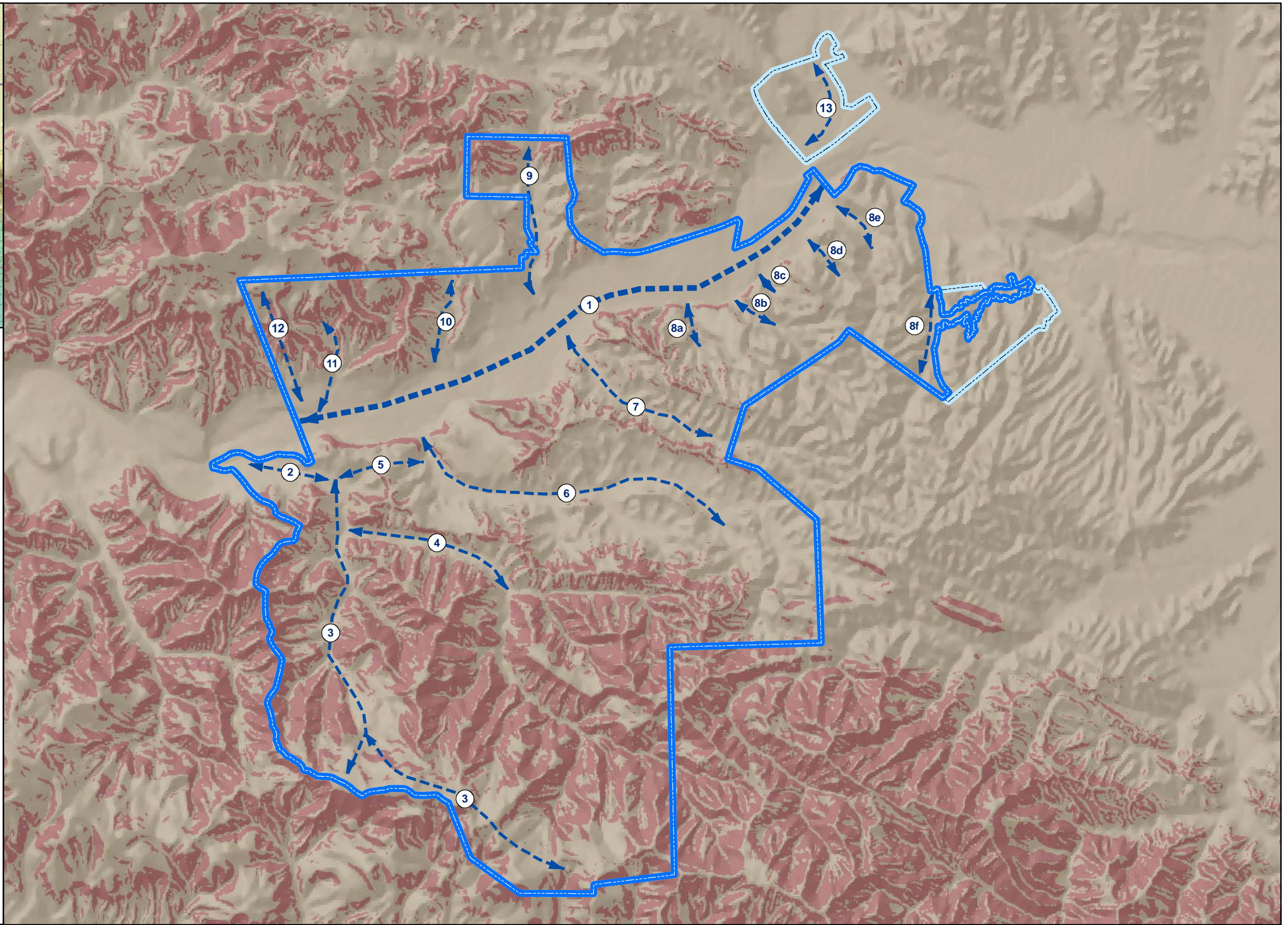


IMAGE SOURCE: USGS 24K Quad

FIGURE 13

Newhall Ranch - Resource Management and Development Plan

RMDP/SCP Existing Regional Wildlife Connectivity Corridors



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The most logical location for a large corridor block is at the west edge of the Specific Plan. The west edge is away from the likely development areas and would make use of existing topographic characteristics and the undercrossings planned by Caltrans in relation to improvements to SR-126 on the north side of the Santa Clara River. Salt Creek is also the most appropriate topographic feature upon which to align a major open area connection. The Salt Creek linkage, in particular, exhibits several distinguishing characteristics. Namely, these characteristics include a direct link between the two major open areas; less disturbance than any of the other potential connections; a linkage that is bound through most of its length by open area on the north, and thus, is not surrounded by future development; a linkage with both upland and riparian vegetation through most of the corridor; and topographic isolation from areas of development on the Specific Plan site.

The combined High Country SMA and Salt Creek area provide a direct connection between the River corridor and large upland habitat areas south of the River. Based on the Impact Sciences, Inc. (2005) mammal study and incidental observations by Dudek (Dudek and Associates 2006b) in the High Country SMA and Salt Creek area, wildlife activity appears to be concentrated in these areas even with ongoing agricultural and grazing activities. The most direct route for wildlife to move from the River corridor to upland areas south of the River is through the Salt Creek Confluence corridor. The combined 5,220-acre High Country SMA and Salt Creek area is large enough to provide both buffer and core habitat to allow wildlife to use this landscape linkage without necessarily having to come into close contact with urban development, except at highway crossings. The conceptual linkage identified by Penrod et al. (2006) in this area is about 4.5 miles (23,760 feet) wide, with the narrowest portion of the High Country SMA and Salt Creek area approximately 4,000 feet wide. This minimum 4,000-foot-wide zone will provide adequate buffer and core habitat for most wildlife species.

The Castaic/Hasley corridor will also remain intact as an Open Area following implementation of the Project and build-out of the Specific Plan, VCC, and Entrada planning areas, but with a narrowing of the corridor that passes between the VCC and Entrada projects. This corridor was not identified by Penrod et al. (2006) as a regional linkage, but with its direct connection to the Santa Clara River corridor, it will still allow for movement of many species, including many mammals and some aquatic species (ENTRIX 2007). Although the vicinity of Castaic Creek north of the Project area is becoming increasingly developed, it will continue to have connectivity value between the Santa Clara River and upland habitats to the northeast of the Project area extending to Castaic Lake and the Angeles National Forest.

As shown in *Figure 13*, a number of the potential wildlife corridors would be developed, would become dead-ends, or would be highly constrained for wildlife after implementation of the Project. Corridors No. 8d: Dead End Canyon; No. 8e: Middle Canyon; No. 8f: Magic Mountain

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Canyon; and No. 11: Off-Haul Canyon would be developed and eliminated as wildlife corridors. Corridors No. 8a: Humble Canyon; No. 8b: Lion Canyon; and No. 8c: Exxon Canyon would become dead-ended at development areas. Corridors No. 5: Potrero Canyon–Salt Creek; No. 6: Potrero Canyon; No. 7: Long Canyon; No. 9: Chiquito Canyon; No. 10: San Martinez Grande Canyon; and No. 12: Homestead Canyon would become constrained wildlife corridors due to surrounding development. Although some wildlife species will move through these constrained corridors and others may permanently occupy portions of these corridors where there is adequate habitat, in general, these constrained corridors are not considered to effectively contribute to long-term habitat connectivity function in the Project area.

More information regarding the linkage function of each of the preserves, including which species can be expected to utilize the linkage and movement corridors, is provided in *Section 7.0*.

5.3.4 Buffers/Transition Areas

Each of the SMAs, where located adjacent to development, has an associated preserve buffer/transition area designed to protect natural resources. The first level of protection is provided through adherence with the buffer design principles outlined in *Section 5.1.2*. As-needed additional protection is provided as-needed based on a determination of potential significant impacts and required mitigation as described in *Section 7.0*. Described here is a brief overview of buffer conditions at the urban–wildland interface.

The buffer between the aquatic habitat and urban development would be a minimum of 100 feet wide adjacent to the Santa Clara River between the top river-side of bank stabilization and development, 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. This buffer would preserve much of the existing streamside vegetation that serves to control sedimentation except in those areas where structures such as bridge footings, outfall structures, and viewing platforms will be placed, for example.

With build-out of the Project area, the future urban edge along the High Country SMA and Salt Creek area is of relatively low concern because of the substantial area (>5,200 acres) of habitat that will remain in open space. Even with some level of impact along the edge of this open space, there will be adequate habitat for these species in unaffected core areas. The open space system, and particularly the combined High Country SMA and Salt Creek area, is large enough to provide both buffer and core habitat to allow these species to use the landscape without

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necessarily having to come into close contact with urban development, except at highway crossings discussed below. As shown in Figure 9 the High Country and Salt Creek SMA are part of the eastern arm of the conceptual linkage design identified in the South Coast Missing Linkages Project (Penrod et al. 2006). This linkage in this area is about 4.5 miles (23,760 feet) wide, with the narrowest portion of the High Country SMA and Salt Creek area approximately 4,000 feet wide. This minimum 4,000 feet wide zone will provide adequate buffer and core habitat for most special-status species.

Finally, the Open Areas were designed to offer a buffer/transition area between development and the SMAs. As such, the Open Areas are not additionally buffered from development but instead offer transitional areas where edge effects are minimized. The functions of the Open Areas vary from offering constrained but effective wildlife movement corridors, as in the case of Potrero, Long, Chiquito, and San Martinez Grande Canyons to functioning as areas where water quality treatment can occur prior to discharge into natural drainages. A variety of land uses are present within the Open Area but in general, resources that require buffer protection are restored with appropriate native communities. Examples of this include all drainages with 100-year storm flows of 2,000 cfs or greater, all of which are contained within the Open Area as open channels with native habitat treatments and preserved occurrences of San Fernando Valley spineflower, each of which has an established buffer zone with native habitat treatments.

5.3.5 Development Avoidance and Minimization

Impact minimization techniques have been incorporated into the design of facilities through the planning of preserve boundaries (e.g., minimization of edge-area ratio, thereby minimizing edge effects), the design of infrastructure with consideration of resource protection both during and following construction, and through the implementation of active monitoring and management measures to be implemented during and following construction that serve to further protect sensitive resources from adverse impacts. These impact avoidance and minimization aspects of the various development components that are expected to impact jurisdictional resources within the RMDP study area are described in more detail in *Section 6.0*. Included in this description are the location, design, material, construction method, and maintenance requirements for each development component, as well as an evaluation of how each of these aspects conforms with the RMDP GOs and design principles (DPs).

5.3.6 Preserve Management

The RMDP also provides for a long-term management strategy which, when implemented, would ensure conservation of resource functions and values through targeted and measured maintenance and management activities. The strategy involves management of resources within

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the conservation areas (SMAs and Open Areas), as well as management of infrastructure facilities within the Specific Plan area that will affect resources in adjacent conservation areas. The RMDP addresses management of conservation areas in *Section 7.0*. Management of infrastructure, in terms of minimized maintenance that is also of sufficient frequency to prevent adverse effects from lack of maintenance, is discussed in *Section 6.0* and is supplemented by the *Newhall Ranch RMDP Maintenance Manual (Appendix A)* (Dudek 2008b). The maintenance manual, in particular, is intended to be periodically updated based on current Best Management Practices for minimizing impacts to biological resources such as nesting birds, water quality, special status vegetation communities, and control of invasive species. Resource preservation is enhanced through a comprehensive management strategy for the region. This strategy includes ongoing evaluation of resources, and coordination with other resource management programs outside the boundary of the RMDP.

In addition to assembly of a preserve which protects cores, linkages and buffers, the RMDP provides mitigation for significant unavoidable impacts such that all impacts are reduced to a level less than significant. Some of these mitigation measures provide for the replacement of resources through restoration and/or enhancement activities. Other mitigation measures provide for avoidance and/or relocation of special-status species. Described in more detail in *Section 7.0*, these mitigation measures would be implemented to avoid or minimize impacts to coastal scrub, wetlands, oaks, Southern California black walnut, mainland (holly-leaf) cherry, slender mariposa lily, spineflower, unarmored threespine stickleback, arroyo chub, Santa Ana sucker, arroyo toad, California red-legged frog, two-striped garter snake, southwestern pond turtle, western spadefoot toad, coast horned lizard, silvery legless lizard, various special-status bird species, San Diego desert woodrat, San Diego black-tailed jackrabbit, American badger, mountain lion natal dens, various special-status bat species, and wildlife movement corridors. Additional mitigation includes management of local trails, design of transition areas, monitoring of grading activities, design of drainage facilities, monitoring of maintenance activities, and ongoing resource monitoring. Implementation of these measures is necessary, based on species requirements for habitat buffers and adequate habitat connectivity, to ensure long-term, successful preservation of native biological resources.

5.4 RMDP Implementation

The RMDP is part of a set of guiding documents that provide for implementation of the Newhall Ranch Specific Plan and portions of the VCC and Entrada planning areas, in accordance with the EIR as well as state and federal wetlands and endangered species regulations. The RMDP provides evaluation of state- and federally regulated impacts in a comprehensive fashion. Although evaluation of the impacts and mitigation of the RMDP occurs at once, with processing of the EIS/EIR and initial master permits/agreements, implementation of the RMDP is

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incremental. The following subsections describe the process for approval of development components, assemblage of the preserve, and mitigation compliance monitoring and reporting. A conceptual example of how the dedication of open space and implementation of restoration plans may be implemented on a project-by-project basis within the Specific Plan boundaries is provided as *Appendix D – Comprehensive Mitigation Implementation Plan (CMIP)*.

5.4.1 Development Approval Process

Although the exact phasing and grouping of development components is subject to change, in general the Applicant is expected to submit the following Tentative Maps for approval by the County of Los Angeles, over an approximately 10-30 year period following approval of the RMDP: Mission Village, Homestead Village, Landmark Village, and Potrero Village. In general, development components occurring within each village will be implemented in conjunction with each Tentative Map. In addition, the following major infrastructure improvements may be submitted for approval separately from the Tentative Maps–WRP and SR-126 Improvements. Following county approval of Tentative Maps, Final Maps, and Grading Plans, Improvement Plans will be prepared and submitted for county approval in order to initiate construction.

At any time during this process, the RMDP components associated with the construction project may be submitted to the agencies for consistency review with the Master Streambed Alteration Agreement and/or section 404 Permit. A Subnotification will be prepared that is intended to document project compliance with the RMDP and master permit/agreements for the RMDP. In addition to conformance in terms of incorporation of required design parameters that avoid or minimize impacts, the Subnotification review and approval process allows for evaluation of adequate mitigation. As will be described in *Section 7.0*, mitigation measures may include construction-related monitoring, preserve restoration and enhancement activities, and compliance reporting.

Through the review and approval process of Tentative Maps, Final Maps, Improvement Plans, Grading Plans, and Subnotifications, each development component of the RMDP described in *Section 6.0* is expected to be implemented in accordance with the RMDP goals and objectives and design principles outlined here in *Section 5.0* and in accordance with mitigation measures listed in *Section 7.0*.

5.4.2 Preserve Assemblage

The process of preserve assembly began in the Specific Plan's RMP. This process provides for the dedication, ownership, and management of 1,921 acres within the Open Area and the two Specific Plan SMAs, namely, the 977-acre River Corridor SMA and the 4,205-acre High

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Country SMA. As discussed below, the two SMAs preserve regionally significant biological and other natural resources within the Specific Plan site.

As part of the approval of the Specific Plan in May 2003, the County's Board of Supervisors also imposed an off-site condition, requiring the applicant (Newhall Land) to dedicate to the public the remaining 1,517-acre portion of the Salt Creek watershed in Ventura County, adjacent to the Newhall Ranch Specific Plan. This additional land dedication is to be managed in conjunction with, and in the same manner as, the High Country SMA.

The High Country SMA, the Salt Creek area, and the Open Area also include suitable areas for the preservation, restoration, and enhancement of coastal scrub, wetlands, oaks, Southern California black walnut, mainland (holly-leaf) cherry, and slender mariposa lily resources (Dudek 2007a). In addition, the Specific Plan's RMP includes a spineflower mitigation program, and two conservation easements already exist on the Specific Plan area for the preservation of the spineflower.

The requirements relating to each of these preserve areas is described further below.

River Corridor SMA

The 977-acre River Corridor SMA must be protected via a permanent, non-revocable conservation and public access easement. The easement must be offered to Los Angeles County over the portion of the River Corridor SMA within each subdivision 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 that subdivision allowing construction within or adjacent to the River Corridor SMA (SP-4.6-22). The River Corridor SMA conservation and public access easement must be offered to the County prior to the transfer of the River Corridor SMA ownership, or portion thereof, to a management entity (SP-4.6-23). In addition, the River Corridor SMA conservation and public access easement shall be consistent in its provisions with any other on-site conservation easements that may have been granted (SP-4.6-25).

Under the Specific Plan's RMP, prior to recordation of the River Corridor SMA conservation and public access easement, a plan is required to be provided to the County for the permanent ownership and management of the River Corridor SMA, including any necessary financing. This plan must include the transfer of ownership of the River Corridor SMA to the Center for Natural Lands Management or, alternatively, to a joint powers authority.

Under the Specific Plan's RMP, grazing, except as permitted as a long-term resource management activity, has been removed from the River Corridor SMA (SP-4.6-24). Agricultural

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land uses, other than for long-term resource management activities, also have been removed from the River Corridor SMA.

Under the Specific Plan's RMP, mitigation for the Specific Plan's impacts on riparian resources includes restoration/enhancement activities within the River Corridor SMA in "Candidate Riparian Restoration/Enhancement Areas."

Upon final approval, the SMA designation for the River Corridor SMA shall become effective and its permitted uses and development standards will be governed by the Development Regulations, Chapter 3 of the Specific Plan (SP-4.6-21) (County of Los Angeles 2003a).

High Country SMA

The 4,205-acre High Country SMA must be offered for dedication in three approximately equal phases of approximately 1,400 acres, each proceeding from north to south, as follows (SP-4.6-37):

1. The first offer of dedication will take place with the issuance of the 2,000th residential building permit of Newhall Ranch.
2. The second offer of dedication will take place with the issuance of the 6,000th residential building permit of Newhall Ranch.
3. The remaining offer of dedication will be completed by the 11,000th residential building permit of Newhall Ranch.
4. The Specific Plan applicant also must provide a quarterly report to the Departments of Public Works and Regional Planning, indicating the number of residential building permits issued in the Specific Plan area by subdivision map number.

The High Country SMA must be offered for dedication in fee to a joint powers authority consisting of Los Angeles County (four members), the City of Santa Clarita (two members), and the Santa Monica Mountains Conservancy (two members) (SP-4.6-41). The joint powers authority will have overall responsibility for recreation within and conservation of the High Country. Prior to the dedication, a conservation and public access easement must be offered to Los Angeles County, along with a conservation and management easement to the Center for Natural Lands Management (SP-4.6-38). In addition, the High Country SMA conservation and public access easement shall be consistent in its provisions with any other on-site conservation easements that may have been granted (SP-4.6-40).

The High Country SMA conservation and public access easement must prohibit cattle grazing within the High Country SMA, except for those grazing activities associated with long-term

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resource management programs, and must restrict recreation use of the established trail system. Existing agricultural operations are permitted to continue within the High Country SMA. However, such operations cannot be expanded beyond the historical areas of operation, unless the proposed expansion, if any, is first reviewed under the County's SEA criteria and the Planning and Zoning Law. A Conditional Use Permit may be required for such operations.

Under the Specific Plan's RMP, mitigation for Specific Plan impacts on riparian resources includes restoration/enhancement activities within the High Country SMA in "Candidate Riparian Restoration/Enhancement Areas."

Funding for management of the High Country SMA consists of a \$2 million endowment (in 1997 dollars) to the Center for Natural Lands Management by the Project applicant for the perpetual conservation management of the resources in the High Country, the River Corridor, and Open Area (see "Agreement for the Donation and Management of the Open Area, High Country, and River Corridor of Newhall Ranch"). The Specific Plan's RMP also includes the framework for a per-unit assessment fee for the High Country SMA, to be established under the authority of the County's Board of Supervisors (SP-4.6-42).

Upon final approval, the SMA 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 of the Specific Plan (SP-4.6-36) (County of Los Angeles 2003a).

Salt Creek Area

The 1,517-acre Salt Creek area must be dedicated in fee and/or by conservation easement, as determined by Los Angeles County, in its sole discretion, to the joint powers authority, which is responsible for overall recreation and conservation of the High Country SMA. The dedication is triggered upon approval of the first tract map within the Oak Valley Village (currently known as Potrero Village) of the Specific Plan. In addition, the land must be managed in conjunction with, and in the same manner as, the High Country SMA.

Upon dedication of the fee and/or conservation easement for the Salt Creek area, the cattle grazing prohibition contained in the Specific Plan's RMP must be applied to the Ventura County portion of the Salt Creek area in conjunction with, and in the same manner as, the High Country SMA.

Because the Ventura County portion of the Salt Creek area is to be managed in the same manner as the High Country SMA, existing agricultural field operations within the Ventura County portion of the Salt Creek area are permitted to continue; however, the Project applicant (Newhall

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Land) cannot expand or intensify its existing agricultural field operations within the Ventura County portion of the Salt Creek area.

Prior to dedication of the Ventura County portion of the Salt Creek area, a conservation and management easement must be offered to a Natural Land Management Organization (NLMO). The Ventura County portion of the Salt Creek area shall then be offered for dedication in fee and/or conservation easement to the joint powers authority having overall responsibility for the High Country SMA.

The intent of the Salt Creek condition is to give primary consideration to preservation of the wildlife corridor located within the Ventura County portion of the Salt Creek area, and to discourage any activities inconsistent with this preservation policy.

Like the High Country SMA, the Ventura County portion of the Salt Creek area will include “Candidate Riparian Restoration/Enhancement Areas,” even though they may not necessarily be required as mitigation for impacts of the Specific Plan.

In order to treat the Ventura County portion of the Salt Creek area in the same manner as the High Country SMA, the Project applicant and the Center for Natural Lands Management will amend the existing Newhall Land/Center “Agreement for the Donation and Management of the Open Area, High Country, and River Corridor to Newhall Ranch” to include the Ventura County portion of the Salt Creek area for perpetual conservation management. Like the High Country SMA, the Ventura County portion of Salt Creek area Corridor will be included in the fee assessment to be established under the authority of the County’s Board of Supervisors.

Open Area

The 3,420-acre Open Area is located outside the Specific Plan’s SMAs and will be preserved to protect significant resources, including important landforms, major creeks and drainages, oak woodland and savannahs, community parks, and cultural sites and to provide open areas. Suitable portions of Open Area may be used for mitigation of Specific Plan impacts on riparian, oak resources, or elderberry scrub. Mitigation activities within Open Area are subject to specified restoration and enhancement activities, as set forth in the River Corridor SMA and the High Country SMA.

Open Area within each final map permitting construction will be offered for dedication to the Center for Natural Lands Management at the time that each map is recorded. 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

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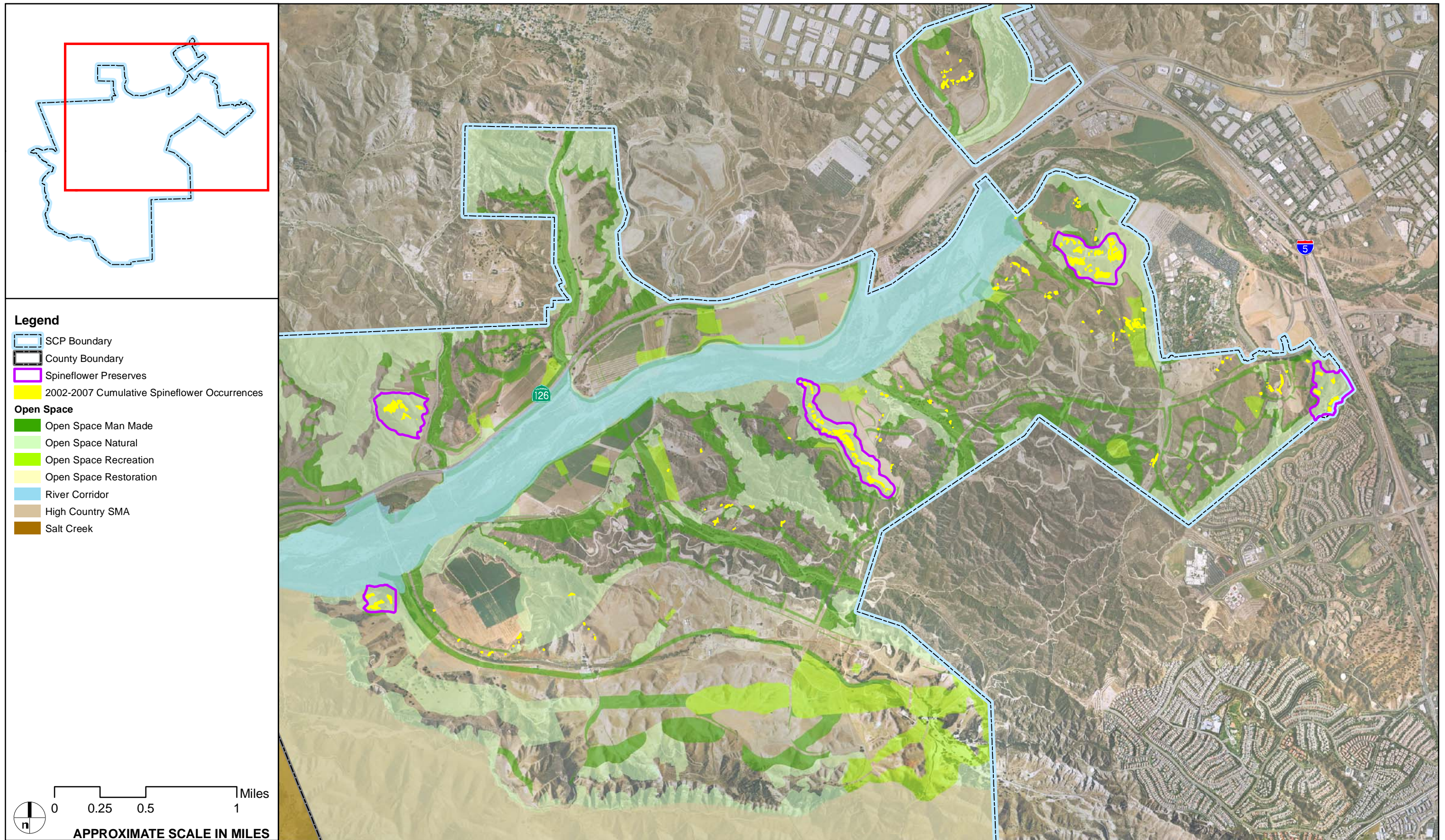
easements, as well as easements for infrastructure, shall be offered to Los Angeles County or other appropriate entity (SP-4.6-47).

Spineflower preserves are included in the Specific Plan's RMP in a "Special Study Mitigation Overlay and Preserve Program," and are incorporated within the Open Area. The mitigation program was established in consultation with both Los Angeles County and CDFG to conserve spineflower and minimize the Specific Plan's impacts to the spineflower. Two conservation easements, covering over 64 acres, already have been granted to CDFG. The conservation easements provide mitigation for certain impacts to the spineflower by providing conservation easements on the Specific Plan property to protect the spineflower and its habitat. Additionally, within the conservation easements, buffer areas surrounding spineflower populations are created on the Specific Plan property.

Under the SCP component of the proposed Project, the applicant proposes to place conservation easements over five preserve areas within the study area (*Figure 14*). The five preserve areas total approximately 167.6 acres and include about 68.5% of the occupied spineflower area cumulatively observed in 2002 through 2007.

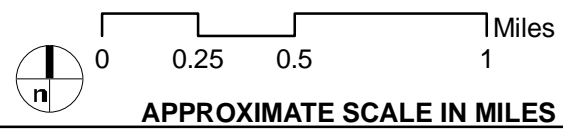
Oak Resources

Oak Resources must be protected through implementation of an oak resource replacement plan prior to recordation of construction-level final subdivision maps. Each plan shall: (1) provide guidelines for the oak tree planting and/or replanting, (2) be reviewed by the Los Angeles Department of Regional Planning and the County Forester, and (3) include 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 Specific Plan plans and specifications must follow the oak tree guidelines specified in the County of Los Angeles Oak Tree Ordinance (CLAOTO) (Los Angeles County 1988). Suitable areas for oak tree replacement and restoration were identified within the River Corridor SMA, High Country SMA, and Open Areas on the "Potential Oak Tree Restoration Areas" figure contained in the approved Specific Plan (Exhibit 2.6-9).



Legend

- SCP Boundary
- County Boundary
- Spineflower Preserves
- 2002-2007 Cumulative Spineflower Occurrences
- Open Space**
- Open Space Man Made
- Open Space Natural
- Open Space Recreation
- Open Space Restoration
- River Corridor
- High Country SMA
- Salt Creek



AERIAL SOURCE: AirphotoUSA, 2007

FIGURE 14

Newhall Ranch - Resource Management and Development Plan
Spineflower Preserves in Relation to Open Space

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5.4.3 Compliance Assurance

Compliance with the RMDP will be assured throughout the incremental implementation of the plan through consistent monitoring and reporting methods. Compliance monitoring is required at several stages of RMDP implementation. Following approval of development plans, construction monitoring and reporting will often be required (according to the Subnotification for that development component) to ensure compliance with the RMDP and master permits/agreements. Following dedication of the preserve area, resource management and monitoring activities, some of which will be related to specific development components (e.g., restoration of habitats impacted by a bridge crossing) other activities which may be general monitoring and management related to conservation of resources within the preserve, will be documented in annual monitoring reports. The requirements for monitoring and management, responsible parties, acceptable techniques, and reporting requirements are detailed in *Sections 7.0, 8.0, 9.0, 10.0, and 12.0*. Implementation of the RMDP requires ongoing, consistent compliance monitoring. The County of Los Angeles and resource agencies will have responsibility to review compliance monitoring reports and determine if implementation is adequate and appropriate to meet the goals and objectives and design principles of the RMP and RMDP.

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6.0 RMDP DEVELOPMENT COMPONENTS DESCRIPTION

The following describes the Newhall Ranch RMDP development components related to implementation of the Specific Plan and evaluates the conformance of those proposed activities to the GOs listed in *Section 2.0* and the DPs discussed in *Section 5.2.3*.

Various Specific Plan infrastructure improvements and facilities, and the maintenance of such infrastructure, require Corps, CDFG, USFWS, and RWQCB permitting, consultations, and agreements because the infrastructure construction and/or maintenance would affect the waters and drainages within the jurisdictional limits of the Corps and CDFG or would potentially affect threatened or endangered species. These improvements and facilities are discussed in further detail below along with a summary of expected maintenance practices. A complete discussion of maintenance practices and restrictions can be found in *Appendix A – RMDP Maintenance Manual*.

The applicant has proposed RMDP infrastructure improvements to implement the approved Specific Plan, which are described in further detail below. The proposed RMDP improvements are briefly summarized, as follows:

- **Bridges and Road-Crossing Culverts.** Three bridges and 16 new road-crossing culverts would be installed to serve the Specific Plan, and to accommodate future traffic associated with development of the Specific Plan and the region. There are two proposed bridges, Potrero Canyon Bridge and Long Canyon Road Bridge, and one previously approved bridge, Commerce Center Drive Bridge.⁸ The three bridges would be located over the main stem of the Santa Clara River. The bridges are proposed to be constructed of conventional concrete girders placed over concrete-filled piers. Fifteen of the 16 new road-crossing culverts would cross five tributaries to the Santa Clara River. A sixteenth road-crossing culvert would cross Ayers Canyon, near Potrero Mesa. The road crossings are proposed to be constructed of earthen fill and pre-fabricated arched culverts.
- **Bank Stabilization.** Bank stabilization would be installed along portions of the Santa Clara River and its tributary drainages within the RMDP site. Bank stabilization would include buried soil cement, grouted and ungrouted rock riprap, turf reinforcement mats, and limited gunite slope lining in and around bridge abutments and other areas where other methods are not technically feasible. Raising of the ground surface for building pads would occur in

⁸ The Commerce Center Drive Bridge was previously analyzed in the Final EIS/EIR prepared and approved by the Corps and CDFG in connection with the previously adopted NRMP (CDFG 1998).

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areas along the Santa Clara River and major tributary drainages in order to protect land uses from flooding.

- **Drainage Facilities.** Drainage facilities would be installed and include open and closed drainage systems, inlets, outlets, bank stabilization, and National Pollutant Discharge Elimination System (NPDES) water quality basins. The proposed drainage structures focus on minimizing the amount of debris that would enter the drainage system, and maintaining the quality of water within the system.
- **Water Quality Control Facilities.** Pursuant to NPDES requirements, Best Management Practices (BMPs) would be implemented, including the following water quality control facilities: (1) water quality basins, (2) debris basins, located just upstream of the interface between developed and undeveloped areas, primarily to trap debris coming from the upper watersheds (Debris Retaining Inlets (DRI)), (3) detention basins, which are typically sized to capture the predicted runoff volume and retain the water volume for a period of time (usually 24 to 48 hours), (4) catch basin inserts or screens/filters installed in existing or new storm drains to capture pollutants in the stormwater runoff, (5) bioretention, such as vegetated, grassy swales, that provide water quality benefits and convey stormwater runoff, and (6) solids separator units or in-line structures that reduce or manipulate runoff velocities such that particulate matter falls out of suspension and settles in a collection chamber.
- **Tributary Drainages**
 - **Modified Tributary Drainages—Existing Channels Stabilized.** In order to accommodate the Specific Plan development, some of the existing major tributary drainages within the RMDP site (Chiquito Canyon and San Martinez Grande Canyon) would require stabilizing treatments to protect the channel and surrounding development from excessive vertical scour and lateral channel migration. The existing drainages would remain intact, but would sustain permanent and temporary impacts from construction of stabilization elements, including buried bank stabilization and grade stabilization structures. Impacted areas would be appropriately planted with native vegetation following construction.
 - **Modified Tributary Drainages—Regraded Channels.** Due to the existing conditions within portions of some drainages in the RMDP site (portions of Long, Lion, and Potrero canyons), stabilization of the existing drainages is not feasible; therefore, in order to meet the County’s flood protection objectives, these drainages would be graded, and a new drainage would be constructed in the same or similar location. The new drainages would be designed to incorporate buried bank stabilization and grade stabilization, and would have sufficient hydrologic capacity to

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- pass the Los Angeles County Capital Flood without the need for clearing vegetation from the channels. The new channel banks would be appropriately planted with native vegetation following construction.
- **Unmodified (Preserved) Drainages.** Among the minor tributary drainages within the RMDP site, some are located in areas where no impacts are proposed, and are distant enough from surrounding development that bank stabilization or any routine maintenance will not be required. These drainages would remain in their existing condition; the RMDP does not propose to impact or enhance these drainages. In most situations, unmodified drainages would be located within future open space areas and maintain their current hydrologic functions, as well as providing linkages for wildlife movement to and from the Santa Clara River.
 - **Drainages Converted to Buried Storm Drain.** Some of the drainages within the RMDP site, including many of the smallest, ephemeral streams, would be graded as part of the grading operations required to facilitate build-out of the Specific Plan. Development flows in these area drainages meet the Los Angeles County flood criteria (less than 2,000 cubic feet per second (cfs)) to be conveyed by storm drain. Because of the small, ephemeral nature of these drainages, the RMDP does not propose to create new drainage channels to replace these impacted drainages. Rather, these areas will be graded with the development activities and new buried storm drain systems will be installed pursuant to the development plans. Wet-weather flows from these areas occupy the drainages that would be routed into the development's storm drain system, and would be discharged to the Santa Clara River via the proposed storm drain outlets and BMPs, as applicable. Where the upstream edge of development meets open/undeveloped area, a DRI is proposed to be constructed, and, in some cases, will be coterminous with the upper limit of development impact to these drainages. Not all DRIs will be sited at the upper limits of drainages, with most sited at the daylight of development grading in the upper canyon open areas. In most cases the entire drainage will be graded for development.
 - **Grade Stabilization Structures.** Grade stabilization structures would be installed on five existing tributaries (Chiquito Canyon, Long Canyon, Potrero Canyon, San Martinez Grande Canyon, and Lion Canyon) to the main stem of the Santa Clara River. The grade stabilization structures are designed to contain the hydraulic "jump" that occurs when there is a significant drop in streambed elevation, so that higher velocities are dissipated within the area. The structures would help control erosion and changes to the configuration of the bed of the stream channel. Such structures would be constructed of soil cement, sheet piles, or reinforced concrete.

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- **Utility Corridor.** Various electrical, sewer, water, gas, and communications lines would be installed parallel to the right-of-way of SR-126 to bring utilities to various planning areas and the Newhall Ranch WRP. These utilities require some bank stabilization along the Santa Clara River and cross various drainages (Castaic Creek, Chiquito Canyon, San Martinez, and other minor drainages) either buried beneath the creekbed, suspended from bridges, or located in the road bed at culverted crossings.
- **Utility Crossings.** Various electrical, sewer, water, gas, and communications lines would be installed across the Santa Clara River, Chiquito Canyon, San Martinez Canyon, Potrero Canyon, and Long Canyon to serve the Specific Plan. Typically, the utility lines would be installed in rights-of-way adjacent to bridges where access for installation and maintenance can be easily accommodated. Smaller utility lines serving local planning areas may cross beneath the bed of stabilized, regraded, or preserved channels and drainages.
- **Temporary Haul Routes for Grading Equipment.** Temporary haul routes across the Santa Clara River would be used during construction to move equipment and excavated soil to locations in the RMDP site where fill is needed.
- **WRP Outfall Construction Activities.** An effluent outfall pipeline would be constructed from the Newhall Ranch WRP through the bank stabilization to the bed of the Santa Clara River. An earthen channel and adjacent walkway also would be constructed to reach the confluence of the outfall and actual flow path of the River.
- **Roadway Improvements to SR-126.** Various roadway improvements to SR-126 would be needed within the vicinity of the RMDP site, including new bridges or culvert crossings and outlets at Castaic Creek, Chiquito Canyon, San Martinez Canyon, and other minor drainages.
- **Roadway Improvements to Magic Mountain Parkway.** To realize the Specific Plan approved traffic circulation plan, Magic Mountain Parkway must be widened and extended from its current limits into Newhall Ranch. This road improvement will impact ephemeral drainages in the Entrada planning area.
- **Maintenance Activities.** DPW or other management entity would conduct regular and ongoing maintenance of flood, drainage, and water quality protection facilities on the RMDP site. Such activities would include periodic inspection of structures and monitoring of vegetation growth and sediment buildup to ensure that the integrity of the structures is maintained and that planned conveyance capacity is present. Maintenance may also include repairs and maintenance of bridges and bank stabilization, repair to buried, suspended, and overhead utilities, and/or emergency maintenance activities.

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- **Recreation Facilities.** The Specific Plan Master Trails Plan includes a comprehensive system of bicycle, pedestrian, and equestrian trails. The RMDP includes construction of these features, including several new trail bridges at various large and small tributaries and construction of up to eight nature viewing platforms that would be located in or adjacent to jurisdictional areas along the Santa Clara River.
- **Geotechnical Investigations.** Geotechnical investigations may occur throughout the RMDP study area. Equipment will access investigation sites along a 10- to 20-foot-wide access route and will utilize access ramps of similar width, as necessary. Investigation sites typically require a cleared area for safe access. Test Pit excavations are up to 20 feet deep, 36 inches wide, and 200 feet long, with the excavated soils temporarily piled adjacent to the excavation and then placed back into the excavated area. Activities are generally within areas that will be impacted by future RMDP development components.
- **Habitat Enhancement and Restoration Activities.** The RMDP incorporates a variety of design features that minimize impacts to riparian and upland resources along and within the Santa Clara River and its tributary drainages, including avoidance, minimization, restoration, and enhancement activities. In addition, the RMDP includes enhancement design features, such as removal of grazing to enhance riparian habitat, and rehabilitating native habitat areas that have been disturbed by past activities or invaded by non-native plant species. These activities will primarily occur in the following areas: River Corridor SMA, Salt Creek Corridor, and High Country SMA. Other open space, Open Area, Manufactured Open Area, and other suitable locations may be proposed to CDFG and the Corps in the future for additional enhancement and restoration activities.

6.1 Santa Clara River Development Components

While the Santa Clara River generally would remain in its natural condition, the RMDP proposes bank stabilization, three bridges (one previously authorized), the Newhall Ranch WRP outfall, bank stabilization along the utility corridor, temporary haul routes, water quality control facilities (including outlet structures/energy dissipaters), viewing platform locations, and habitat enhancement activities. Of these RMDP improvements, the major features in or along the Santa Clara River consist of the bank stabilization, the three bridges, and bank stabilization along the utility corridor. *Figure 15* depicts the location of the proposed RMDP Santa Clara River major features.

6.1.1 Bank Stabilization—Santa Clara River

Regarding bank stabilization, the approved Newhall Ranch Specific Plan contemplated installation of buried bank stabilization along portions of the Santa Clara River to protect

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development from flood hazards while preserving the River as a natural resource.⁹ Consistent with the Specific Plan, the RMDP proposes buried bank stabilization where necessary to protect against flooding and erosion pursuant to Federal Emergency Management Administration (FEMA) and Los Angeles County Department of Public Works' requirements. The bank stabilization is designed and would be constructed to retain the Santa Clara River's significant riparian habitat, to allow the River to continue to function as a regional east-west wildlife corridor, and to provide flood protection pursuant to Los Angeles County standards.

As shown, the proposed RMDP buried bank stabilization extends along the north and south banks of the Santa Clara River (*Figure 15*). In total, the RMDP proposes installation of approximately 29,779 lf of bank stabilization along the north and south banks of the Santa Clara River to facilitate build-out of the Specific Plan site. Approximately 22,958 lf of buried bank stabilization (78%) would be installed in non-jurisdictional areas adjacent to the River. Such installation would result in newly created River channel and jurisdictional areas (approximately 80 acres), as well as upland habitat, depicted in green in *Figure 15*. The newly created River channel consists of approximately 802 acres of jurisdictional area and is depicted in blue on *Figure 15*.

Types of Bank Stabilization Protection

The RMDP incorporates the following types of bank stabilization:¹⁰ (a) buried soil cement, (b) ungrouted rock riprap, (c) gunite slope lining, and (d) turf reinforcement mats (TRMs). These types of bank stabilization can be divided into two different categories, flexible and rigid revetments. Ungrouted rock riprap and TRMs are flexible revetment systems that would be used as exposed bank stabilization in areas that do not have earthen cover and where stream velocities are low enough to ensure that the stabilization can resist erosive hydraulic forces. Generally, this would be a maximum stream velocity of 12 to 14 feet per second (fps). Rigid revetments are able to resist much higher velocities or erosive forces; however, they do not adjust or move like flexible systems. Rigid revetments can resist velocities in excess of 20 fps.

⁹ The approved Specific Plan also contains criteria for such drainage and flood control improvements to be followed by projects implementing the Specific Plan. (County of Los Angeles 2003a, pp. 2-71-2-75)

¹⁰ The bank stabilization shown in the RMDP is for both the Santa Clara River and certain identified drainage tributaries within the RMDP study area. The description of the types of bank stabilization shown in the RMDP is for both the Santa Clara River and certain

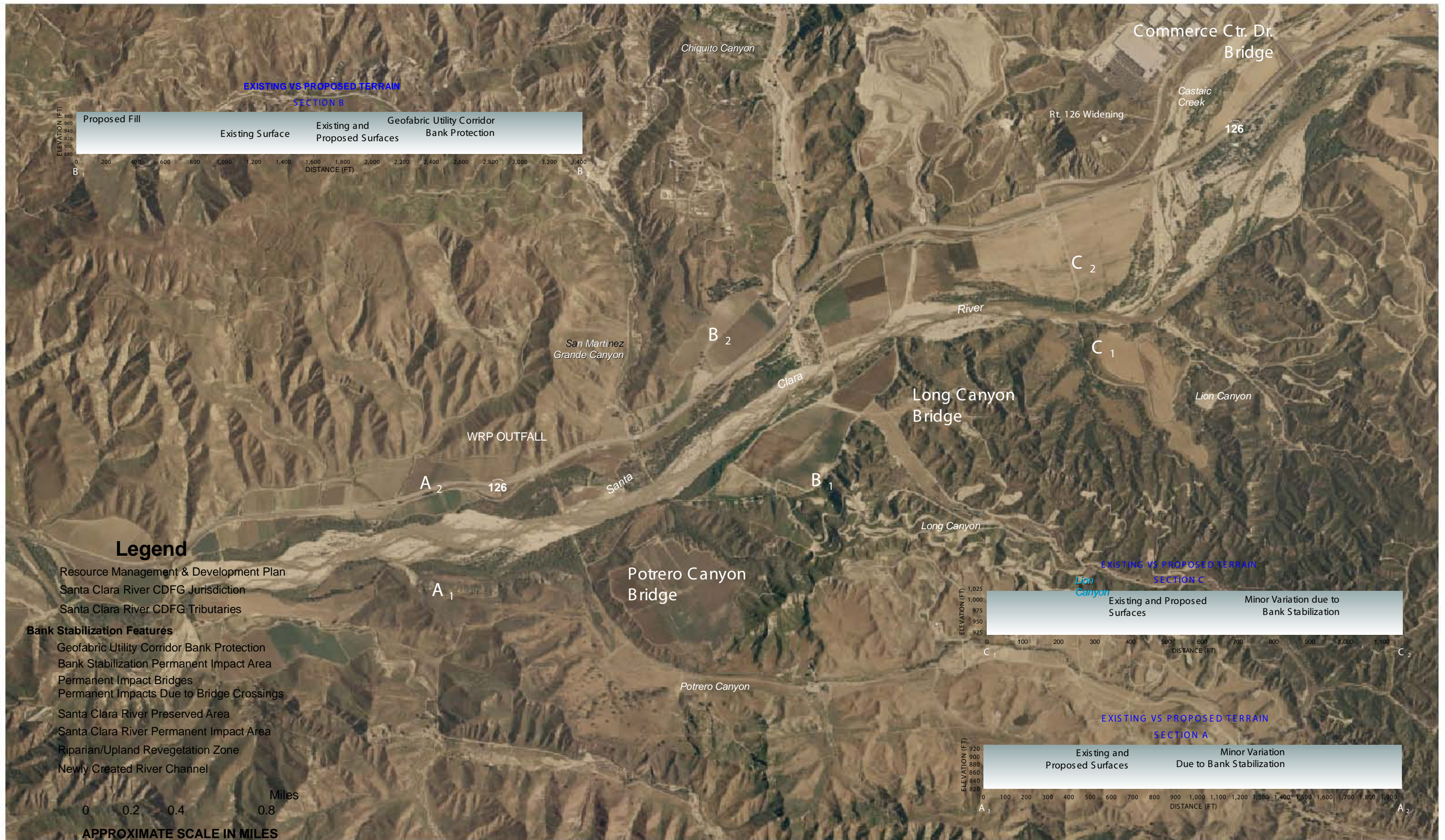


FIGURE 15

Proposed RMDP Santa Clara River Major Features

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Maintenance

Maintenance of buried soil cement and TRMs is minimal. The use of buried soil cement, and other buried bank stabilization, eliminates the need to maintain a clear zone at base of the bank. In general, no maintenance is required unless there is evidence of bank failure, in which case temporary impacts to resources remaining on and around the failed structure may be necessary to repair the failure. UngROUTED rock riprap and gunite slope lining would require removal of trash and debris, replacement of riprap, and removal of trees and other vegetation possibly impeding access or threatening the structural integrity of the levees. If access to the bottom of the River is required, in general, the work area will be an approximately 30-foot-wide zone extending outward from the levee at the invert and 15 feet upstream and downstream on either side of the tree to be removed. These bank areas will require clear access for inspection and potential maintenance for structural repairs, graffiti removal, etc. A mow-strip area approximately 15 feet wide, parallel to the gunite lining, will be routinely cleared of woody vegetation to allow for visual inspections. Repairs may require a large work area. See *Appendix A* for additional details on maintenance.

RMDP Compliance

Selection of Santa Clara River bank stabilization types and locations meet the DPs as follows:

- DP 1 The LEDPA process provides the location and extent of bank protection in the least environmentally damaging practicable manner. Impacts to sensitive environmental resources have been evaluated and compared to the project benefits.
- DP 2 Analysis of the River hydrology has determined that bank protection locations do not alter the existing hydrologic conditions. Adjacent development areas supported by bank protection have been designed to meet the sub-regional stormwater management plan, which provides for both protection of water quality as well as prevention of hydromodification of tributary drainages and the Santa Clara River.
- DP 3 The locations of bank protection do not remove regional habitat linkages and have been determined to not affect continued habitat connectivity on site.
- DP 4 The bank protection is located such that the River channel will remain as a soft-bottom open channel.
- DP 5 Bank protection will be developed in several forms, each unique in its level of maintenance and construction impacts. The LEDPA process defines the appropriate bank protection for each location on the River to satisfy flood protection requirements. The TRMs (vegetated geotextile slope protection) require minimal maintenance, typically

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only in the event of a large erosion event that has damaged the protective fabrics. The location of TRM protection has been selected where it is unlikely that highly erosive flows will ever occur. Buried soil-cement is likewise vegetated and would only require maintenance in the event of major damage from a large erosion event. UngROUTED rock riprap is specified at locations where highly erosive flows may be experienced due to a narrowing of the floodway, such as at bridges. Rock riprap is also used to transition between different types of bank protection, and generally will occur at bridge abutments. Rock riprap may be vegetated or un-vegetated, with un-vegetated rock riprap requiring routine maintenance to control tree growth. GunitE slope facing is required at bridges to ensure that debris flow does not become impinged along the bridge abutments, a situation that could alter scour patterns and cause damage to bridge supports. GunitE slope facing requires the most intensive maintenance due to the requirements for routine inspection. The process of selecting bank protection locations and types has minimized the need for ongoing maintenance to the extent practicable.

- DP 6 For those features requiring maintenance, a Maintenance Manual (*Appendix A*) has been developed to ensure that activities are conducted with the same environmental and species protection measures as required for new construction. The adopted measures are intended to first avoid adverse effects, and, if unavoidable, then to minimize potential adverse effects through implementation of mitigation measures (see *Section 7.0*)
- DP 7 The bank protection provides the infrastructure upon which the regional trail system is to be constructed. Barrier fencing along the regional trail system in this area provides for a safe and access-restricted experience, which protects resources while allowing trail users the opportunity to experience the resource.
- DP 8 The LEDPA process resulted in bank protection locations set back from the riparian edge in nearly all areas. The area between the top of bank and the original riparian edge may be converted to riverine, riparian, transitional, and buffer natural habitats, providing for the reservation and/or replacement of biological resources and maintenance or increase in biological functions and services. The resulting River corridor is to be placed under a conservation easement and long-term management by the Center for Natural Land Management.

Subnotifications for river bank stabilization projects shall provide descriptions of construction-related impacts as well as post-construction conditions (e.g., revegetation, indirect effects). Mitigation measures have been developed to ensure that native habitats and riverbed are restored. In addition, because the bank protection is set back from the river edge, large areas of existing agricultural fields will be converted to riverbed habitats (see *Section 7.0*). The Subnotification

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process requires project-level submittals to demonstrate compliance with the LEDPA-approved locations of bank protection and to satisfy all of the mitigation measures to avoid and minimize effects on species and habitats.

Proposed bank stabilization along the Santa Clara River is consistent with RMDP GOs through the selection of bank stabilization designs that minimize adverse edge effects in transition areas (GO 2), minimizes direct and indirect impacts to biological and water quality resources (GO 3), increases functions and values within the Santa Clara River (GO 5), and avoids or minimizes alteration of potential wildlife movement corridors (GO 6). The Subnotification process will provide necessary documentation to the resource agencies and the County of Los Angeles (GO 8). Unavoidable significant impacts to resources would require implementation of mitigation measures (see *Section 7.0*).

6.1.2 Bridges/Road Crossings—Santa Clara River

The RMDP proposes construction of three bridges across the Santa Clara River: one at Commerce Center Drive (previously authorized under Corps Permit No. 94-00504-BAH and Lake/Streambed Alteration Agreement No. 5-502-97 and identified here for information purposes only), one at Long Canyon Road, and one at Potrero Canyon Road. The locations of the three bridges are shown on *Figure 15*. *Table 5* provides the physical characteristics associated with the two proposed bridges and one previously approved bridge across the Santa Clara River.

Table 5
Proposed and Previously Approved Bridges Over the Santa Clara River¹

Bridge Location	Bridge Length (Feet)	Bridge Width (Feet)	Number of Piers	Vertical Clearance (Feet)
Potrero Canyon Road Bridge	1,550	84	12 @ 100 feet	20–24
Long Canyon Road Bridge	980	100	9 @ 100 feet	31–41
Commerce Center Drive Bridge ²	1,200	100	9 @ 100 feet	22

¹ The physical characteristics of all bridges are approximations, subject to final design and construction plans.

² The Commerce Center Drive Bridge was previously analyzed in the Final EIS/EIR prepared and approved by the Corps and CDFG in connection with the previously adopted NRMP (CDFG 1998; CDFG SAA 5-502-97, Corps 94-00504-BAH

Maintenance

Although mainly maintenance free, structural repairs may be necessary to bridge supports or bridge decks that can only be completed from within the riverbed. In addition, subsequent to major storm seasons or events, accumulated debris and vegetation may create hazardous conditions to bridge supports. This includes growth of large woody vegetation along the length of the bridge, which may reduce the flood flow capacity during such major storm events and

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provide locations for debris to accumulate. Depending on scope of repairs or debris and vegetation to be removed, it may be necessary for heavy equipment to be operated within the channel. Whenever practical, repairs or maintenance to bridges shall be made from the bridge deck, although if this is not practical, encroachment upstream and/or downstream of the bridge may be necessary. The maintenance work area for structural repairs shall be limited to the area necessary to complete the work and for access, generally 30 feet on either side of the bridge and under the bridge itself. Access ramps, as necessary, will be located as close to the repair site as feasible, with preference given to locations with minimal mature vegetation, lacking flowing water, and requiring minimal bank disturbance. See *Appendix A* for additional details on maintenance.

RMDP Compliance

Selection of three bridge locations meets the DPs as follows:

- DP 1 LEDPA provides the location and span required for each of the bridges to avoid sensitive environmental resources in the least environmentally damaging practicable manner. Impacts to sensitive environmental resources were evaluated and balanced with project benefits.
- DP 2 Analysis and design of the bridge span and clearance is required to show that the bridges do not change the river's hydrologic conditions. Runoff from bridge decks will be managed in accordance with the sub-regional stormwater management plan, which provides for both protection of water quality as well as prevention of hydromodification of tributary drainages and the Santa Clara River.
- DP 3 The bridge types (pier supported, large clear spans, elevated above riverbed) and selected crossing locations preserve regional habitat linkages and do not affect continued habitat connectivity on site. Mitigation measures have been included to minimize impacts on habitat movement within the River corridor (see *Section 7.0*) due to construction, maintenance, and operation of the facilities (i.e., lighting).
- DP 4 The bridge span and clearance design allows the River channel to remain as a soft-bottom open channel without impediment to wildlife passage.
- DP 5 The bridge designs (large spans, maximum vertical clearance, and abutments set back from the active channel) are such that maintenance will be minimal. To ensure public safety, in the event of damage from storm flows, repairs would be implemented. In addition, preventative measures to control woody growth, such as large trees that could impact the bridge deck, may be performed. Repairs or vegetation control may require

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access to the riverbed, therefore, mitigation measures have been proposed to minimize effects of those activities.

- DP 6 A Maintenance Manual (*Appendix A*) has been developed to ensure that activities are conducted with the same environmental and species protection measures as required for new construction. The adopted measures are intended to first avoid adverse effects, and, if unavoidable, then to minimize potential adverse effects through implementation of mitigation measures (see *Section 7.0*).
- DP 7 Each bridge abutment provides the infrastructure to allow a safe and access-controlled location for recreational trails. Fencing along trails provides for protection of the resources while also allowing trail users the opportunity to engage the natural resources.
- DP 8 The LEDPA process resulted in the least number of bridges, in the least sensitive locations, and with the longest spans practicable to minimize effects on biological resources. Permanent direct impacts to the riverbed from the bridge pier and shading effects of the bridge deck are to be mitigated (see *Section 7.0*) by replacing biological resources to maintain or increase biological functions and services on site.

Subnotifications for river bank stabilization projects shall provide descriptions of construction-related impacts as well as post-construction conditions (e.g., revegetation, indirect effects). Mitigation measures have been developed to ensure that native habitats and riverbed are restored. The Subnotification process will require that any project-level submittal demonstrate compliance with the LEDPA location and span for each bridge.

Compliance with RMDP GOs is demonstrated in that the three proposed bridge crossings minimize adverse edge effects in transitions areas (GO 2), minimize direct and indirect impacts to biological and water quality resources (GO 3), and avoid or minimize alteration of potential wildlife movement corridors (GO 6). The Subnotification process will provide necessary documentation to the resource agencies and the County of Los Angeles (GO 8). As bridge construction will permanently impact the River at pier locations and from bridge deck shading effects, mitigation measures have been developed to mitigate significant unavoidable effects, including replacement of impacted habitat (see *Section 7.0*).

6.1.3 Temporary Haul Routes—Santa Clara River

During construction, three temporary haul routes would cross the Santa Clara River, to be used to move excavated soil and provide general construction access to locations within the Project area where fill is needed. The approximate locations of the three proposed temporary haul routes are depicted on *Figure 16*. The proposed crossings would be two-way with 60 feet of travel

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surface width. In locations where the riverbank is steep and ramping is required, fill would be placed in the River to create a safe slope ratio for passage of heavy equipment. Extra width for the side slopes of such crossings would be required. Passage of river flows would be maintained for all periods when the temporary haul routes are in use, and may include culverts or simple span bridge crossing of flowing water. Crossings may be removed as necessary to pass larger winter flows.

These temporary haul route locations would be used during construction of all four planning areas: Mission Village, Landmark Village, Homestead Village, and Potrero Village. Between periods of use, the haul routes would either: (1) revert back to general ranch use (oil and gas and agricultural), (2) be rendered inoperable by removal of portion crossing flowing water, or (3) if no longer needed for ranch operations, the approaches to the river crossings would be gated, or otherwise controlled, to prevent unauthorized access to the river corridor until such time that they are put into service for grading or permanently closed and restored to appropriate native habitats.

Maintenance

As they are not permanent features, temporary haul routes would not require maintenance.

RMDP Compliance

The proposed temporary haul route location and size meet the DPs as follows:

- DP 1 One of the haul routes is collocated with Long Canyon Bridge, the location of which was selected through the LEDPA analysis. The other is an existing agricultural road crossing location where new impacts to the riverbed will be minimized.
- DP 2 The temporary nature of the haul routes and the inclusion of culverts to pass low flows, in addition to the likelihood that they will not be operated during periods of high winter flows, minimizes alteration of existing hydrologic and water quality conditions.
- DP 3 The short-term operation of the haul routes may create a barrier to terrestrial species along the regional habitat linkage. Operations will not occur during nighttime hours when most animals are mobile along the River corridor, thereby minimizing the effect.
- DP 4 Haul routes are not a drainage facility.
- DP 5 As described, the temporary haul routes will not require ongoing maintenance.



SOURCE: Impact Sciences, Inc. - February 2007

FIGURE 16
Temporary Haul Routes

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- DP 6 Maintenance practices are not applicable to temporary haul routes.
- DP 7 Temporary haul routes are not recreational facilities.
- DP 8 Upon completion of use, temporary haul routes will be removed and the areas revegetated to preserve and/or replace biological resources to maintain or increase biological functions and services on site.

Subnotifications for temporary haul routes shall provide descriptions of construction-related impacts as well as post-construction conditions (e.g., revegetation, indirect effects). Mitigation measures have been developed to ensure that native habitats and riverbed are restored. In addition, upon completion of activities, the historical agricultural crossing will be removed from operation and converted to riverbed, providing opportunities for habitat creation, restoration, and preservation.

RMDP GOs are achieved in the design of temporary haul routes because of their minimized size and number of locations, which allow for minimization of direct and indirect impacts to biological and water quality resources (GO 3), and through the replacement of resources (GO 4) following use of the haul routes, which maintains or increases riparian functions and services (GO 5). The Subnotification process will provide necessary documentation to the resource agencies and the County of Los Angeles (GO 8).

6.1.4 Viewing Platforms—Santa Clara River

The RMDP proposes to construct five nature viewing platforms that would be located in or adjacent to jurisdictional areas along the Santa Clara River corridor. The proposed viewing platform locations are depicted on *Figure 17*.

Maintenance

General maintenance of viewing platforms would include repair, painting, or coating of structures or trimming of native growth encroaching on the pathways. See *Appendix A* for additional details on maintenance.

RMDP Compliance

Viewing platforms meet the DPs as follows:

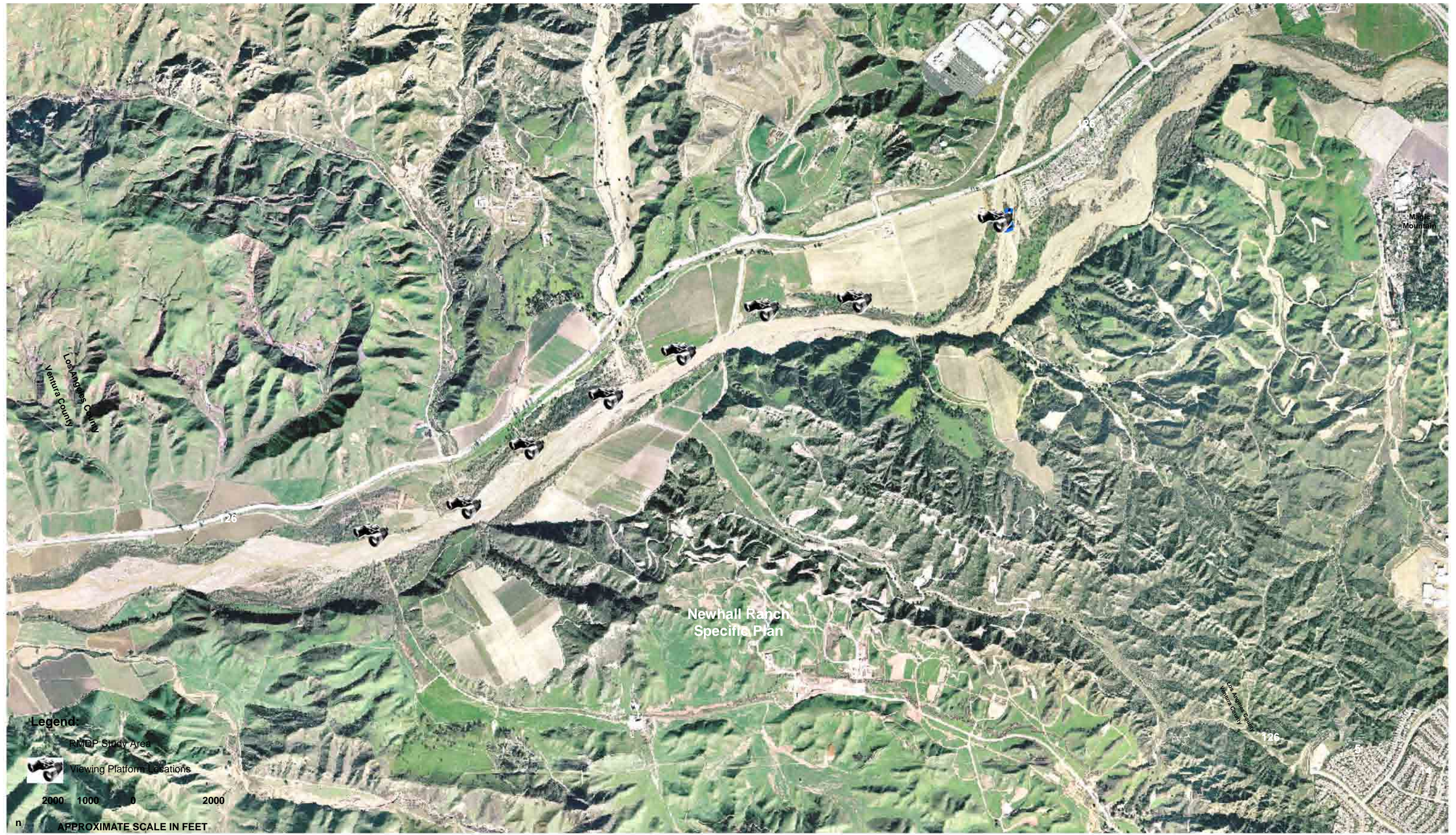
- DP 1 The location of viewing platforms will be determined through the LEDPA process to ensure that the final locations and design are the least environmentally damaging.

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- DP 2 Viewing platforms are located where they do not alter hydrologic and water quality conditions.
- DP 3 Viewing platforms are sited where they avoid existing regional habitat linkages and allow continued habitat connectivity on site.
- DP 4 Drainage facility design is not applicable to viewing platforms.
- DP 5 Because of their proximity to native vegetation, minor trimming of vegetation encroaching on the pathways will be necessary at times. Pathways are to be made of treated lumber or other non-rotting materials, minimizing the need for replacement and repair. Maintenance restrictions specified in *Appendix A* will be implemented to protect adjacent resources.
- DP 6 Maintenance would primarily be performed from the platform, avoiding or minimizing potential adverse effects on the natural vegetation communities.
- DP 7 The viewing platforms are a component of the recreational facilities DP (DP 7). The platforms offer public engagement with natural resources in a controlled setting in locations where impacts to species are avoided.
- DP 8 The viewing platforms, where sited within jurisdictional areas, would include mitigation to replace impacted resources to maintain or increase biological functions and services on site.

Subnotifications for viewing platforms shall provide descriptions of construction-related impacts (i.e., temporary and permanent impacts) as well as post-construction conditions (i.e., maintenance and indirect effects). Mitigation measures are proposed in *Section 7.0* for unavoidable significant impacts that occur from construction, maintenance, and use of the viewing platforms. In particular, platforms shall be located in areas that do not currently support least Bell's vireo breeding territories and shall be constructed to discourage white-tailed kite roosting opportunities (due to the potential for over-foraging by white-tailed kites within the River corridor). Platforms will include barriers to prevent public access into resource areas.

The limited number and access-restricted design of the viewing platforms, along with mitigation for unavoidable impacts, demonstrates compliance with RMDP GOs, which require minimization of edge effects (GO 2), replacement of impacted resources (GO 4), and maintenance or increases in riparian function and services (GO 5). The Subnotification process will provide necessary documentation to the resource agencies and the County of Los Angeles (GO 8).



SOURCE: Impact Sciences, Inc. - February 2007

FIGURE 17
Viewing Platform Locations

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6.1.5 WRP Outfall—Santa Clara River

An effluent outfall pipeline, approximately 30 inches in diameter, would be constructed from the Newhall Ranch WRP through the bank stabilization to an energy dissipater and pilot channel out to the bed of the Santa Clara River. *Figure 18* depicts the WRP outfall location. The approved Newhall Ranch WRP is to be located on the south side of SR-126, adjacent to the Santa Clara River and near the Los Angeles County/Ventura County jurisdiction line. It would be constructed on agricultural and other previously disturbed land.

The outfall pipe would terminate on the side of the bank stabilization, similar to a typical storm drain outfall where an energy dissipater would be located. A pilot channel and adjacent walkway would be constructed and maintained to reach the actual flow path of the River. The walkway would be used to obtain water samples, which would be required under the NPDES permit for the Newhall Ranch WRP. The channel would be excavated with equipment and lined with either concrete, gunite, TRM, rock, or if velocities are low enough, simply compacted soil. Additional information regarding the specifications of the WRP can be found in *Appendix A*.

Maintenance

The channel and walkway would be maintained periodically to restore functions lost due to storm damage, vegetative growth, or soil erosion from plant discharge. Maintenance would be limited to hand cutting vegetation along the path, maintaining the outlet and energy dissipater and restoration of the functions of the pilot channel. See *Appendix A* for additional details on maintenance.

RMDP Compliance

Establishment of the WRP outfall satisfies the DPs as follows:

- DP 1 The location of the outfall was selected using the LEDPA process.
- DP 2 The channel and walkway are sited above the flowing channel and do not alter existing hydrologic and water quality conditions.
- DP 3 The outfall channel and walkway do not affect regional habitat linkages and allow continued habitat connectivity on site.
- DP 4 The outfall channel is intended to carry seasonal WRP outflows and is not designed as a stormwater drainage facility.
- DP 5 The requirements for maintaining a functioning channel (i.e., soft bottom with vegetative growth that may require periodic cutting versus a gunite-lined open channel) will be

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considered when determining the final construction method, with the intent to minimize the need for ongoing maintenance while preserving natural habitats.

DP 6 Maintenance would be restricted to hand cutting of vegetation, and heavy equipment would be used only when necessary to restore flow carrying capacity or to restore channel function after a high-flow event.

DP 7 The WRP outfall is not a recreational facility.

DP 8 Permanent impacts from establishing the WRP outfall channel and walkway would be mitigated (see *Section 7.0*) by replacing biological resources to maintain or increase biological functions and services on site.

Subnotification for the WRP outfall shall provide descriptions of construction-related impacts (i.e., temporary and permanent impacts) as well as post-construction conditions (e.g., periodic access, maintenance, revegetation, indirect effects). Mitigation measures have been specified to minimize the effects of impacts to native habitats and to ensure human presence is minimized within resource areas.

Compliance with RMDP GOs is demonstrated for the WRP outfall based on its single location and minimized size, which minimizes direct and indirect impacts to biological and water quality resources (GO 3), and through the implementation of mitigation measures that require replacement of impacted resources (GO 4) and maintenance or increases in riparian functions and services (GO 5). The Subnotification process will provide necessary documentation to the resource agencies and to the County of Los Angeles (GO 8).



SOURCE: PACE - December 2007

FIGURE 18
WRP Outfall Locations

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6.1.6 Storm Drain Outlets—Santa Clara River

The RMDP proposes installation of 25 storm drain outlets along the Santa Clara River. *Figure 19* depicts the approximate locations of the outlets. Installation of storm drain outlets generally requires a 20-foot-wide excavation/construction zone. All of the storm drain outlets would eventually drain to jurisdictional areas of the Corps and CDFG, although most are constructed outside of jurisdictional areas.

Maintenance

Maintenance of storm drain outlets shall include clearing vegetation and removal of accumulated sediment. In situations where drain outlets are not draining sufficiently, pilot channels up to 75 feet long by 10 feet wide may be created to facilitate the conveyance of storm flows. See *Appendix A* for additional details on maintenance.

RMDP Compliance

Storm drain outlets satisfy the DPs as follows:

- DP 1 The outfall locations are primarily dictated by bank protection locations determined in the LEDPA process, with the actual outfall collocated with bank protection.
- DP 2 The project has been designed to minimize alteration of existing hydrologic and water quality conditions, with the storm drain outlets being the final point of release of treated stormwater from the development areas. Outfall locations have been selected, to the extent feasible, in locations where attenuation and diffusion of low flows will occur prior to discharge to the River.
- DP 3 Storm drain outlets avoid existing regional habitat linkages and allow continued habitat connectivity on site.
- DP 4 Storm drain outlets will include, when necessary, pilot channels to carry discharge to the primary flow path of the River. The pilot channels are soft bottom open channel.
- DP 5 Outlets and pilot channels are the most maintenance-intensive activities to be constructed in the RMDP due to the hazards and public safety issues associated with flood control, vector, and nuisance control that arise absent maintenance. Outfalls are designed to minimize the need for ongoing maintenance through established inspection access points, stabilized outlets, and creation of pilot channels to promote positive drainage from the outlets.

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- DP 6 Maintenance methods and associated mitigation measures (see *Section 7.0* and *Appendix A*) have been developed to avoid or minimize potential adverse effects due to the operation and maintenance of the storm drain outlets.
- DP 7 Storm drain outlets are not recreational facilities.
- DP 8 Impacts from storm drain outlets are primarily associated with the buried soil cement, although the establishment of pilot channels may create additional impacts requiring replacement of biological resources to maintain or increase biological functions and services (see *Section 7.0*).

Subnotifications for storm drain outlets on the Santa Clara River will likely be a component of buried soil cement development, which will provide a description of construction-related impacts (i.e., permanent and temporary impacts) as well as post-construction conditions (e.g., revegetation, indirect effects). Mitigation measures will be incorporated to address impacts from storm drain outlet construction and maintenance as applicable (see *Section 7.0* and *Appendix A*)

Compliance with RMDP GOs is demonstrated for storm drain outlets on the Santa Clara River because of their minimized size and number of locations, which allow for minimization of direct and indirect impacts to biological and water quality resources (GO 3), through the implementation of mitigation measures that require replacement of impacted resources (GO 4), and maintenance or increases in riparian functions and services (GO 5). The Subnotification process will provide necessary documentation to the resource agencies and to the County of Los Angeles (GO 8).



SOURCE: PACE December 2007

FIGURE 19
Storm Drain Outlets - Santa Clara River

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6.2 Tributary Drainages

Within the tributary drainages in the RMDP study area, certain drainages would not be graded and would remain undisturbed, while other drainage areas would be graded, reconstructed to a soft-bottom drainage channel with buried bank stabilization along each side of the drainage, or converted to buried storm drain. Reconstructed drainage areas would integrate flood control and grade stabilizing measures (i.e., a combination of drop structures/grade stabilizers and bank stabilization) to maintain sediment equilibrium and protect the channel bed and banks from hydromodification impacts. This design methodology is intended to create stable drainage channels that would support in-channel native habitats following Project implementation. The approach focuses on developing channel width, depth, slope, and other parameters based on the future flow and sediment regime of each drainage, using an integrated approach that predicts stable characteristics, and that uses structures and other measures only in those drainage locations where erosional forces would exceed the natural stability of the drainage channel. All such structures (bank and channel bed stabilization) are designed to mimic natural features and use a combination of structural and vegetative methods to provide drainage channels that are stable, visually aesthetic, and provide for the desired habitat (i.e., riparian, wetland, and upland) with minimal maintenance required after Project implementation. Road-crossing culverts and bridges would cross various drainages, but only where necessary to accommodate the approved Specific Plan circulation system. *Figure 20* depicts the tributary drainages within the RMDP study area and distinguishes which will be preserved (i.e., unmodified by the RMDP, shown in blue), which will be converted to buried storm drain (shown in pink), and which will be modified by the RMDP (shown in white). Modified drainage/jurisdiction includes stabilized and engineered tributary drainages that are revegetated and where new drainage/jurisdiction is being created.

Table 6 summarizes the various proposed drainage treatments required to support build-out of the Specific Plan.

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**Table 6
Alternative 2 Tributary Drainage RMDP Infrastructure**

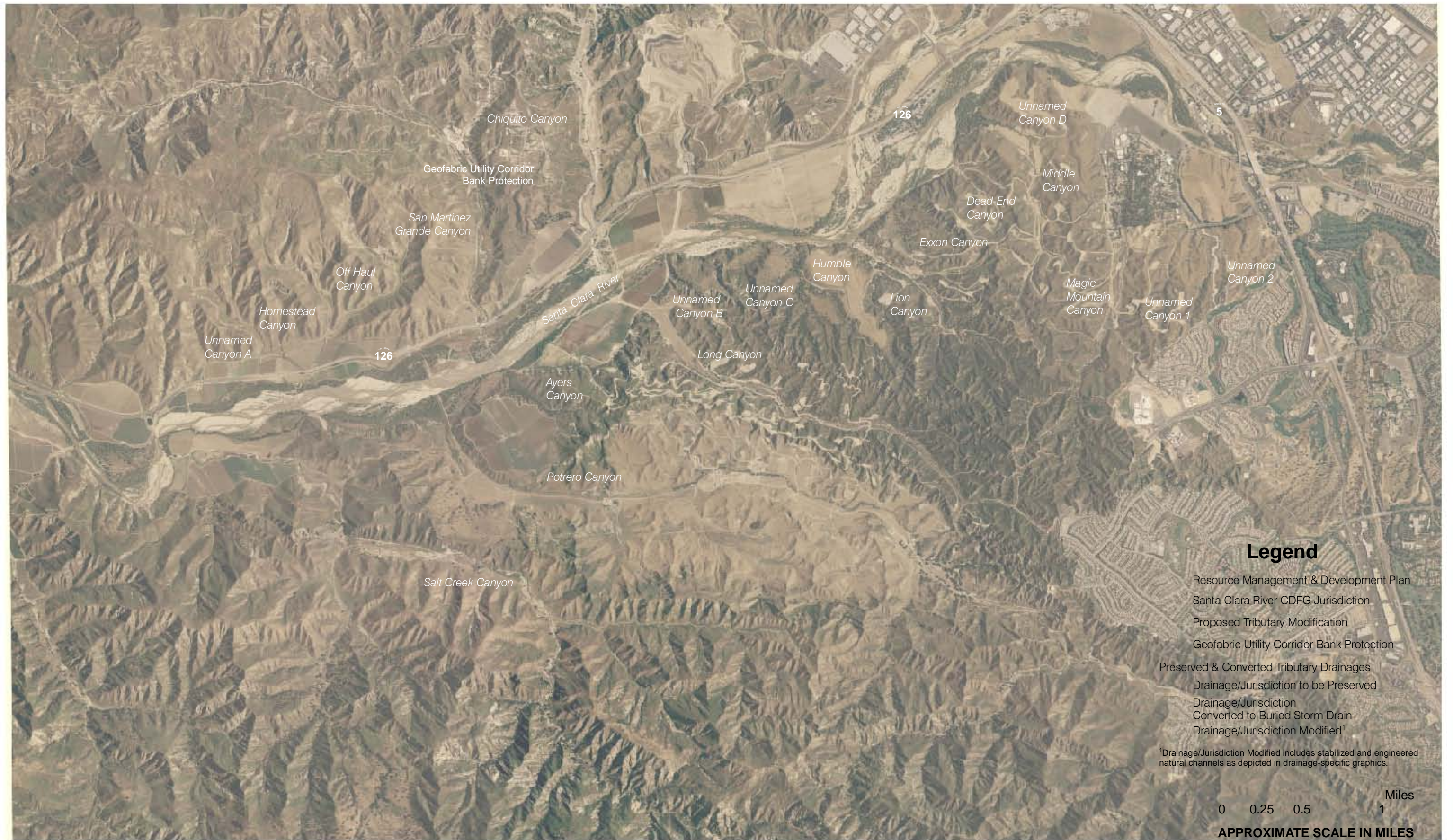
Drainage Location	Drainage Modified (lf)	Drainage Converted to Buried Storm Drain (lf)	Bank Stabilization ¹ (lf)		Preserved Drainage (lf)	Road Crossings	
			West Bank	East Bank		Bridges	Culverts
Santa Clara River/ Castaic Creek	—	—	20,016	9,763	—	3	—
Modified Drainages							
Chiquito Canyon	8,612	2,549	7,411	7,280	898	—	3
Lion Canyon	5,614	6,316	—	—	—	—	1
Long Canyon	9,618	961	8,833	8,815	—	—	3
Potrero Canyon	19,095	10,918	16,354	16,176	9,679	—	5
San Martinez Grande Canyon	5,048	—	4,279	4,287	122	—	2
Unmodified/Converted Drainages							
Agricultural Ditch	317	1,479	—	—	0	—	—
Ayers Canyon ²	154	—	—	—	2,311	—	1
Dead-End Canyon	—	1,931	—	—	—	—	—
Exxon Canyon	—	1,276	—	—	2,265	—	—
Homestead Canyon	—	609	—	—	—	—	—
Humble Canyon	—	421	—	—	5,116	—	—
Middle Canyon	—	7,439	—	—	148	—	—
Mid-Martinez Canyon	22	4,541	—	—	250	—	—
Off-Haul Canyon	—	7,593	—	—	1,185	—	—
Salt Canyon	7,290	—	—	1,992	101,470	—	—
Magic Mountain Canyon	—	6,111	—	—	—	—	—
Unnamed Canyon 1 ³	—	4,647	—	—	—	—	—
Unnamed Canyon 2	—	416	—	—	—	—	—
Unnamed Canyon A	—	—	—	—	1,293	—	—
Unnamed Canyon B	—	1,004	—	—	568	—	—
Unnamed Canyon C	—	402	—	—	869	—	—
Unnamed Canyon D	—	1,232	—	—	260	—	—
Totals	55,770	59,845	36,877	38,551	126,434	—	15

Notes:

¹ The lf of bank stabilization does not necessarily reflect impacts to jurisdictional areas; it only provides the linear feet of bank protection to be installed along various tributary drainages. For the Santa Clara River, the column labeled "West Bank" represents the north River bank, while the column labeled "East Bank" represents the south River bank.

² The 154 lf of Drainage Modified is road crossing bridge/culvert-related.

³ Unnamed Canyons 1 and 2 are located within the Entrada planning area and are given a numerical designation to distinguish them from the four other unnamed canyons located within the Specific Plan area (i.e., Unnamed Canyons A through D).



SOURCE: PACE - September 2007

FIGURE 20
 Modified, Converted, and Preserved Tributary Drainages

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Grade Stabilizing Design Measures and Bank Stabilization

The five modified drainages (Chiquito, Lion, Long, Potrero, and San Martinez Grande) would contain structures (bank and channel-bed stabilization) designed to mimic natural features, and use a combination of structural and vegetative methods to provide drainages that are stable, visually aesthetic, and support the desired habitat following Project implementation. Described below are drop structures/grade stabilizers and bank stabilization that would be used in the design of the improved drainages within the RMDP boundary. Maintenance of these various features is discussed in *Appendix A*.

Grade Stabilization Structures. On-site soils would be combined with cement and water to form a higher strength soil-cement mixture that would mimic the appearance of soils in the drainage area. Riprap would be placed in and along the structure and downstream, and would be planted with native vegetation. Soil cement would be mixed on site, placed, compacted, finished, and cured, resulting in a durable and erosion-resistant material.

Grouted Sloping Boulder Drops. Boulders, typically with a 24-inch minimum diameter, would be placed in a step-like fashion, creating a condition similar to that in a natural riffle or small cascade. Boulders would be placed to prevent downcutting at the downstream end of the boulder drop. Grout would be placed at the bottom one-third to one-half of the depth of the boulders to lock them together. In some cases, where the stream discharge and gradient are not excessive, grouting of the boulders would not be necessary, and non-grouted, placed boulders could be installed. Riprap would be placed along the approach, in the upper voids of the boulders, along the upper banks, and downstream of the stilling basin, and would be planted with native vegetation.

Non-Grouted Boulders and Step-Pools. Boulders, composed of various sizes between 24-inch and 36-inch minimum diameter, would be placed to form a step-pool complex, which would prevent excessive scour, while maintaining a functional drainage system. Boulders would be placed on the face of the step-pool structure, the crest, the lower part of the side slopes, and pool. The sub-base of the structure would be adequately designed using a mixture of compacted soil and riprap. The boulders would be individually placed and chinked to lock them together. Native plants would be established to help prevent boulders from dislodging. The non-grouted boulder step-pool would be designed for less than Q_{cap} and have typical dimensions of roughly 50 feet by 50 feet. Riprap would be placed along the approach, in the upper voids of the boulders, along the upper banks, and downstream of the pool, and would also be planted with native vegetation.

Sculpted Concrete Drop Structures. Poured and shaped concrete would be molded to form an aesthetic modification to the grouted sloping boulder style drop structure. Design of these drop structures would be conducted individually but similarly to the grouted sloping boulder drop

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design. The finished product would be analogous to a natural streambed in a bedrock-dominated system, with alternating fast, narrow segments and broader, deeper pools. Construction typically would be conducted with a single monolithic full-depth pour or using a two-pour system over steel reinforcement, then contoured and textured to finish. Planting wells would be considered to help revegetate and conceal the structure.

Summary Description of Location and Design of Tributary Drainage Improvements, Bridges and Road-Crossing Culverts

As previously stated, the RMDP proposes to cross six different tributary drainages within the RMDP study area. Under the RMDP, there would be five culvert road crossings in Potrero Canyon, three in Long Canyon, three in Chiquito Canyon, two in San Martinez Grande Canyon, two in Lion Canyon, and one in Ayers Canyon.

Construction of this type of road crossing typically results in a temporary disturbance of a 60-foot-wide corridor on each side of the crossing with permanent impacts to the entire width of the crossing. Following completion of this construction activity, the temporary impact zone would be restored to channel grade and revegetated with native riparian and upland species as appropriate. Maintenance of bridges and road-crossing culverts is discussed in *Appendix A*.

Maintenance

Grade control and drop-pool structures are designed to be primarily self-cleaning with limited need for sediment removal or vegetation control. In the event vegetative growth threatens the integrity of the crest, chute, or splash pool, such vegetation may be hand-cut and removed. Sediment is to be removed when sedimentation occurs to the point that the structure does not function or causes nuisance conditions. These features will likely be within reasonable distance of a service road, therefore, access will be limited to short-distance travel over open scrub habitat.

General vegetation clearing will not be required within the banks of the tributaries. Invasive species may require control and methods described in *Section 7.7.5* would apply. Clearing of excess sedimentation to enable proper flow characteristics, or to abate nuisance ponding conditions, may be required.

RMDP Compliance

Selection of the various drainage treatments for the minor and major tributaries within the RMDP site meet the DPs as follows:

DP 1 Impacts and modifications to each tributary have been evaluated using the LEDPA process. The selection of drainage design treatment takes into account the overall

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function of the drainage within the watershed and allows for preservation of those drainages that provide the greatest functions and services, and minimizes impacts to other drainages in accordance with the existing level of functions and services.

- DP 2 Proposed design features for the various tributaries are focused on minimizing the alteration of existing hydrologic and water quality conditions, with channel design focused on prevention of hydromodification throughout the development to satisfy development area runoff water quality requirements.
- DP 3 Tributaries providing important regional habitat linkages have been avoided, or, where open channel reconstruction is necessary to meet flood control requirements, the corridor would be revegetated and enhanced to allow continued habitat connectivity on site.
- DP 4 All of the drainage facilities with 100-year storm flows greater than 2,000 cubic feet per second (cfs) have been designed to have open channels, having buried or vegetated bank stabilization, except as noted for drop structures and/or road crossings.
- DP 5 The proposed channel modifications include buried bank stabilization and grade stabilization methods that allow for revegetation and establishment of natural vegetative communities, thereby minimizing the need for ongoing maintenance. Some portions of the drainage systems will still require maintenance and mitigation measures have been established for such activities (see *Appendix A*)
- DP 6 The Maintenance Manual (see *Appendix B*) has been developed to include maintenance practices that avoid or minimize potential adverse effects by limiting the extent of maintenance to only what is necessary for public safety or protection of property. Mitigation measures are also included to avoid and minimize impacts to species and habitats where maintenance may occur.
- DP 7 The larger tributary drainage modifications include bank stabilization that provides the infrastructure to implement a major trail system that is integral to the overall recreational system within the project site. The local trail system provides for safe and access-restricted exposure to the drainage corridors, where barrier fencing provides for protection of the resources while allowing trail users the opportunity to experience resources throughout the year.
- DP 8 Drainage modifications and conversion of minor tributaries to buried storm drains will require mitigation to replace biological resources that are affected. Mitigation measures (see *Section 7.0*) will be implemented to maintain or increase biological functions and services through restoration and enhancement activities. Preservation of the remaining

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drainages in an extensive open space system that provides local and regional wildlife connectivity is also incorporated into the mitigation approaches.

Subnotifications for modified, unimproved, and/or converted tributary drainages shall provide descriptions of construction-related impacts (i.e., temporary and permanent impacts) as well as post-construction conditions (e.g., revegetation, indirect effects, and maintenance). The limits and extent of impacts for each project will be evaluated for conformance to the LEDPA-defined project limits.

Compliance with RMDP GOs is demonstrated for modified, unimproved, and/or converted tributary drainages because they are designed to minimize edge effects by providing a transition area between development and large preserve areas (e.g., River Corridor and High Country SMAs) (GO 2); to minimize direct and indirect impacts to biological and water quality resources (GO 3); following restoration, they will replace impacted resources and maintain or increase functions and values (GOs 4 and 5); and important wildlife corridors and habitat corridors will be maintained or enhanced (GO 6). Unimproved drainages additionally provide for assemblage of a permanent preserve that functions within an existing regional preserve system and allows for the long-term preservation of sensitive biological, scenic, and other natural resources (GO 1). The Subnotification process will provide necessary documentation to the resource agencies and to the County of Los Angeles (GO 8).

6.3 Bridges/Culvert Road Crossings—Tributaries/SR-126

In addition to the proposed and previously approved bridges over the Santa Clara River, the RMDP addresses three proposed widened bridges/culvert road crossings at SR-126. There are two proposed widened bridges at SR-126, the first is at Castaic Creek (six lanes expanded to eight) and the second is at San Martinez Grande Canyon (four lanes expanded to six). There is also one proposed culvert extension at SR-126 and Chiquito Canyon (four lanes expanded to six) (depending on Caltrans final design decision on the SR-126/Chiquito Canyon interchange, the culvert depicted may in actuality include three independent bridge decks and a separate trail bridge). The proposed widened bridges/culvert road crossings are part of the Caltrans widening project for SR-126, and they are proposed by Caltrans to accommodate increased traffic flow along SR-126. *Table 7* provides the characteristics for the proposed widened bridges/culvert road crossings at SR-126. *Figure 21* shows the location of Caltrans' SR-126 road widening project in relation to the proposed Project area.

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**Table 7
Proposed Widened Bridges/Culvert Road Crossings at SR-126**

Location	Existing Length (Feet)	Existing Width (Feet)	Proposed Length (Feet)	Proposed Width (Feet)
Castaic Creek (bridge)	468	80	533	156
Chiquito Canyon (culvert)	175	43	229	43
San Martinez Grande Canyon (bridge)	81	87	99	107

A previously approved project processed by the applicant allowed for expansion of the SR-126/Castaic Creek bridge from four to six lanes, which widened the bridge by an additional 50 feet. The proposed RMDP would widen this previously approved bridge from six to eight lanes. An additional 50 feet of width, plus a separate 10-foot-wide pedestrian/bike lane, would be located on the south side of the bridge, with utility crossings located on both the north and south sides of the bridge in a 100-foot-wide disturbance zone.

RMDP Compliance

The infrastructure roadway improvements along SR-126 will be determined primarily by Caltrans, although DPs of the RMDP are being incorporated as follows:

- DP 1 Caltrans widening of SR-126 to accommodate increased traffic is not a component of the LEDPA process, although likely impacts to resources have been discussed and described in the LEDPA analysis.
- DP 2 Drainage culvert extensions, additional bridge deck, piers, and channel scour protection required for the improvements incorporate design guidelines to minimize alteration of existing hydrologic conditions. Water quality control of roadway runoff will meet Caltrans requirements.
- DP 3 Improvements to SR-126 culverts and bridges within the RMDP site have been evaluated and sited to avoid existing regional habitat linkages and allow continued habitat connectivity on site.
- DP 4 The SR-126 culverts and bridges are existing facilities with limited ability to change culverts to open channels wherever 100-year storm flows are more than 2,000 cfs. Drainage channels upstream and downstream of the drainage crossings are being considered for open channel improvements.
- DP 5 Due to the public safety and protection of property issues that could occur should a culvert or bridge become obstructed during high-flow events, extensive maintenance may

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be required at these infrastructure facilities. Mitigation measures are proposed in the Maintenance Manual (see *Appendix A*) to minimize impacts from ongoing maintenance.

- DP 6 The Maintenance Manual (see *Appendix A*) includes specific maintenance practices for bridges and culverts that avoid or minimize potential adverse effects.
- DP 7 The SR-126 widening implements an important component of the regional recreational facilities, and, with the proximity to the Santa Clara River and natural channels, offer public engagement with natural resources. The trails and bridges shall be equipped with barriers to prevent entry into resource areas to minimize potential adverse effects.
- DP 8 Bridge deck, piers, and scour protection components and culvert extensions will impact resources. Mitigation measures (see *Section 7.0*) have been developed to replace biological resources that are impacted to maintain or increase biological functions and services on site.

Subnotifications for widened bridges/culvert road crossings at SR-126 shall provide descriptions of construction-related impacts (i.e., temporary and permanent impacts) as well as post-construction conditions (e.g., revegetation, indirect effects, and maintenance). Detailed plans shall be consistent with the DPs to the extent discussed above.

Compliance with RMDP GOs is demonstrated for widened bridges/culvert road crossings at SR-126 because they are each designed to minimize direct and indirect impacts to biological and water quality resources (GO 3) and maintain or enhance important wildlife corridors and habitat corridors (GO 6). Mitigation for unavoidable impacts will result in restoration of temporarily impacted areas and maintenance or increases in riparian functions and services (GOs 4 and 5). The Subnotification process will provide necessary documentation to the resource agencies and to the County of Los Angeles (GO 8).



SOURCE: URS October 2007

FIGURE 21
SR-126 Road Widening

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6.4 Magic Mountain Parkway Extension

The approved Specific Plan includes an extension of Magic Mountain Parkway to the west into the RMDP study area. The purpose of this roadway extension is to accommodate future traffic associated with the continued development of the approved Specific Plan and surrounding region. The general alignment of the proposed Magic Mountain Parkway extension is depicted on *Figure 22*, and typical cross sections of the road design are provided on Specific Plan Exhibit 2.4-4 (Roadway Sections B and C).

This roadway extension would extend existing culvert road crossings at Unnamed Canyon 1 and Unnamed Canyon 2 over drainages, both tributaries of the Santa Clara River. Construction of this road results in a permanent impact to the drainages for extending existing culverts and construction of Debris Retaining Inlets.

Temporary impacts would include areas necessary for construction of the DRIs. Following completion of construction activities, the temporary impact zone would be restored to channel grade and revegetated with native riparian and upland species as appropriate.

RMDP Compliance

The Magic Mountain Parkway Extension satisfies the RMDP DPs as follows:

- DP 1 The location and extent of impacts to the drainages to construct the Magic Mountain Parkway Extension use the least damaging practicable alternative for satisfying this critical traffic circulation element.
- DP 2 Culverts, bridges, and other road crossing components are proposed that minimize alteration of existing hydrologic and water quality conditions. Roadway runoff is conveyed and processed to meet discharge requirements of the subregional stormwater management plan.
- DP 3 The drainages impacted by the roadway extension are not existing regional habitat linkages, and improvements allow for continued habitat connectivity on site.
- DP 4 The drainages have 100-year storm flows less than 2,000 cfs; therefore, they have not been considered for open channel design.
- DP 5 Due to the public safety and protection of property issues that could occur should a culvert or bridge become obstructed during high-flow events, extensive maintenance may be required at this facility. Mitigation measures are proposed in the Maintenance Manual (see *Appendix A*) to minimize impacts from ongoing maintenance.

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- DP 6 The Maintenance Manual (see *Appendix A*) includes specific maintenance practices for bridges and culverts that avoid or minimize potential adverse effects.
- DP 7 The Magic Mountain Parkway Extension project does not implement any recreational facilities.
- DP 8 Bridge deck shading and culvert backfill will impact resources. Mitigation measures (see *Section 7.0*) have been developed to replace biological resources that are impacted to maintain or increase biological functions and services on site.

Subnotification(s) for the Magic Mountain Parkway Extension shall provide descriptions of construction-related impacts (i.e., temporary and permanent impacts) as well as post-construction conditions (e.g., revegetation, indirect effects, and maintenance). Roadway improvement plans shall be submitted to demonstrate conformance with LEDPA.

The Magic Mountain Parkway Extension component of the RMDP is consistent with RMDP GOs because the road width and culverts are designed to minimize direct and indirect impacts to biological and water quality resources (GO 3). Mitigation for unavoidable impacts will result in restoration of temporarily impacted areas and maintenance or increases in riparian functions and services (GOs 4 and 5). The Subnotification process will provide necessary documentation to the resource agencies and to the County of Los Angeles (GO 8).



SOURCE: PACE October 2007

FIGURE 22

Magic Mountain Parkway Extention

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6.5 Utility Crossings

Primary electrical, sewer, water, gas, and communications lines would be installed across the Santa Clara River (two locations), Chiquito Canyon, and San Martinez Canyon to serve the approved Specific Plan (County of Los Angeles 2003a). Other locally serving utilities would be installed across other tributaries and drainages described in the RMDP.

On the River, utility lines would be installed in rights-of-way adjacent to, within, or hanging from, bridges where access for installation and repair could be readily accommodated. To the extent feasible, utility lines will be located within the elevated bridge deck. Depending on the timing of bridge construction and subsequent installation of utilities, access to the riverbed and/or creekbed may be necessary to facilitate placement or hanging of pipes and conduits. Access activities would result in temporary impacts to riverbed vegetation. For installation of buried utilities, directional drilling techniques would be used, where feasible, to avoid the environmental impacts associated with trenching across the Santa Clara River. In the Chiquito Canyon and San Martinez Grande Canyon tributaries, where trenching is likely to be used, installation of buried lines would require a 30- to 50-foot-wide construction zone. In other tributaries and drainages, trenching is also likely to be used with similar construction zones. Buried lines across watercourses would be buried below scour depth and weighted or cemented in place, where appropriate, or collocated with bed stabilization features that provide scour protection. Following completion of construction activities, the temporary impact zone would be restored to channel grade and revegetated with native riparian and upland species, as appropriate.

Permanent access for maintenance of utilities would be located outside the jurisdictional limits of the streambed and associated wetlands. Maintenance of utility crossings is discussed in *Appendix A*.

RMDP Compliance

Utility crossings have been designed according to the RMDP DPs as follows:

- DP 1 Utility crossings are typically collocated with other RMDP facilities and, therefore, have been evaluated to the extent that those other facilities are evaluated under LEDPA.
- DP 2 Utilities are installed outside of the limits of fluvial processes in the riverbed and creeks; therefore, they avoid alteration of existing hydrologic and water quality conditions.
- DP 3 Utilities avoid existing regional habitat linkages and allow continued habitat connectivity on site, as they are either buried deep beneath the riverbed or creek, or are located within or near other RMDP facilities.

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- DP 4 Utilities are not drainage facilities; therefore, they are not designed as open channels.
- DP 5 The location of utilities is selected to maximize the life of the facility while also minimizing the need for ongoing maintenance.
- DP 6 Maintenance practices, as included in *Appendix A*, avoid or minimize potential adverse effects for each type of maintenance that may be required. Facilities within a bridge deck would likely be maintained from the roadway surface, avoiding any entry in jurisdictional areas. Facilities hung from the outside of a bridge deck may require ongoing maintenance as they are exposed to weather and potential damage from roadway use or debris impact during high-flow events. Maintenance for these events would require access to the riverbed or creek. Facilities buried beneath the riverbed or creek would only require maintenance in the event of an indicated operational problem (e.g., a plugged line or leak). Such a maintenance event may involve deep excavations in the jurisdictional area. Mitigation measures are incorporated into *Appendix A* to minimize adverse effects of these maintenance activities.
- DP 7 Utility crossings do not provide recreational facilities.
- DP 8 Utility crossings may impact resources if not installed at the same time as the associated bridge or culvert crossing and during some maintenance activities. Mitigation measures (see *Section 7.0*) have been developed to replace biological resources that are impacted to maintain or increase biological functions and services on site.

Subnotifications for utility crossings shall provide descriptions of construction-related impacts (i.e., temporary and permanent impacts) as well as post-construction conditions (e.g., revegetation, indirect effects, and maintenance).

Compliance with RMDP GOs is demonstrated for utility crossings because they are each designed to minimize direct and indirect impacts to biological and water quality resources (GO 3) and maintain or enhance important wildlife corridors and habitat corridors (GO 6). Mitigation for unavoidable impacts will result in restoration of temporarily impacted areas and maintenance or increases in riparian functions and services (GOs 4 and 5). The Subnotification process will provide necessary documentation to the resource agencies and to the County of Los Angeles (GO 8).

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6.6 Water Quality Treatment Basins and Debris Basins

The RMDP proposes to implement a sub-regional stormwater mitigation plan to address the Specific Plan's construction, municipal, and industrial stormwater discharges under the NPDES program. This program requires that all flood control facilities be in compliance with the General Permit for Los Angeles County or conditions placed upon individual NPDES permits.

As build-out of the Specific Plan occurs, individual tract maps would comply with those NPDES requirements in effect at the time the proposed water quality features are designed. The drainage concept for the Specific Plan was developed to respond to the NPDES program. Project-specific drainage concept reports are to be prepared with each tract map. The drainage plans would include implementation of BMPs to document compliance with the Los Angeles County Standard Urban Stormwater Mitigation Plan (SUSMP) requirements.

Each of these water quality control facilities requires maintenance, and may or may not be located within jurisdictional areas. Because of their function as water conveyance from development areas, unwanted vegetative communities may develop, reducing the effectiveness of certain features. The Newhall Ranch RMDP Maintenance Manual in *Appendix A* (Dudek 2008b) specifies the anticipated maintenance practices and restrictions for each facility type and includes general restrictions for all maintenance. In general, each facility type requires periodic removal of vegetation, sediment, and debris; although some facility types require planting and maintenance of specific plant species to maintain function. Access ramps to the facilities shall be maintained clear to allow access. Respecting the fact that natural habitats may form in these man-made features, the maintenance practices and mitigation measures are to be implemented in these types of facilities regardless of jurisdictional location to avoid and/or minimize effects on species.

Water Quality Treatment/Detention Basins

The RMDP proposes NPDES water quality treatment/detention basins throughout the RMDP study area. *Figure 23* depicts the general locations of the water quality treatment basins within the RMDP study area.

Water quality treatment/detention basins are typically sized to capture the predicted runoff (first flush) volume and retain the design volume for a period typically between 24 and 48 hours. Detention basins can be designed with multiple stages to provide both flood control and water quality benefits. The upper stage is designed to store a large volume of runoff to reduce flood peaks. The lower, smaller volume stage provides slower drainage times (longer detention) to promote water quality by settling of particulates and removal of nutrients, heavy metals, and other pollutants potentially present in the sediment.

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Catch basin inserts are screens or filters that are installed in existing or new storm drains to capture pollutants in the stormwater runoff. Catch basin inserts are proposed for use at various locations throughout the planned storm drain system to treat lower flow stormwater prior to reaching downstream BMPs. During storm events, catch basin insert filters would treat stormwater runoff up to a maximum flow capacity. Any flows greater than this maximum value would bypass the filter and flow directly into the downstream storm system. Final locations and exact number would be determined during final tract map design.

Vegetated swales are linear bioretention features often located adjacent to roads, next to the frontage or in the medians, as well as in parking lots. They are engineered grass-lined channels that provide water quality benefits in addition to conveying stormwater runoff. Low channel gradient, wide channel bottoms, shallow side slopes and vegetation reduce the velocity of stormwater flow, aiding in sediment removal and increased absorption and filtration. Final locations and exact number of vegetated swales would be determined during final tract map design.

Separators are in-line structures that reduce or manipulate runoff velocities such that particulate matter falls out of suspension and settles in a collection chamber. Typically, separators have an outlet designed to discharge from below the water surface, which allows floatable trash, oils, and grease to be collected in the structure as well.

Debris Basins

Throughout the RMDP study area, as previously described, there will be various open channel, buried storm drain, and natural drainage areas fed by the overall watershed. These systems eventually drain into the Santa Clara River. To ensure the proper function of the engineered portions of the storm drainage system, in certain areas Debris Retaining Inlets (DRIs) are proposed at the interface between development and undeveloped areas upstream. Their primary function is to trap debris coming from the upper watersheds. Debris basins are proposed in various natural slope and tributary locales in the RMDP area as generally shown on *Figure 24*. The precise locations of the basins and access to the basins would be defined by subsequent tract maps that implement the Specific Plan.

The design capacity for debris control structures would take into account the classifications stated in the debris production maps provided in Appendix A of the DPW Hydrology Manual (County of Los Angeles 1993). Debris control structure capacity and transportation rates would be based on the specification stated in the DPW Sedimentation Manual. Maintenance of the basins would include the periodic removal of accumulated sediment and other debris. Maintenance of various debris basin configurations is discussed in *Appendix A*.

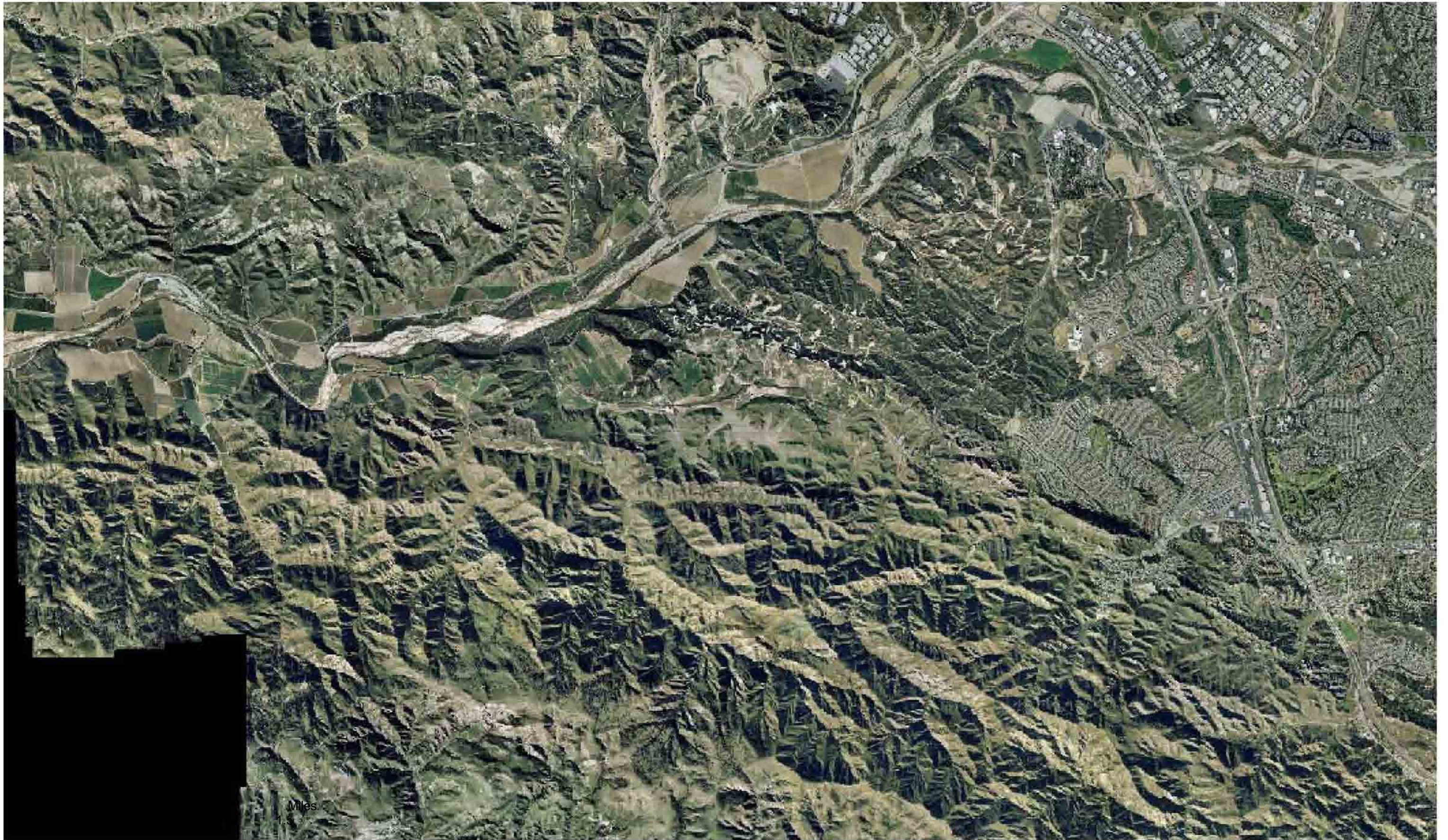


SOURCE: Hunsaker November 2007

FIGURE 23

Location of Water Quality Basins

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SOURCE: Hunsaker November 2007

FIGURE 24
Locations of Debris Basins

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RMDP Compliance

Water quality treatment basins and debris basins will be constructed in conjunction with other tributary drainage modifications. The design of these facilities is integrated into the DPs, providing both attenuation of flow for prevention of hydromodification and primary water quality treatment.

- DP 1 Basins are typically collocated with other RMDP facilities, and therefore have not been evaluated using LEDPA, except to the extent that the associated RMDP component location has been selected pursuant to the LEDPA analysis.
- DP 2 As discussed, basins are integral in preservation of existing hydrologic and water quality conditions.
- DP 3 Basins are located such that they avoid existing regional habitat linkages or by their design, allowing continued habitat connectivity on site. Designs include permanent plantings beyond the limits of routine maintenance to minimize the effects on species' mobility.
- DP 4 Basins are located adjacent to or upstream of the open channels.
- DP 5 Basins may require maintenance to ensure proper debris removal, flood flow attenuation, and/or water quality treatment functions. Facilities requiring intensive maintenance are considered permanent impacts and are mitigated as such.
- DP 6 Maintenance practices, as included in *Appendix A*, avoid or minimize potential effects on species and habitats, with specific mitigation measures required for each type of facility.
- DP 7 Basins do not provide recreational facilities.
- DP 8 Basins, where located in jurisdiction, would be constructed as a component of the tributary drainage modifications. Mitigation measures (see *Section 7.0*) have been developed to replace biological resources that are impacted to maintain or increase biological functions and services on site.

Subnotifications for water quality treatment basins and debris basins shall provide descriptions of construction-related impacts (i.e., temporary and permanent impacts) as well as post-construction conditions (e.g., revegetation, indirect effects, and maintenance).

Water quality treatment basins and debris basins contribute to achievement of RMDP GOs and DPs through a design that controls edge effects (primarily hydrologic and water quality related)

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within transition areas (GO 2) and minimizes direct and indirect impacts to biological and water quality resources (GO 3). Mitigation for unavoidable impacts will result in restoration of temporarily impacted areas and maintenance or increases in riparian functions and services (GOs 4 and 5). The Subnotification process will provide necessary documentation to the resource agencies and to the County of Los Angeles (GO 8).

6.7 Other Development Components

6.7.1 Storm Drain Outlets along SR-126

The Specific Plan calls for improvements to several existing roadways, including SR-126, Magic Mountain Parkway, Potrero Valley Road, Commerce Center Drive, Chiquito Canyon Road, San Martinez Grande Road, and Pico Canyon Road. Bridge-widening activities on SR-126 are discussed in *Section 6.1.2*. Roadway improvement components such as widened bridges, bank stabilization, culverts, basins, and swale, generally would be designed consistent with how those features are described above. Several storm drain outlets will be extended as a function of the SR-126 widening and/or utility corridor construction, which will impact RMDP jurisdiction areas. A 10-foot-wide by 75-foot-long pilot channel may be graded from the end of the outlet riprap apron towards the riverbed to promote positive drainage. Maintenance of outlet structures and pilot channels are discussed in *Appendix A*.

RMDP Compliance

Storm drain outlets meet the RMDP DPs as follows:

- DP 1 Outlets are related components of larger RMDP facilities, and therefore have not been evaluated using LEDPA except to the extent that the associated RMDP component has been selected pursuant to the LEDPA analysis.
- DP 2 Outlets are sited, sized, and constructed with flow-attenuating devices to avoid alteration of existing hydrologic and water quality conditions.
- DP 3 Outlets and associated storm drains may provide limited opportunity for habitat linkages, creating north-to-south passages beneath SR-126, but have generally been sited to avoid existing regional habitat linkages. The outlets and associated storm drains may allow continued habitat connectivity for smaller animal species on site.
- DP 4 Outlets are a component of drainage facilities; therefore, they are not designed as open channels.

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- DP 5 Outlet design and location have been selected to minimize the need for ongoing maintenance and, to the extent feasible, are in locations where the natural topography allows for positive drainage. Where topography is not favorable and pilot channels must be excavated, mitigation measures have been included in *Appendix A* to avoid and minimize effects on species and habitats.
- DP 6 Maintenance practices, as included in *Appendix A*, avoid or minimize potential adverse effects for establishing and maintaining pilot channels. Mitigation measures are incorporated in *Appendix A* to minimize adverse effects of these maintenance activities.
- DP 7 Outlets do not provide recreational facilities.
- DP 8 Outlets may impact resources, but typically are collocated with other RMDP components, such as the utility corridor bank protection; therefore, impacts are generally discussed in relation to the associated feature. Mitigation measures (see *Section 7.0*) have been developed to replace biological resources that are impacted and to maintain or increase biological functions and services on site.

Subnotifications for storm drain outlets along SR-126 shall provide descriptions of construction-related impacts (i.e., temporary and permanent impacts) as well as post-construction conditions (e.g., revegetation, indirect effects, and maintenance).

Compliance with RMDP GOs and DPs is demonstrated for storm drain outlets along SR-126 because they are each designed to minimize direct and indirect impacts to biological and water quality resources (GO 3) and to maintain or enhance important wildlife corridors and habitat corridors (GO 6). Mitigation for unavoidable impacts will result in restoration of temporarily impacted areas and maintenance or increases in riparian functions and services (GOs 4 and 5). The Subnotification process will provide necessary documentation to the resource agencies and to the County of Los Angeles (GO 8).

6.7.2 Recreational Facilities

The Specific Plan Master Trails Plan encompasses a comprehensive system of bicycle, pedestrian, and equestrian trails that would facilitate movement throughout the RMDP study area. The Plan also provides potential connections to regional trail systems within the Santa Clarita Valley. Trails are a key component of the recreation element of the approved Specific Plan and provide public access to open space within the Specific Plan site.

Approximately 20 trail crossings and 8 viewing platforms are included in or adjacent to the Santa Clara River and its drainages within the RMDP study area, many of them unimproved within the

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channel bed. The general locations of proposed trail crossings are depicted on *Figure 25*. The precise location of trails and proposed trail crossings would be defined by final tract maps that implement the Specific Plan. As previously discussed, trails may also include separate bridge structures adjacent to SR-126 crossings of San Martinez Canyon, Chiquito Canyon, and Castaic Creek, as well as north–south equestrian trails at Chiquito Canyon and Castaic Creek bridges. Other trail crossings will be seasonal (i.e., no structural stream crossing) with appropriate signage to address public safety.

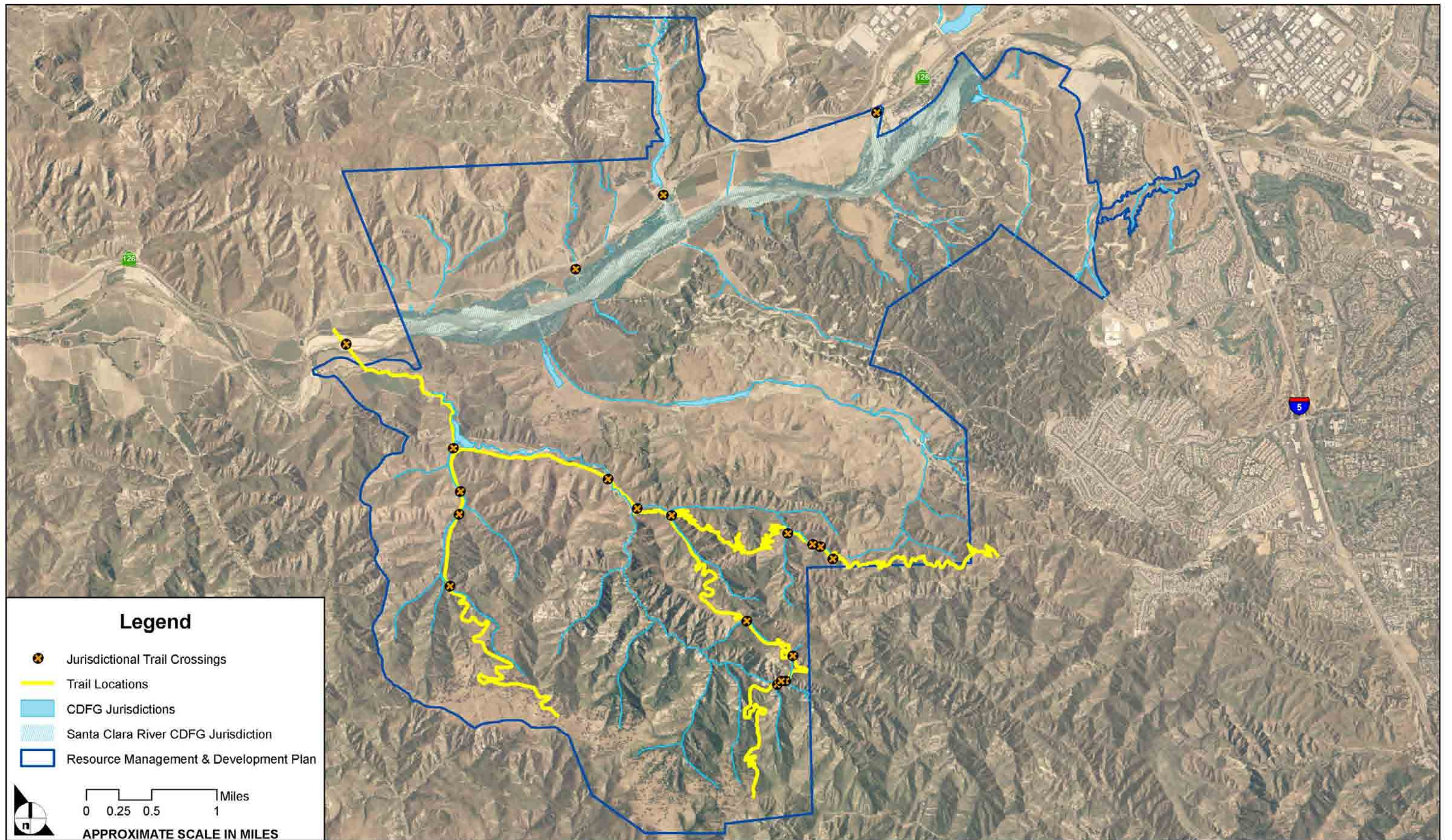
Maintenance

Trail facilities typically require as-needed maintenance in the form of vegetation removal on and adjacent to trails and platforms, removal of debris, and resurfacing and replacement of structures (e.g., fences, signs, kiosks, wooden structures).

RMDP Compliance

Recreational facilities implement the DPs as follows:

- DP 1 Trails and viewing platforms are typically collocated with other RMDP facilities that have been selected according to the LEDPA process. Additional trail locations may be sited, primarily along existing dirt roads and as such, are designed to minimize impacts.
- DP 2 Trails and viewing platforms are proposed outside of the limits of significant fluvial processes in the riverbed and creek; therefore, they avoid alteration of existing hydrologic and water quality conditions.
- DP 3 Recreational facilities may be located within existing regional habitat linkages, although they are designed to allow continued habitat connectivity on site by either providing adequate open area for passage or by paralleling movement corridors.
- DP 4 Recreational facilities are not drainage facilities; therefore, they are not designed as open channels.
- DP 5 The location and materials used to construct the trails and viewing platforms are selected to maximize the life of the facility while also minimizing the need for ongoing maintenance.



SOURCE: PACE - December 2007

FIGURE 25
 Trail Crossings

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- DP 6 Maintenance practices, as included in *Appendix A*, avoid or minimize potential adverse effects for each type of maintenance. Trails are generally located where routine maintenance would be conducted from a paved surface and would not involve impacts to species or habitats. Viewing platforms, due to their proximity to natural vegetative communities, may require regular trimming of vegetation to maintain safe conditions for pedestrian traffic. Mitigation measures are incorporated in *Appendix A* to minimize adverse effects of these maintenance activities.
- DP 7 The SR-126 trails and viewing platforms implement a significant component of the recreational facilities that offer engagement with natural resources while protecting resources from potential adverse effects. The trails and platforms are designed with barriers to minimize human intrusion into native vegetative communities.
- DP 8 Trails and viewing platforms may impact resources and would require mitigation. Mitigation measures (see *Section 7.0*) have been developed to replace biological resources that are impacted to maintain or increase biological functions and services on site.

Subnotifications for recreation facilities shall provide descriptions of construction-related impacts (i.e., temporary and permanent impacts) as well as post-construction conditions (e.g., revegetation, indirect effects, and maintenance). Materials selected for viewing platforms shall be demonstrated as low maintenance and suitable for use in natural areas.

Compliance with RMDP GOs is demonstrated for recreational facilities because they are each designed to minimize edge effects within transition areas (GO 2), minimize direct and indirect impacts to biological and water quality resources (GO 3), and mitigate unavoidable impacts through restoration of temporarily impacted areas and maintenance or increases in riparian functions and services (GOs 4 and 5). The Subnotification process will provide necessary documentation to the resource agencies and to the County of Los Angeles (GO 8).

6.7.3 Geotechnical Investigations

Geotechnical investigations are conducted to give a better understanding of subsurface geologic and hydrogeologic conditions to engineers, planners, and reviewing agencies when determining design feasibility of flood protection structures. On occasion they are also used to determine the depth of alluvial deposits that may coincide with jurisdictional areas. Investigations, and associated access into jurisdictional areas if necessary, will occur in advance of development mass grading. The activities are typical of short duration, 1 to 3 days, and may be extended based on the complexity of the site and investigative methods.

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Investigation activities have similar impacts as typical construction activities, primarily related to creating access areas, although on a much reduced scale. Equipment used during these activities may include drill rigs, van-truck mounted drill rigs (CPT), backhoes and excavators (Test Pits), dozers and rubber tire loaders (Trenches), and various support vehicles (pickups, tool-trucks).

Equipment will access investigation sites along a 10- to 20-foot-wide access route, avoiding species and habitats to the extent possible. Where necessary, an access ramp will be cut into the river or creek bank to reach the lower terrace and bed locations. At the completion of activities, the bank is to be returned to its original configuration. Vegetation in the access route and at the drill site will be cut a few inches above the ground surface to allow for re-vegetation. At a drilling site an area 20 feet by 50 feet will be cleared of vegetation for personnel and fire safety. At test pit excavations, a trench up to 20 feet deep, 36 inches wide, and 200 feet long may be opened, with the excavated soils temporarily piled adjacent to the excavation. At completion of the trench, it would be backfilled and stabilized with native vegetation. Trench excavations may be much wider and longer than test pits and generally are deeper, possibly involving dozers.

RMDP Compliance

Geotechnical investigations are short-duration activities that do not involve permanent impact or ongoing activities in jurisdictional areas. The DPs are not applicable to these activities. Mitigation measures are provided for these activities to minimize effects on species and habitats that may be impacted during access to the jurisdictional areas.

Subnotifications for geotechnical investigations shall provide descriptions of temporary impacts, as well as post-activity conditions (e.g., erosion and access control).

6.8 Maintenance Activities

DPW, or other responsible management entity, would maintain flood, drainage, and water quality protection facilities located within the RMDP study area. In general, maintenance activities would involve the periodic inspection of the structures to ensure that the structures are intact, and to monitor any flow capacity restrictions due to vegetation growth and sediment buildup at or near the structures. Maintenance activities would be initiated if the integrity of the structures is compromised or if conveyance capacity is inadequate.

In addition, DPW, or other responsible management entity, would conduct regular maintenance to ensure that all flood control structures operate at their design standards. For example, DPW requires that open channels, closed conduits, bridges, dams, and debris basins (not under State of California jurisdiction, i.e., dam safety) accommodate flows resulting from a Capital Flood. Other facilities in developed areas must be designed to accommodate the “Urban Flood,” which

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is the amount of runoff resulting from a 25-year frequency storm falling on a saturated watershed. On the RMDP study area, maintenance may include activities such as:

- Periodic removal of woody vegetation from riprap to protect its structural integrity
- Periodic clearing of storm drain outlets to ensure proper drainage
- Periodic removal of ponded water that causes odor and/or mosquito problems
- As-needed repairs and routine maintenance of bridges, decks, piers, abutments, and associated facilities (e.g., utilities, clearing of trapped debris and vegetation)
- As-needed repairs of bank stabilization
- As-needed vegetation, debris, and sediment deposit removal at detention and debris basins
- Periodic inspection, vegetation removal, and repair to creek-bed stabilization structures
- Periodic vegetation removal and sediment removal at road-crossing culverts
- Vegetation control and repair to viewing platforms and trails (including associated fencing)
- Exotic and invasive plant and animal species control efforts
- Emergency repair activities.

Routine maintenance of drainage facilities may require the use of a backhoe, excavator, loader or other similar construction equipment to excavate accumulated sediment and other debris and hand tools for cutting of vegetation. The excavated soil material would be placed into off- and/or on-highway trucks for removal from the site and transportation to an approved reuse or disposal site. To the extent feasible, cut native materials would be mulched and beneficially reused on or off site, and any invasive species would be directed to proper disposal. Maintenance activities on the RMDP site could be conducted by any responsible management entity pursuant to the RMDP Agency permits and agreements.

The applicant has prepared an RMDP Maintenance Manual (Dudek 2008b) for use within the RMDP study area (*Appendix A*). The maintenance manual identifies the extent and frequency of various maintenance activities that may occur on site and describes standard mitigation, monitoring, notification, and reporting conditions applicable to all types of maintenance activities.

RMDP Compliance

The maintenance practices implement or provide specific detail to DP 5 and DP 6. Selection of the various RMDP components determines the associated level of maintenance, with most areas requiring no routine maintenance (buried bank protection, stabilized tributary drainages, and

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other naturalized drainage elements). Where routine maintenance is necessary, practices have been developed to avoid and minimize impacts to species and habitats to the extent feasible. Where maintenance cannot avoid impacts, such as in locations providing water quality or flood control functions, or where public safety and property may be at risk minus maintenance, mitigation measures are proposed to minimize effects of the activities.

Subnotifications for maintenance activities shall provide descriptions of original facility design specifications, as related to establishing the maintenance baselines, previous maintenance activities, existing conditions, and proposed maintenance activities. Proposed activities shall substantially conform to the RMDP Maintenance Manual (*Appendix A*).

Compliance with RMDP GOs and DPs is demonstrated for maintenance activities because maintenance practices are designed to minimize direct and indirect impacts to biological and water quality resources (GO 3), provide long-term hydrologic stability and water quality protection (DP 2), minimize the frequency and intensity of maintenance activities (DP 5), and to provide sufficient maintenance practices such that potential adverse effects of unmaintained facilities are avoided or minimized (DP 6). The Subnotification process will provide necessary documentation to the resource agencies and to the County of Los Angeles (GO 8).

6.9 Environmental Protection Design Features

The RMDP incorporates a variety of design features that minimize impacts to riparian resources. These features include avoidance, minimization, and restoration of riparian habitat, and enhancement activities.

Restoration Design Features

Riparian resources along the Santa Clara River that are impacted by the RMDP would require restoration. The primary objective of restoration efforts would be to enhance habitat quality and values within the Project area. Habitat restoration activities that would be implemented in conjunction with the RMDP include revegetation of native plant communities on candidate sites contiguous to existing riparian habitats. Site restoration also would include the maintenance of revegetation sites, including the control of non-native plants and irrigation system maintenance. Monitoring of the restoration sites would be conducted to evaluate the success of revegetation efforts. Contingency plans and appropriate remedial measures to be implemented should habitat restoration objectives not be achieved would also be included in proposed habitat restoration plans.

Revegetation plans will be developed and submitted to Corps and CDFG in accordance with the section 404 Permit and Master Lake/Streambed Alteration Agreement. The revegetation plan

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would provide details on where restoration sites are located and the appropriate restoration methods to be used at each location. *Section 7.0* of this RMDP contains more detailed discussion of potential restoration opportunities within each of the RMDP conservation and special management areas.

Enhancement Design Features

Habitat enhancement associated with the RMDP includes rehabilitation of areas of native habitat that have been disturbed by past activities (e.g., grazing, roads, oil and natural gas operations, etc.), or impacted by non-native plant species such as giant reed (*Arundo donax*) and tamarisk (*Tamarix* spp.).

Removal of grazing is an important means of enhancing riparian habitat values. Without ongoing disturbance from cattle, vegetative conditions in many riparian areas would improve, although weed management may be necessary. To achieve this enhancement goal, grazing would be excluded from the River Corridor SMA. However, controlled grazing may be used in areas such as open space and SMAs as a means to manage annual grass growth instead of mowing or applying herbicides.

Not all enhancement areas would necessarily require supplemental plantings of native species. Some areas may support conditions conducive for rapid natural re-establishment of native species. The revegetation plan may incorporate means of enhancement to areas by reconditioning compacted soils, amending poor soil fertility, removing trash or flood debris, and by removing any unneeded ranch roads as a way of increasing habitat values. Removal of non-native species such as giant reed, tamarisk, tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) to mitigate impacts would be subject to the management requirements described in the Specific Plan, Corps section 404 Permit, the CDFG Master Lake/Streambed Alteration Agreement, and the RMDP.

RMDP Compliance

Subnotifications for environmental protection design features shall provide descriptions of restoration and enhancement plans including grading, clearing, planting, irrigation, maintenance, and monitoring. If restoration or enhancement is intended for mitigation credit, then the types of impacts for which the mitigation credits can be used shall be described, even if the impacts have not yet occurred. Detailed plans shall substantially conform with the general descriptions provided above.

Compliance with RMDP GOs and DPs is demonstrated for environmental protection design features because they are each designed to assemble and manage a multicomponent permanent preserve (GO 1), replace impacted resources (GO 4 and DP 8), maintain or increase riparian

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functions and values (GO 5), maintain or enhance important wildlife and habitat corridors (GO 6), and conserve endangered species' habitats (GO 7). The Subnotification process will provide necessary documentation to the resource agencies and to the County of Los Angeles (GO 8).

6.10 Spineflower Conservation Plan and Candidate Conservation Agreement

The Specific Plan requires that the Project applicant establish spineflower preserves. The SCP (Dudek 2007d) sets forth biological goals and objectives as cornerstones of the adaptive management program for the San Fernando Valley spineflower in the preserves established within portions of the applicant's land holdings in Los Angeles County where there are known spineflower populations. Three main goals for the spineflower preserves are presented in the SCP. The goals describe the desired conditions of the spineflower populations, the communities in which the spineflower occurs, and the ecosystem processes known or hypothesized to maintain the spineflower populations and associated communities. For each goal, the SCP describes a set of objectives for attaining that goal, along with a brief explanation or rationale for each objective. The SCP's three goals are as follows:

- Goal 1:** Maintain or increase spineflower populations within the preserves.
- Goal 2:** Maintain or enhance the structure and native species composition of the native communities within the spineflower preserves.
- Goal 3:** Facilitate the natural ecological processes required to sustain the native populations and communities in the preserves.

Figure 14 depicts the preserves called for in the SCP component of the proposed Project. In some cases, the preserves are to be connected to the permanently protected and managed open space on the Specific Plan site, including the River Corridor SMA, High Country SMA, and the designated Open Areas. The five proposed preserve areas will be connected to each other through lands designated as open space. *Figure 14* depicts the five preserve areas in relationship to each other and other open space within the SCP study areas. The Potrero, Grapevine Mesa, and Airport Mesa preserve areas each connect to the River Corridor SMA. The Entrada Preserve Area is connected to an open space corridor that runs southwest, which, in turn, connects to the Specific Plan open space corridors and the River Corridor SMA. The San Martinez Grande Preserve Area is located to the west of designated open space.

In addition, the adopted Specific Plan Mitigation Monitoring Plan imposed a spineflower mitigation program to ensure the long-term conservation of spineflower on the Specific Plan area. In response to those Specific Plan requirements and the applicant's need for a

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section 2081(b) Incidental Take Permit for spineflower, the applicant prepared the SCP, which addresses overall preserve design and associated conservation measures for spineflower within all of the applicant's land holdings in the SCP study area.

The SCP provides a comprehensive management approach to address potential impacts to spineflower resulting from development within the SCP planning area, which consists of the Specific Plan, VCC, and Entrada study areas. The SCP also provides background information on the plant and its habitat, describes mitigation measures, and recommends establishment of preserves on SCP planning area lands known to contain spineflower populations, consistent with the applicant's proposed Project. The SCP is the main supporting document to the CDFG section 2081(b) permit and application along with the Newhall Ranch RMDP-SCP EIS/EIR. These documents were used by CDFG to justify issuance of a section 2081(b) Incidental Take Permit, and to determine the conditions imposed under the permit. The SCP is designed to develop a management and preservation framework that provides for the long-term persistence of spineflower within the SCP planning area.

No urban development would be permitted within these preserve areas.¹¹ Each preserve area and corresponding buffer zone would be placed into a permanent conservation easement to ensure long-term protection. The conservation easement would be granted to CDFG by the applicant and it would contain appropriate restrictions to help ensure that the preserve land remains in a natural condition in perpetuity.

Candidate Conservation Agreement

The applicant also has applied to the USFWS for a draft Candidate Conservation Agreement. Upon execution of the Candidate Conservation Agreement, the applicant would commit to implement the conservation, management, and monitoring measures for spineflower within the SCP study area as set forth in the SCP, which, when combined with the benefits achieved by conservation of the spineflower on the former Ahmanson Ranch property, would preclude the need to list the spineflower in the future as threatened or endangered under the federal ESA.

The Candidate Conservation Agreement sets forth conservation measures, which must be adopted and implemented in accordance with the Candidate Conservation Agreement and the SCP for the benefit of the spineflower. The conservation measures are designed to provide for the long-term persistence of spineflower within the SCP study area, while also allowing for take of spineflower outside of preserve areas.

¹¹ Development within the preserves could include fencing, signage, limited access facilities, and drainage and erosion control, all of which are necessary for the overall management and monitoring of the preserves.

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7.0 MITIGATION AND MANAGEMENT ACTIVITIES

The proposed Project (i.e., implementation of the RMDP and SCP) will result in significant impacts to jurisdictional waters/drainages and sensitive biological resources, absent preserve assembly and implementation of the management, mitigation, monitoring, and funding provisions of the RMDP. The EIS/EIR prepared by the Corps and CDFG analyzes the proposed Project's impacts on sensitive biological resources and other natural resources, and identifies feasible mitigation and Project alternatives.

This section lists the RMDP's significant impacts to jurisdictional waters/drainages and sensitive biological resources within the Specific Plan area, absent mitigation. This list is intended to provide context for the mitigation and management activities proposed by the RMDP.

The following resources would be significantly impacted, absent mitigation:

- Riparian plant communities and associated wildlife habitat
- California annual grassland, agriculture, and disturbed land and associated wildlife habitat
- Coastal scrub communities and associated wildlife habitat
- Chaparral communities and associated wildlife habitat
- Oak woodland communities and associated wildlife habitat
- Wildlife movement corridors
- Common wildlife (raptors, riparian birds, upland grassland birds, upland scrub and chaparral birds, and upland woodland birds)
- Special-status insect (San Emigdio blue butterfly)
- Special-status aquatic species (unarmored threespine stickleback, arroyo chub, Santa Ana sucker, and undescribed snail)
- Special-status reptile and amphibian – semi-aquatic species (arroyo toad, California red-legged frog, south coast garter snake, southwestern pond turtle, two-striped garter snake, and western spadefoot toad)
- Special-status reptiles (coast horned lizard, coast patch-nosed snake, silvery legless lizard, coastal western whiptail, rosy boa, and San Bernardino ringneck snake)
- Special-status raptors (California condor, golden eagle, white-tailed kite, long-eared owl, northern harrier, western burrowing owl, Cooper's hawk, ferruginous hawk, and turkey vulture)

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- Special-status riparian birds (least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, tricolored blackbird, yellow-breasted chat, yellow warbler, and Nuttall's woodpecker)
- Special-status upland scrub and chaparral birds (loggerhead shrike, Allen's hummingbird, Bell's sage sparrow, Costa's hummingbird, and southern California rufous-crowned sparrow)
- Special-status upland grassland birds (grasshopper sparrow and California horned lark)
- Special-status upland woodland birds (chipping sparrow, Lawrence's goldfinch, and oak titmouse)
- Special-status bats (pallid bat, pocketed free-tailed bat, Townsend's big-eared bat, western mastiff bat, western red bat, fringed myotis, long-legged myotis, western small-footed myotis, and Yuma myotis)
- Special-status mammals (ringtail, San Diego desert woodrat, American badger, San Diego black-tailed jackrabbit, black bear, and mountain lion)
- Special-status plants (San Fernando Valley spineflower, undescribed everlasting, island mountain-mahogany, mainland (holly-leaf) cherry, oak trees, oak-leaved nemophila, Ojai navarretia, Parish's sagebrush, Peirson's morning glory, slender mariposa lily, and Southern California black walnut)

In light of the above impacts, the RMDP continues the preserve assembly introduced in the adopted Specific Plan RMP. The preserve will protect large areas of land within the 4,205-acre High Country SMA and the 977-acre River Corridor SMA. In addition, the off-site Salt Creek area condition requires the applicant to dedicate to the public an additional 1,517 acres of land in the Salt Creek watershed in Ventura County, adjacent to the Newhall Ranch Specific Plan area. The 3,691-acre Open Area also provides added open space within the Specific Plan area, and connectivity with the High Country SMA and River Corridor SMA preserve areas. The Open Area includes proposed permanent conservation easements over 167.6 acres of spineflower preserves.

These large areas of sensitive native habitats are generally associated with the natural drainages and major landforms of, and adjacent to, the Specific Plan site. They also provide linkages and connectivity with regional open space adjacent to the Specific Plan site. The approximately 6,867 acres of land to be preserved and protected (High Country SMA, River Corridor SMA, Salt Creek area, and spineflower preserves) provide significant on-site and adjacent mitigation and management opportunities. Approximately 1,921 of the 3,420 acres within the Open Area would also be preserved and protected as native habitat, either not impacted by Project grading

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and infrastructure construction, or restored as native habitat following Project development. The balance of the Open Area will be used for passive and active recreational uses. The sensitive resources occurring within these preserve areas and the proposed mitigation and management activities are set forth below. The locations of these preserves and protected lands are shown on *Figure 9*.

Jointly with management of preserve and protected land areas, construction and maintenance of infrastructure facilities within the Specific Plan are subject to restrictions and guidelines set forth in the RMDP to protect resources from edge effects. These restrictions and guidelines are summarized here in the context of the resource protection afforded by implementation of the RMDP and associated plans (i.e., Maintenance Manual in *Appendix A*).

Additional mitigation measures are described for special-status species identified in the EIS/EIR as significantly impacted by implementation of the RMDP. These measures are consistent with, and supplement, those mitigation measures listed in the previously certified Newhall Ranch Specific Plan Program EIR (County of Los Angeles 2003b). The complete list of mitigation measures is included as *Appendix B – RMDP Mitigation Matrix*. The measures are divided according to whether they are related to construction or preserve management. Within these two broad groups, mitigation measures are classified according to which resource area or resource type it pertains to. Within each preserve area subsection below, a brief summary of applicable mitigation measures related to construction and preserve management is provided; however, the reader is referred to *Appendix B* for the complete text of each mitigation measure. Finally, following discussions of individual preserve areas, a general discussion of mitigation credits and wildfire fuel modification requirements is provided.

7.1 River Corridor SMA

7.1.1 Resource Description

The 977-acre River Corridor SMA includes preservation areas along the Santa Clara River, a regionally significant biological resource. Its value is derived from the inherent value of its wetland and riparian habitats and associated species, and from its function as a regional wildlife corridor. Federally listed endangered species and numerous other special-status species have been observed or detected in riparian habitats of the River. Special-status wildlife species include the state- and federally listed endangered unarmored threespine stickleback, the state- and federally listed endangered southwestern willow flycatcher, and the state- and federally listed endangered least Bell's vireo, among others.

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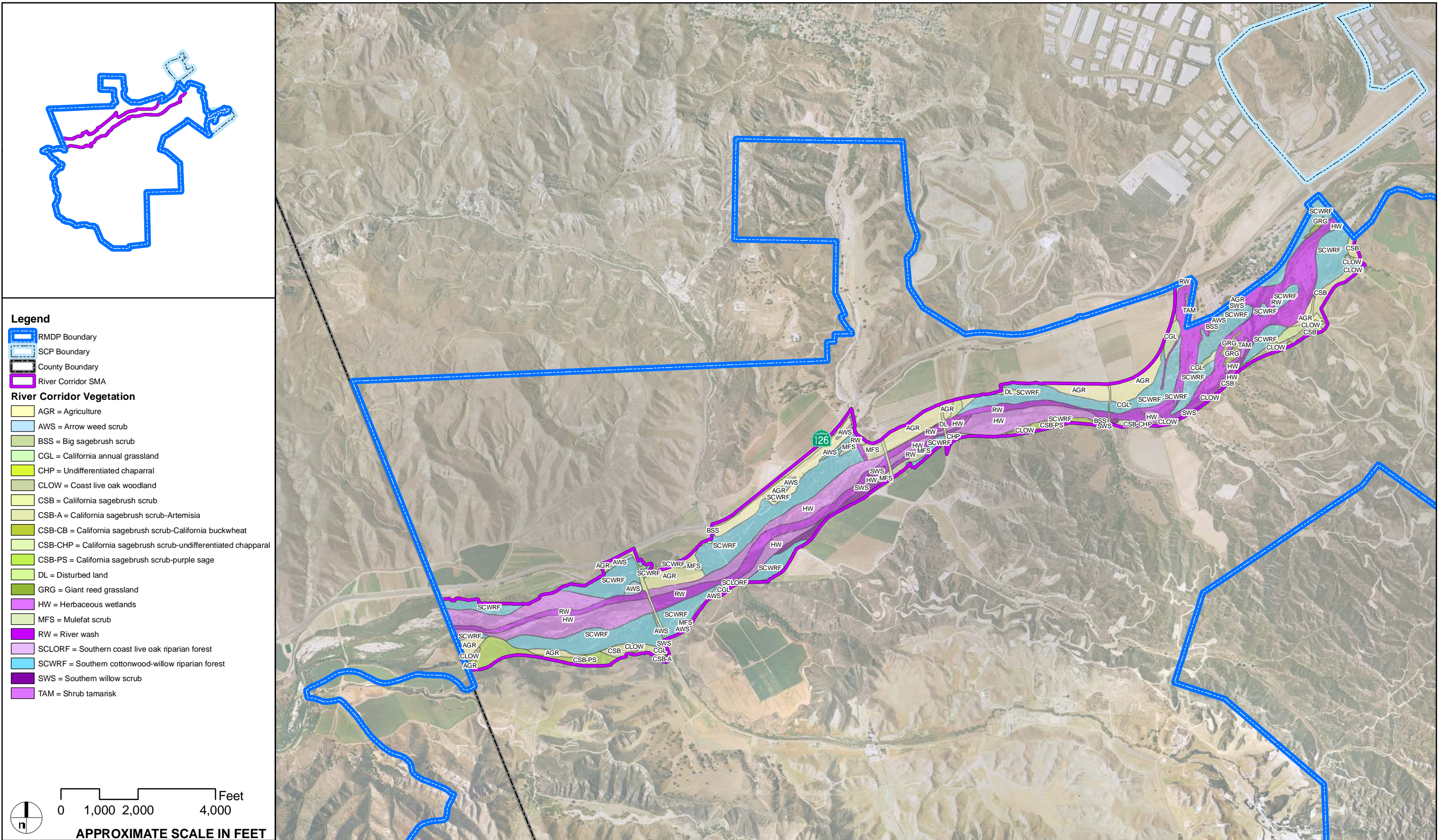
The River Corridor SMA also comprises a portion of the County's SEA 23. As part of the development of the Specific Plan, a River Corridor SMA has been delineated that is sufficiently wide to handle the capital flood while retaining nearly all of the riparian vegetation existing along the River. Limited infrastructure development will occur within the River Corridor SMA, as described in *Section 6.0*. Construction for these facilities would temporarily impact 129 acres of the River Corridor SMA; permanent facilities would occupy 86 acres.

The Santa Clara River is an important riparian corridor that connects the Specific Plan area with habitat to the east and west. 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 dispersal corridor for many wildlife species, including aquatic taxa, riparian obligate species (resident and migratory), and larger, more mobile terrestrial animals.

The biotic resources of the River are potentially subject to damage from human activities. Thus, the RMDP provides for "transition" areas between the River and development, restricts recreational uses in the River, and provides for the long-term management of the River Corridor SMA. *Figures 26 and 27A through 27C* show the biological resources present within the River Corridor SMA: first, the vegetation communities and land cover types, and second, the special-status species occurrence data.

Plant Communities and Land Covers

Vegetation community classifications used in this RMDP follow the "List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database" (CDFG 2003; Dudek and Associates 2006b, 2006c, 2006d). Southern cottonwood-willow riparian forest and river wash comprise the majority of the land in the River Corridor SMA, 32.6% and 20.6%, respectively. *Table 8* shows the distribution of vegetation communities/land cover types in the River Corridor SMA.



AERIAL SOURCE: DigitalGlobe, 2007

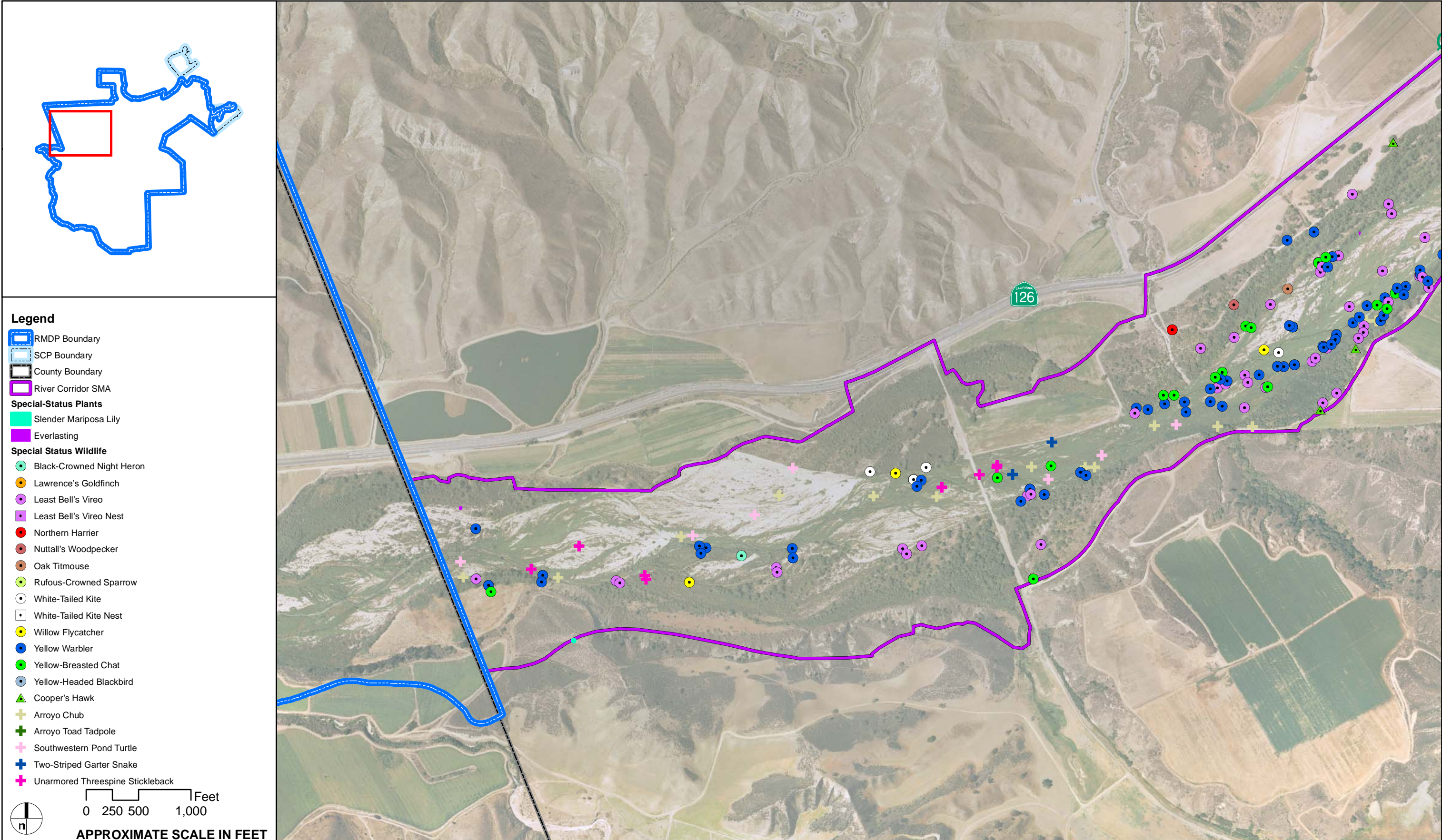
FIGURE 26

Newhall Ranch - Resource Management and Development Plan

River Corridor SMA - Generalized Vegetation Communities and Land Covers



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Legend

- RMDP Boundary
- SCP Boundary
- County Boundary
- River Corridor SMA

Special-Status Plants

- Slender Mariposa Lily
- Everlasting

Special Status Wildlife

- Black-Crowned Night Heron
- Lawrence's Goldfinch
- Least Bell's Vireo
- Least Bell's Vireo Nest
- Northern Harrier
- Nuttall's Woodpecker
- Oak Titmouse
- Rufous-Crowned Sparrow
- White-Tailed Kite
- White-Tailed Kite Nest
- Willow Flycatcher
- Yellow Warbler
- Yellow-Breasted Chat
- Yellow-Headed Blackbird
- Cooper's Hawk
- Arroyo Chub
- Arroyo Toad Tadpole
- Southwestern Pond Turtle
- Two-Striped Garter Snake
- Unarmored Threespine Stickleback

0 250 500 1,000 Feet

APPROXIMATE SCALE IN FEET

AERIAL SOURCE: DigitalGlobe, 2007

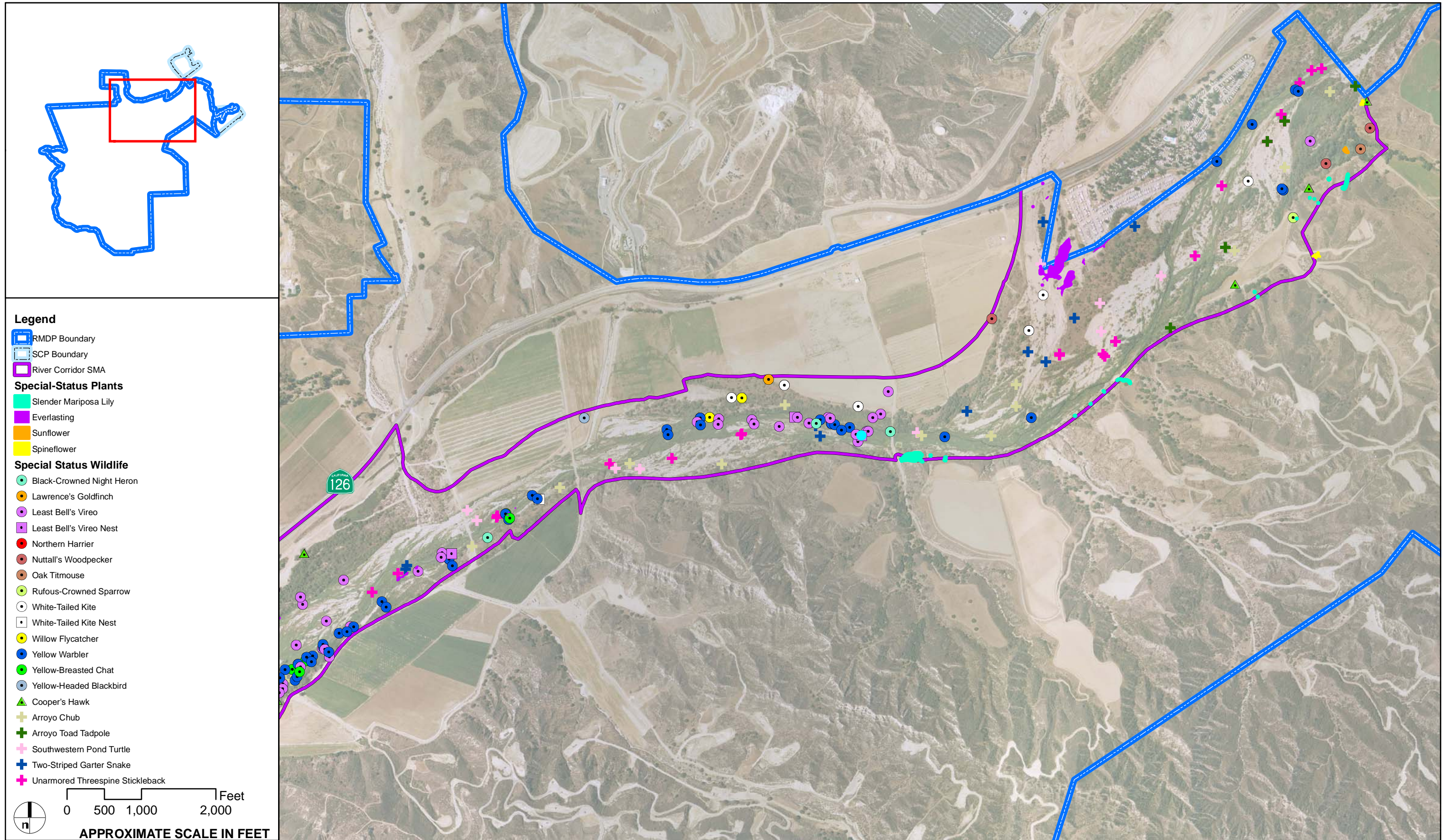
FIGURE 27A

Newhall Ranch - Resource Management and Development Plan
River Corridor SMA - Special-Status Species Occurrences



Z:\Projects\373801\RMDF\arcmap\ReportGraphics -SL July 2008

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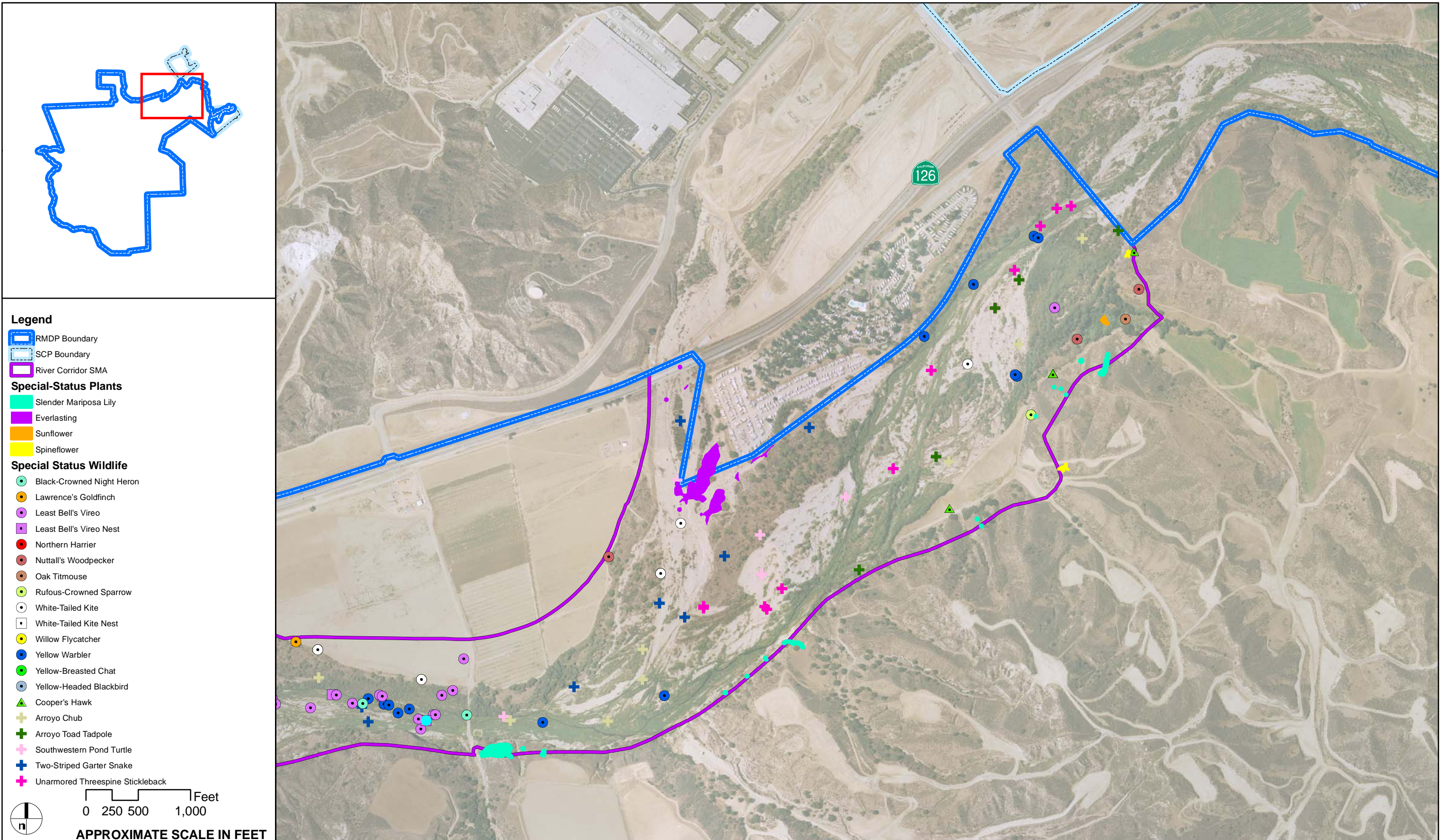


AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 27B

Newhall Ranch - Resource Management and Development Plan
River Corridor SMA - Special-Status Species Occurrences

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- Legend**
- RMDP Boundary
 - SCP Boundary
 - River Corridor SMA
- Special-Status Plants**
- Slender Mariposa Lily
 - Everlasting
 - Sunflower
 - Spineflower
- Special Status Wildlife**
- Black-Crowned Night Heron
 - Lawrence's Goldfinch
 - Least Bell's Vireo
 - Least Bell's Vireo Nest
 - Northern Harrier
 - Nuttall's Woodpecker
 - Oak Titmouse
 - Rufous-Crowned Sparrow
 - White-Tailed Kite
 - White-Tailed Kite Nest
 - Willow Flycatcher
 - Yellow Warbler
 - Yellow-Breasted Chat
 - Yellow-Headed Blackbird
 - Cooper's Hawk
 - Arroyo Chub
 - Arroyo Toad Tadpole
 - Southwestern Pond Turtle
 - Two-Striped Garter Snake
 - Unarmored Threespine Stickleback

0 250 500 1,000 Feet
 APPROXIMATE SCALE IN FEET

AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 27C

Newhall Ranch - Resource Management and Development Plan
River Corridor SMA - Special-Status Species Occurrences



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Newhall Ranch Resource Management and Development Plan

**Table 8
River Corridor SMA Vegetation Communities/Land Cover¹**

Vegetation Community/Land Cover	Associations (If Any)	Acres	Percent of Total
Upland Grassland			
California annual grassland		9.4	1.0%
Coastal Scrub			
California sagebrush scrub	California sagebrush scrub-Artemisia	0.4	<0.1%
	California sagebrush scrub-California buckwheat	0.1	<0.1%
	California sagebrush scrub-Purple sage	31.4	3.2%
	California sagebrush scrub	22.3	2.3%
California sagebrush scrub-Undifferentiated chaparral		3.0	0.3%
Subtotal: Coastal Scrub		57.2	5.9%
Chaparral Scrub			
Undifferentiated chaparral scrub		1.5	0.2%
Upland Woodland and Savannah			
Coast live oak woodland		16.1	1.6%
Riparian Waters and Wetlands			
Herbaceous wetlands		182.2	18.6%
River wash		201.1	20.6%
Subtotal: Riparian Waters and Wetlands		383.3	39.2%
Riparian Scrub			
Arrow weed scrub		11.9	1.2%
Big sagebrush scrub		2.8	0.3%
Giant reed		5.6	0.6%
Mulefat scrub		15.0	1.5%
Southern willow scrub		13.9	1.4%
Tamarisk scrub		2.3	0.2%
Subtotal: Riparian Scrub		51.5	5.3%
Riparian Forest Woodland			
Southern coast live oak riparian forest		0.6	0.1%
Southern cottonwood-willow riparian forest		318.5	32.6%
Subtotal: Riparian Forest Woodland		319.1	32.7%
Land Covers			
Agriculture		101.8	10.4%
Disturbed land		37.2	3.8%
Subtotal: Land Covers		139.0	14.2%
Total		977.1	100.0%

¹ The acreages and vegetation types depicted in this table were determined during field mapping in 2006 (Dudek and Associates 2006b)

Soils

Soils in the River Corridor SMA are mapped as the Mocho-Sorrento association, within a 2% to 9% slope. Because the mapping was done at a generalized level, there are areas within this SMA with lesser slopes and other soil types that were not mapped. The mapped soils are gently sloping to moderately sloping alluvial fans with brown to grayish-brown loam. Erosion hazard is slight to moderate, and the runoff rate is slow to medium (USDA 1969).

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Special-Status Species

Habitat suitability calculations for the River Corridor SMA for various special-status species are presented in *Appendix C – Newhall Ranch Special-Status Species Preserve Report*. This species list and set of habitat calculations are included as data for the habitat manager to utilize when monitoring the preserve. Although several surveys have been conducted to detect both special-status plant and animal species, and the results of those surveys are described below, additional species may occur and, if detected, should also be managed for preservation in accordance with the RMP goals and objectives. Changes in habitat types and abundances will affect suitability for various species; such changes shall be monitored with specific regard to special-status species listed in *Appendix C*.

The following special-status animals have been observed in the River Corridor SMA during surveys conducted between 2002 and 2007: arroyo toad, black-crowned night heron, Cooper's hawk, Lawrence's goldfinch, least Bell's vireo, northern harrier, Nuttall's woodpecker, oak titmouse, white-tailed kite, willow flycatcher, yellow warbler, yellow-breasted chat, yellow-headed blackbird, arroyo chub, Santa Ana sucker, unarmored threespine stickleback, southwestern pond turtle, and two-striped garter snake. Three special-status plants have been recorded in the River Corridor SMA, also between 2002 and 2007: undescribed everlasting, undescribed sunflower, and slender mariposa lily.

Wildlife Habitat Buffers and Connectivity

The function of the River Corridor SMA as a wildlife habitat buffer and/or movement linkage/corridor was analyzed in *Appendix F - Newhall Ranch Resource Management and Development Plan: Wildlife Habitat Buffer and Connectivity White Paper* (Dudek 2008a) based on species guilds. *Table 9* describes seven different guilds of species based on groups of species with shared life histories, similar vagility, and home range characteristics: (1) aquatic, (2) semi-aquatic, (3) high mobility ground-dwelling, (4) moderate mobility ground-dwelling, (5) low mobility ground-dwelling, (6) high mobility aerial (birds, bats, and invertebrates), and (7) moderate mobility aerial (birds and invertebrates).

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**Table 9
Species Guilds**

Guild	Vagility	Home Range	Dispersal Ability	Special-Status Species Documented or Potentially Occurring in Project Area ¹
Aquatic	Exclusively aquatic; vagility depends on aquatic system, such as river, pond, or lake	Exclusively aquatic, home range variable but maximum defined by aquatic system and species characteristics	Beyond Project area but variable, depending on distribution of aquatic and upland habitats	arroyo chub Santa Ana sucker southern steelhead unarmored threespine stickleback undescribed snail
Semi-Aquatic	Generally limited to vicinity of aquatic environments for breeding, some terrestrial habitat use and movement are essential elements of life history (e.g., foraging, aestivation, hibernation)	Aquatic and terrestrial habitats that may extend beyond Project area	Beyond Project area but variable, depending on distribution of aquatic and terrestrial habitats	arroyo toad California red-legged frog western spadefoot toad south coast garter snake southwestern pond turtle two-striped garter snake
High Mobility Ground-Dwelling	May be influenced by development and topography; able to traverse some fragmented areas	Beyond Project area	Beyond Project area	mule deer black bear mountain lion
Moderate Mobility Ground-Dwelling	Prefer to move within habitat; some species able to utilize agricultural areas	Within Project area	Beyond Project area	American badger ringtail San Diego black-tailed jackrabbit
Low Mobility Ground-Dwelling	Closely tied to preferred habitat; movement likely limited by where habitat is fragmented and isolated by urban development	Specific habitats within Project area	Typically within Project area	coast horned lizard coast patch-nosed snake coastal western whiptail rosy boa San Bernardino ringneck snake silvery legless lizard San Diego desert woodrat southern grasshopper mouse

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Table 9 (Continued)

Guild	Vagility	Home Range	Dispersal Ability	Special-Status Species Documented or Potentially Occurring in Project Area ¹
High Mobility Aerial (Birds, Bats, Invertebrates)	Flight; essentially unlimited movement; passerine bird migration may be limited by urbanization or influenced by habitat structure such as riparian or woodland; bat presence and movement limited by availability of roosting sites.	All or portions of life history contained within Project area, such as breeding and nesting, over-wintering, migration foraging, etc.	Beyond Project area	Allen's hummingbird (nesting) American peregrine falcon black-crowned night heron (rookery) California condor California horned lark chipping sparrow (nesting) Cooper's hawk (nesting) Costa's hummingbird (nesting) ferruginous hawk (wintering) golden eagle (nesting and wintering) grasshopper sparrow (nesting) hermit warbler (nesting) Lawrence's goldfinch (nesting and foraging) least Bell's vireo (nesting) loggerhead shrike long-eared owl (nesting) merlin (wintering) northern harrier (nesting) Nuttall's woodpecker (nesting) oak titmouse (nesting) prairie falcon (nesting) rufous hummingbird (nesting) sharp-shinned hawk (nesting) short-eared owl (nesting) southwestern willow flycatcher (nesting) summer tanager (nesting) tricolored blackbird (nesting colony) turkey vulture vermillion flycatcher (nesting)

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Table 9 (Continued)

Guild	Vagility	Home Range	Dispersal Ability	Special-Status Species Documented or Potentially Occurring in Project Area ¹
				western burrowing owl (burrow sites and some wintering sites) western yellow-billed cuckoo (nesting) white-tailed kite (nesting) yellow warbler (nesting) yellow-breasted chat (nesting) yellow-headed blackbird (nesting) fringed myotis long-legged myotis pallid bat pocketed free-tailed bat Townsend's big-eared bat western mastiff bat western red bat western small-footed myotis Yuma myotis monarch butterfly (wintering sites)
Moderate Mobility Aerial (Birds and Invertebrates)	Flight; movement may be limited by habitat fragmentation and isolation by urban development; resident or short-distance dispersal	Specific habitats within Project area	Beyond Project area; but dispersal is limited	Bell's sage sparrow (nesting) black-chinned sparrow (nesting) coastal California gnatcatcher Southern California rufous-crowned sparrow San Emigdio blue butterfly

¹ Species in bold are known to occur on site; all other species have potential to occur on site based on their known geographic range and available suitable habitat.

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The River Corridor SMA is the most important resource within the Project area for the aquatic guild. Based on a review of the scientific literature, this 100-foot-wide buffer will be adequate to protect habitat for the aquatic guild fish species (Dudek 2008a). The area within the River Corridor SMA (the main stem of the Santa Clara River) will remain intact after build-out of the Project area; therefore, the ability of these species to move through the Santa Clara River will not be substantially impaired. During construction of bridges, several measures will be implemented to ensure that habitat connectivity is maintained (see *Section 7.1.2.1*). Planned flood control structures in the ephemeral tributary drainages mostly will preclude aquatic guild species from using those areas during times of high flow when aquatic environments within these tributaries normally would be accessible. However, these drainages are not expected to provide important long-term habitat for species in this guild because of the ephemeral nature of the drainages (ENTRIX 2007).

Based on existing information for the four semi-aquatic species addressed in this section, the terrestrial buffer requirements of the arroyo toad and southwestern pond turtle are anticipated to be large enough to provide adequate buffers for the western spadefoot toad and two-striped garter snake. Based on the life history information for the arroyo toad and southwestern pond turtle, the River Corridor SMA would be adequate to meet the typical terrestrial habitat requirements of the arroyo toad and southwestern pond turtle. In terms of connectivity, the most significant supporting feature in the Project area is instream movements along the Santa Clara River and its major tributaries (e.g., Castaic Creek, Salt Creek). Any suitable aquatic habitats within the Project area and immediate region can be reached directly by moving along the River corridor. Furthermore, there are no suitable aquatic habitat areas (i.e., major drainages or streams) within their dispersal capabilities (at least up to 5 miles along streambeds for the arroyo toad (66 FR 9413–9474) and 3 miles overland for southwestern pond turtles (Holland 1994)) and that could not be reached by moving along the River corridor. Habitat connectivity for the arroyo toad and southwestern pond turtle in the Project area, therefore, will not be significantly affected by build-out of the Project area.

The River Corridor SMA is likely to be used by all of the high mobility ground-dwelling guild species, except perhaps black bear, which would only use it as a north–south crossing point to gain access to large habitat areas to the north and south of the River. At 1,000 feet to more than 2,000 feet wide, the River Corridor SMA also provides adequate habitat for these species without forcing them into direct contact with humans. The Santa Clara River Corridor SMA serves as a major east–west linear linkage to canyons and hills along the length of the River and provides far-reaching linkages to larger open space area north and south of the River. This linkage provides a 1,000-foot-wide to 2,000-foot-wide swath of riverine habitat that probably can meet the life history needs of the bobcat, coyote, and mule deer and can function as dispersal habitat

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for the mountain lion and black bear. Movement perpendicular to the River Corridor SMA is expected and the connectivity with the Salt Creek area and High Country SMA should be highly utilized by wildlife moving between the Santa Susana Mountains and the River Corridor SMA. Individuals moving between the Santa Susana Mountains and the Santa Clara River corridor, however, will be constrained from moving directly north from the River within the Project area boundaries because of the proposed Homestead Village development partially blocking Homestead and Off-Haul canyons north of the River Corridor SMA. Instead, they will need to use habitat west of the Project area in Ventura County to move into the Los Padres National Forest, as illustrated in the Missing Linkages conceptual design (*Figure 10*). Individuals moving east along the River corridor are more likely to encounter urban-related impacts as they move into the City of Santa Clarita and thus would be at greater risk. Coyotes and mule deer, and possibly bobcat, probably could traverse the length of the River corridor to the east and gain access to the Angeles National Forest north and south of the River corridor, but mountain lion and black bear would be at much greater risk of negative urban-related encounters. SR-126 is a significant barrier to north–south movement by high mobility ground-dwelling species. For the primary crossings of SR-126 in Ventura County, there are existing arched culverts that serve the ranch agricultural operations, as depicted on *Figure 9*. These culverts are large enough to accommodate black bear, mule deer, and mountain lion.

Upon build-out, the River Corridor SMA will range from approximately 1,000 feet wide to 2,000 feet wide, with a 100-foot transition area between the top of river bank and the urban edge. This amount of riverine habitat in the River Corridor SMA will be adequate for the two riparian-associated species—raccoon and fox—and will provide some suitable habitat for the badger, black-tailed jackrabbit, and long-tailed weasel. Several mitigation measures will also provide additional protection from urban-related edge effects, including designated trails, fencing along the River Corridor SMA, controls on public access to the River (e.g., daytime use only, prohibitions on motorized and mountain bikes), pet restrictions, controls on stray and feral cats and dogs, requirements that nighttime illumination be downcast in areas adjacent to natural habitat areas, and controls on the use of rodenticides (see *Section 7.1.4*). The River Corridor SMA will serve as the major linkage to canyons and hills along the length of the River and will provide a regional linkage to larger open space areas for species in this guild. The direct connection of the High Country SMA and Salt Creek area with the River Corridor SMA provides an important cross-linkage for this guild for moving from the higher elevations to and through the River corridor. The main constraint on north–south movement of species in this guild in the Project area and to adjacent open space areas is SR-126. As described above for the high mobility ground-dwelling guild species, however, there are existing arched culverts that serve the ranch agricultural operations, as depicted on *Figure 9*. Because these culverts are large enough to

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accommodate black bear, mule deer, and mountain lion, they will be more than adequate for the smaller moderate mobility ground-dwelling guild species.

Because home ranges for low mobility ground-dwelling species tend to be small, habitat conditions along buffer areas must contain suitable habitat and adequate cover for the species in order for them to be present. Even with suitable habitat, however, a buffer may not support a large number and diversity of low mobility ground-dwelling guild species without some control on edge predator species such as cats. Thus, the effective buffer for protecting low mobility ground-dwelling species should be on the order of at least 200 feet. Areas with 100-foot buffers will provide some level of protection, but some edge effects would likely occur beyond the 100-foot buffer areas. To provide additional protection along the open space–urban interface, several mitigation measures applicable to all open space areas will provide additional protection, including public use only along designated trails, requirements that pets be kept on leash, requirements that nighttime illumination be downcast in areas adjacent to natural habitat areas, controls on stray and feral cats and dogs, and controls on the use of rodenticides (see *Section 7.1.4.*).

Under the assumption that a buffer of at least 200 feet is needed to protect a low mobility species from most edge effects (CBI 2000), a habitat linkage or corridor bounded on both sides by development would have to be at least 400 feet wide, plus whatever width of “interior” habitat is necessary to support a particular species’ life history. The Santa Clara River Corridor SMA also will provide adequate interior habitat for many low mobility ground-dwelling species. Upon build-out of the Project area, the River Corridor SMA will range from approximately 1,000 feet to 2,000 feet wide, with a 100-foot transition area between the top of the river bank and the urban edge, for a total width ranging from 1,200 feet to 2,200 feet. Assuming a 200-foot edge area on either side of the River, the minimum “functional” width of the River Corridor SMA would be approximately 800 feet, which equates to a hypothetical circular home range of 11 to 12 acres. Thus, most low mobility ground-dwelling species would have more than adequate habitat in the River Corridor SMA without necessarily being exposed to adverse edge effects. As a result, the River Corridor SMA will provide habitat connectivity function for adjacent large open space areas for the low mobility ground-dwelling species and allow for dispersal through intergenerational diffusion of populations. As with the high and moderate mobility ground-dwelling guild species, SR-126 is probably the main constraint for north–south population diffusion of species in the low mobility ground-dwelling guild. Movement mostly will be limited to areas with existing and future culverts under the highway.

The key assumption for the high mobility aerial guild species is that their movement in an area is not highly constrained by local landscape conditions such as unsuitable habitat, urban development, or roads. Examples of migratory birds in this guild are the least Bell’s vireo and

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other neotropical migrants that nest in the Santa Clara River. Because of the large number and diversity of species in this guild, the buffer issues and requirements for high mobility aerial guild species are variable and species-specific. For example, white-tailed kite nest sites, while requiring adequate foraging habitat within about 0.5 mile of a nest site, may be threatened by nest disturbance and predation by urban-related species that have been found to be most active within 328 feet to 656 feet of the habitat edge. Increased human activity in proximity to nests may also affect the behavior of the species and result in nest abandonment or lower reproductive success. In contrast, nesting behavior and life cycle requirements of least Bell's vireo occur in a relatively confined area and, as evidenced by monitoring data of least Bell's vireo within the Santa Clara River adjacent to SR-126 and I-5, may be tolerant of relatively high ambient noise levels.

Even with high-quality habitat, a minimum 100-foot-wide buffer in the transition area between the top of the river bank and development, for example, likely will not ameliorate all adverse edge effects on nesting birds in the moderate mobility aerial guild, such as invasive plant species; nest parasitism by brown-headed cowbirds; predation by pet, stray, and feral cats; nighttime lighting; and noise. Expanding the buffer width to as much as 300 feet likely would not lower edge effects enough to preclude the need for management of these effects along the open space–urban interface (CBI 2000). Additional measures to reduce these edge effects include invasive species controls, public use only along designated trails, requirements that pets be kept on leash, requirements that nighttime illumination be downcast in areas adjacent to natural habitat areas, controls on stray and feral cats and dogs, and cowbird trapping (see *Section 7.1.4*). As species in the moderate mobility aerial guild have relatively small home ranges and territories, local populations or subpopulations could be supported in suitable habitat within the 6,700 acres comprising the High Country SMA, Salt Creek area, and River Corridor SMA. The High Country SMA, Salt Creek area, and River Corridor SMA are all directly connected to one another (*Figure 3*). Dispersal by moderate mobility aerial guild species throughout these areas is expected to occur primarily through diffusion via these existing linkages. In addition, these open space areas are directly connected to suitable habitat north and south of the Project area, as well as east and west via the River Corridor SMA. The largest “non-habitat” jumps would be across SR-126.

7.1.2 Mitigation Requirements

Mitigation requirements related to the River Corridor SMA include construction-related measures to protect sensitive biological resources from such potential adverse effects as noise and polluted storm runoff as well as preserve-related measures including substantial restoration and enhancement of riparian habitats. There are additional mitigation measures related to long-term management of biological resources within the preserves. For the River Corridor SMA,

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these measures are discussed separately in *Section 7.1.4*. Where a statement is taken from a mitigation measure, the mitigation measure number is provided in parentheses following the statement. For mitigation measures from the Newhall Ranch Specific Plan Program EIR (County of Los Angeles 2003b), the number is preceded by “SP.” For mitigation measures from this Project EIS/EIR, the number is preceded by “BIO.” The cumulative list of mitigation measures, which includes the full text of each measure, is provided in *Appendix B*.

7.1.2.1 Construction-Related Mitigation Measures

Construction-related mitigation measures pertaining to the preservation of resources within the River Corridor SMA generally fall within the following categories: general measures, species avoidance, and avoidance through Project design.

General Measures

In order to protect sensitive biological resources within the River Corridor SMA during construction adjacent to or crossing the preserve, construction plans shall include an applicable erosion control plan, performance under SCAQMD Rule 403 dust control, and a Project Stormwater Pollution Prevention Plan (SWPPP), which shall include a thorough list of Best Management Practices (BMPs) (BIO-70). To limit impacts to water quality, the Specific Plan construction shall conform to all provisions of required NPDES permits and water quality permits that would be required by the RWQCB (SP-4.6-58). 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 (BIO-49). Development areas shall have dust control measures, compliant with SCAQMD Rule 403, implemented and maintained to prevent dust from impacting vegetation communities and special-status plant and aquatic wildlife species. 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 shall be installed to protect special-status species locations (BIO-71).

In addition, prior to grading and construction activities, a qualified biologist shall conduct Worker Environmental Awareness Program (WEAP) training for all construction/contractor personnel. 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 provide training materials and briefings to all personnel working on site; discuss legal requirements and various Acts and the legal consequences of non-compliance with these requirements and Acts; attend the pre-construction meeting to ensure that timing/location of construction activities do not conflict with other mitigation requirements; conduct meetings with the contractor and other construction personnel describing the importance

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of restricting work to the restricted areas; discuss procedures for minimizing harm/harassment of wildlife; ensure that haul roads, access roads, and on-site staging and storage areas are sited within grading areas to minimize degradation of vegetation communities; review construction area in the field with the contractor in accordance with the final grading plan; conduct a final field review of staking; 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; be present during initial vegetation clearing and grading; and submit an immediate report to CDFG of any conflicts or errors resulting in impacts to special-status biological resources (BIO-52). Any grading activities within or adjacent to the River Corridor SMA shall have grading perimeters clearly marked and inspected prior to grading. The Project biologist shall work with the grading contractor to avoid inadvertent impacts to riparian resources (SP-4.6-20).

To protect Middle Canyon Spring and to reduce potential direct impacts to any special-status species that may be located within the Spring (e.g., the undescribed snail and the undescribed sunflower) due to unrestricted access, the Project applicant or its designee shall 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. Equipment, materials, construction debris, or anything associated with construction activities shall not be stored behind the temporary fencing. Any upslope runoff from construction areas will be directed away from the Middle Canyon Spring (BIO-74).

Species Avoidance

With regard to avoiding impacts to specific, special-status plant species, focused surveys for the undescribed species of everlasting 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 (BIO-75).

At the time of any subdivision map submittal proposing construction, the County may require updated site-specific surveys for rare, threatened, or endangered plant or animal species that may be present. Each of these surveys shall be conducted in accordance with consultation requirements and documented in a separate report (SP-4.6-53).

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In order to avoid the direct impact of a special-status wildlife species, within 30 days of ground disturbance activities associated with construction or grading occurring 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), weekly surveys shall be 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 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 seven 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 the 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, the buffers will be established in consultation with the CDFG. Potential golden eagle nesting will be reported to the 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 (BIO-56).

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 the 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. This buffer may be adjusted, provided noise levels do not exceed 60 dBA hourly Leq at the edge of the nest site, as determined by a qualified biologist in coordination with a qualified acoustician (BIO-56).

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 (1997) Coastal California Gnatcatcher Presence/Absence Survey Guidelines. If a territory or nest is confirmed,

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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 (BIO-56).

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. 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 (CDFG 1995). 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 (BIO-57).

With regard to protecting special-status fish, prior to development within, or disturbance to, occupied unarmored threespine stickleback habitat, a formal consultation with the USFWS shall occur (SP-4.6-54). 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 (SP-4.6-57). Aquatic habitats within construction sites and access roads, as well as 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 prior to construction activities that result in any disturbance to the banks or wetted channel. 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 (BIO-43).

Prior to the construction of any temporary or permanent crossing of the Santa Clara River, a Stream Crossing and Diversion Plan shall be developed. The Plan shall guide the timing and methods for pre-construction aquatic species surveys; special-status species relocation; fish exclusion techniques; methods to maintain fish passage during construction; channel habitat

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enhancement; fish stranding surveys; and the techniques for the removal of crossings prior to winter storm flows. Methods of providing access across the River shall be constructed outside of the winter season and not during periods when spawning is occurring. If adult special-status fishes are present and spawning has not occurred, they shall be relocated prior to the diversion or crossing. Once the fishes have been excluded by herding, a USFWS staff member or their agents shall inspect the site for remaining or stranded fish. A USFWS staff member or their 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 their agents shall be present at all times (BIO-44). 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 BIO-44 and in consultation with CDFG and USFWS. Equipment shall not be operated in areas of ponded or flowing water, unless authorized by CDFG or USFWS. Equipment shall not be operated in areas of ponded or flowing water, unless authorized by CDFG or USFWS. A qualified restoration ecologist will supervise the construction of the diversion channels on site. 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. Fish shall be excluded from any artificial flowing channels from dewatering discharge (BIO-45). A qualified biologist will inspect diversion or dewatering activities 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 (BIO-46). 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 (BIO-47). The installation of bridges, culverts, or other structures shall not impair movement of fish and aquatic life. The bottoms of temporary culverts shall be placed at or below channel grade, and the 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 (BIO-48)

Similar measures are designed to protect special-status reptiles and amphibians. 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 prior to construction activities. 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, to be developed and submitted to CDFG for approval 60 days prior to any ground disturbing activities within potentially occupied habitat. A 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

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biologist prior to the initiation of construction each day (BIO-89). 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 the presence of arroyo toad (BIO-17) and California red-legged frog (BIO-18) prior to construction activities. If either species is 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 the CDFG and the Corps. The applicant shall implement measures required by the USFWS Biological Opinion for each species that either supplement or supersede these measures. If present, the applicant shall develop and implement a monitoring plan for the present species in consultation with the USFWS and CDFG (BIO-17 and BIO-18). 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 prior to construction activities. If detected in or adjacent to the Project, nesting surveys shall be conducted by a qualified biologist when suitable nesting habitat exists within 1,300 feet of occupied habitat in an area where ground disturbance will occur. If a southwestern pond turtle nesting area would be adversely impacted by maintenance 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 the CDFG. A 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 (BIO-50). A qualified biologist shall conduct pre-construction surveys for the western spadefoot toad within all portions of the Project site containing suitable breeding habitat prior to the issuance of a grading permit for ground disturbance, construction, or site preparation activities. If the western spadefoot toad is found on site, measures including habitat creation at a 2:1 ratio, pre-construction surveys, relocation of adults/tadpoles and egg masses, and monitoring for five years will be implemented (BIO-53).

Thirty days prior to construction in grassland, scrub, chaparral, oak woodland, riverbank, and agricultural 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 (BIO-58) and American Badger (BIO-41). 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. This buffer may be reduced based on the location of the den upon consultation with the CDFG. Occupied maternity dens, depressions, nests, or burrows shall be flagged for

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avoidance, and a biological monitor shall be present during construction. Unattended young shall be relocated to suitable habitat by a qualified biologist. 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 San Diego desert 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, a qualified biologist shall relocate nests off site, to be spaced no closer than 100 feet apart. Collection and relocation of San Diego black-tailed jackrabbits and San Diego desert woodrats shall only occur with the proper scientific collection and handling permits (BIO-58). 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, and a minimum 200-foot buffer established. This buffer may be reduced based on the location of the den upon consultation with the CDFG. Maternity dens shall be flagged for avoidance and 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 before or after the rearing season. Any relocation of badgers shall occur only after consultation with the CDFG (BIO-41).

No earlier than 30 days prior to construction, a qualified biologist shall conduct a pre-construction survey to determine if active roosts of special-status bats are present on or within 300 feet of the Project disturbance boundaries. If an active maternity roost is found, it shall not be disturbed and all work within 300 feet shall be postponed or halted until the roost is vacated and the juveniles fledged. Rock outcrops or trees occupied by maternity roosts shall be avoided by the Project. If avoidance of the maternity roost must occur but the bat biologist determines, in consultation with and with the approval of the 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. 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. 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) (BIO-61). Any special-status species bat day roost sites found by a qualified biologist during

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pre-construction surveys conducted per BIO-61, to be directly (within Project disturbance footprint) or indirectly (within 300 feet of Project disturbance footprint) impacted shall be mitigated with creation of artificial roost sites within suitable preserved open space located at an adequate distance from sources of human disturbance (BIO-68).

Thirty days prior to construction activities, a qualified biologist shall conduct a pre-construction survey for ringtail. 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 non-breeding/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) (BIO-83).

Thirty days prior to construction activities, a qualified biologist shall conduct a pre-construction survey for mountain lion natal dens. The survey shall include the construction footprint and the area within 2,000 feet of the Project disturbance boundaries. Should an active natal den be located, no construction activities shall occur in the 2,000-foot buffer until a qualified biologist in consultation with the CDFG establishes an appropriate setback from the den that would not adversely affect the successful rearing of 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 (BIO-60).

During construction of new antennae and phone/utility towers, the area shall be kept clean of debris, such as cable, trash, and construction materials, and all microtrash and litter, vehicle fluids, and food waste from the Project area shall be collected on a daily basis. A qualified biologist with knowledge of California condors shall monitor construction activities within the Project area. 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. Should condors be found roosting within 0.5 mile of the construction area, no construction activity shall occur between 1 hour before sunset to 1 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 (BIO-82).

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Temporary orange fencing and prohibitive signage shall be installed and maintained around the Middle Canyon Spring prior to and during all phases of construction within 200 feet of the spring and, if applicable, within 100 feet of flowing water in the Middle Canyon drainage (BIO-74). In addition, monitors will be on site daily when work is conducted within 100 feet of flowing water in the Middle Canyon drainage and/or 200 feet of the spring complex, and weekly during mass grading of Middle Canyon. During any period where dewatering occurs within 100 feet of flowing water in the Middle Canyon drainage and/or 200 feet of the spring complex, biological and hydrologic parameters will be monitored daily. No dewatering activities shall occur in the spring complex. Discharge of any dewatering waters, nuisance irrigation flows, water quality basin, subdrain, backdrain, or toe drain flows shall be directed away from the spring (BIO-77).

A qualified biologist shall conduct focused surveys for the undescribed snail species prior to the commencement of grading/construction activities in any drainage area supporting perennial flow. Individuals shall be relocated to appropriate habitat within Middle Canyon Spring. If individuals 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 (BIO-86).

All oak trees that will not be removed that are regulated under CLAOTO (County of Los Angeles 1988) 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 five 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 (BIO-42).

Avoidance through Project Design

In terms of avoidance through Project design, consultation shall occur with the County and CDFG before surveys, after surveys, at subdivision map approval, and during development/disturbance and further mitigation activities (SP-4.6-59).

The installation of bridges, culverts, or other structures shall not impair movement of fish and aquatic life. The bottoms of temporary culverts shall be placed at or below channel grade, and the 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 (BIO-48).

Landscaping plans shall be prepared prior to the issuance of a grading permit. This plan will include a plant palette composed of native or non-native, non-invasive species that do not require

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high irrigation rates. The plant palette proposed for use on landscaped slopes, street medians, park sites, and other public areas and Fuel Modification Zones (FMZs) within 100 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. Container plants to be installed in public areas within 100 feet of the River Corridor SMA shall be inspected by a qualified restoration specialist for diseases, weeds, and pests, including Argentine ants. Landscape plants within 100 feet of native vegetation communities shall not be on the most recent Cal-IPC inventory (<http://www.cal-ipc.org/ip/inventory/index.php>) (Cal-IPC 2006, 2007) (BIO-72).

The following Project design features will be implemented to prevent invasion of Argentine ants: container plants for use within 100 feet of the open space areas (River Corridor SMA, High Country SMA, Salt Creek area, and natural portions of the Open Area) shall be inspected for pests (including Argentine ants) and disease. Plants with pests, weeds, or diseases shall be rejected (BIO-72). In spineflower preserves, these additional Project design features and management measures will be implemented: (1) providing “dry zones” between urban development and spineflower preserves, including the buffers, (2) ensuring that landscape container plants installed within 200 feet of preserves are ant-free, (3) maintaining natural hydrologic conditions in the preserves, including the buffers, and (4) using drought-resistant plants in FMZs and minimizing irrigation to the extent feasible (BIO-85).

All lighting along the perimeter of natural areas shall be downcast luminaries with light patterns directed away from natural areas (SP-4.6-56).

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 (BIO-51).

The Commerce Center Drive Bridge shall be designed to provide roosting habitat for bats. A qualified biologist shall work with the Project engineer in identifying and incorporating structures into the bridge design that provide suitable roosting habitat for bat species occurring in the Project area (BIO-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

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Corridor Plan that specifically addresses wildlife movement corridors at San Martinez Grande Canyon, 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, methods to be implemented to provide for passage, 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. Prior to the construction of residential, commercial, and industrial developments, signs will be placed along the roads indicating potential wildlife crossings where mountain lions and mule deer are likely to cross (BIO-59).

All surfaces on new antennae and phone/utility towers shall be designed and operated with anti-perching devices in conformance with Avian Power Line Interaction Committee (APLIC) standards to deter California condors and other raptors from perching (BIO-82).

7.1.2.2 Preserve-Related Mitigation Measures

Mitigation for Specific Plan impacts to sensitive or special-status biological resources would include restoration and enhancement of habitat within the River Corridor SMA. The mitigation of Project impacts through restoration of habitat and enhancement of existing habitat quality must conform to the requirements set forth below.

Wetlands Creation/Restoration

Wetlands creation/restoration, as referred to in this RMDP, includes the revegetation of native plant communities on sites that are currently non-jurisdictional and that may have had jurisdictional habitat removed due to past activities, such as agricultural or oil and natural gas operations.

Riparian resources along the Santa Clara River that are impacted by the Specific Plan would require restoration of similar habitat and values. Avoidance of impacts to riparian resources shall be the primary goal during the Project-specific design of the individual stages of the Specific Plan. Unavoidable impacts to riparian resources would be minimized through Project design and then mitigated by the implementation of a revegetation plan. The individual, Project-specific revegetation plans would be submitted with each Subnotification form in accordance with the CDFG Master Lake/Streambed Alteration Agreement or the Corps section 404 Permit, and shall include the following:

- 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

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habitat. First priority will be given to those restorable areas that occur adjacent to existing patches (areas) of native habitat that support special-status 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 special-status species (SP-4.6-1).

- 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-4.6-2).
- The identification of restoration/mitigation sites to be used 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 baseline data deemed necessary by the permitting agency (SP-4.6-3).
- The revegetation effort shall analyze 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, and soil amendments), including the need for a supplemental irrigation system, if any (SP-4.6-4).
- 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 in *Table 10*, or as approved by the permitting federal and state agencies (SP-4.6-5).
- 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-4.6-6).
- The final revegetation plans shall include guidelines for the maintenance of each 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-4.6-7).
- The final revegetation plans 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, and structural development). The monitoring effort shall include an evaluation of not only the plant material installed, but the use of the site by

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wildlife. The length of the monitoring period shall be determined by the permitting federal and/or state agency (SP-4.6-8).

- Monitoring reports for the mitigation site shall be reviewed at frequency intervals determined by the permitting federal and/or state agency (SP-4.6-9).
- Contingency plans and appropriate remedial measures shall be outlined in the revegetation plans (SP-4.6-10).

Table 10
Recommended Plant Species for Habitat Restoration in the River Corridor SMA

Common Name	Scientific Name
Trees	
red willow	<i>Salix levitata</i>
arroyo willow	<i>Salix lasiolepis</i>
Fremont cottonwood	<i>Populus fremontii</i>
black cottonwood	<i>Populus balsamifera ssp. trichocarpa</i>
western sycamore	<i>Platanus racemosa</i>
Shrubs	
mulefat	<i>Baccharis salicifolia</i>
sandbar willow	<i>Salix exigua</i>
arrow weed	<i>Pluchea sericea</i>
Herbs	
mugwort	<i>Artemisia douglasiana</i>
western ragweed	<i>Ambrosia psilostachya</i>
cattail	<i>Typha latifolia</i>
bulrush	<i>Scirpus americanus</i>
prairie bulrush	<i>Scirpus maritimus</i>

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

- The CMIP demonstrates the feasibility of implementing the mitigation acreage required in response to RMDP impacts. Detailed wetlands 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 Subnotification letters for individual projects. Individual project submittals shall include applicable CMIP elements, complying with the requirements outlined below. The 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

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and monitor the enhancement/restoration area; (6) a list of criteria by which to measure success of the mitigation sites (e.g., percent cover of native species, survivorship/establishment of plantings, and wildlife use); (7) measures to exclude unauthorized entry into the riparian creation/enhancement areas; and (8) contingency measures in the event that mitigation efforts are not successful (BIO-1).

- If the County determines that there may be Mexican elderberry scrub on the property, a site-specific survey shall be conducted to determine its presence or absence and any necessary mitigation measures shall be implemented (SP-4.6-60).
- Vegetation community installation completed two years or more prior to construction impact, for all vegetation communities at a 1:1 ratio (SP-4.6-63)
- The permanent removal of jurisdictional riparian habitats shall be replaced by creating riparian habitats of similar functions and values on the Project site. Riparian habitat meeting success criteria two years in advance of the removal of riparian habitat at the construction site shall be in kind and at a 1:1 replacement ratio (except as indicated below in *Table 11*). If replacement riparian habitat cannot meet the success criteria two years in advance of the Project, the ratios listed below will apply (BIO-2).

**Table 11
CDFG Jurisdictional Permanent Impacts Mitigation Ratios**

Ratios Listed by Vegetation Types and Quality				
Vegetation Community	Veg Code / ID	HIGH Reach Value*	MEDIUM Reach Value**	LOW Reach Value**
		(Mitigation Ratio)	(Mitigation Ratio)	(Mitigation Ratio)
Southern Cottonwood–Willow Riparian Forest	SCWRF	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 Alkali Marsh	CAM	2.5:1	2:1	1.5:1
Coastal and Valley Freshwater 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 (CSB) 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

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Table 11 (Continued)

Ratios Listed by Vegetation Types and Quality				
Vegetation Community	Veg Code / ID	HIGH Reach Value*	MEDIUM Reach Value**	LOW Reach Value**
		(Mitigation Ratio)	(Mitigation Ratio)	(Mitigation Ratio)
Eriodictyon Scrub	EDS	1.5:1	1.25:1	1:1
California Annual Grassland	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 Hybrid Assessment of Riparian Condition (HARC) methodology described in the Newhall Ranch 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 the Newhall Ranch RMDP-SCP EIS/EIR.

*** 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 the Newhall Ranch RMDP-SCP EIS/EIR.

Ratios for Permanent Impacts to all classifications: Mitigation established prior to disturbance: 1:1 ratio; mitigation initiated <2 years after disturbance shall follow ratios in table above; mitigation initiated 2 to 5 years after disturbance shall add 0.5 to each value in the table above; and over 5 years, 1.0 is added to each value in the table above. (For example, initiation of mitigation of mulefat scrub 3 years after disturbance for a high habitat impact would be a ratio of 2.5:1, instead of 2:1 if initiated within 2 years of disturbance or 3:1 if initiated more than 5 years after disturbance.)

Ratios for temporary Impacts to all classifications: Disturbance period < 2 yrs, 1:1; 2 to 5 yrs, 1.5:1; over 5 yrs., 2:1, except for removal of Southern Cottonwood and Oak Woodlands, which shall be mitigated at 2:1 for High, 1.5:1 for Medium and 1:1 for Low for all periods (except for pre-mitigated, which is 1:1).

Exotic/invasive species removal, followed by restoration/revegetation, may be used to offset impacts above. Mitigation shall be credited at an acreage equivalent to the percentage of exotic vegetation at the restoration site. This means, for example, if a 10 acre area is occupied by 10% exotic species, restoration will be credited for one acre of impact. As appropriate and authorized by CDFG, reduced percentage credits may be applied for invasive removal with passive restoration (weeding and documentation of natural recruitment only).

- Creation of new vegetation communities and restoration of impacted vegetation communities shall occur at suitable sites in or adjacent to the watercourses or in areas where bank stabilization would occur. The highest priority vegetation community restoration sites are to be new riverbed areas and tributary areas created, or disturbed sites impacted, during the excavation of uplands for bank protection/stabilization activities. All sites shall contain suitable hydrologic conditions and surrounding land uses to ensure a self-sustaining functioning riparian vegetation community. Candidate restoration sites shall be selected by Newhall Land (BIO-3).
- Replacement vegetation communities shall be designed to replace the functions and values of the vegetation communities being removed. The replacement vegetation communities shall have dominant trees and understory shrubs and herbs (excluding exotic species) similar to those of the affected vegetation communities. In addition, the replacement vegetation communities shall be designed to replicate the density and structure of the

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affected vegetation communities once the replacement vegetation communities have met the mitigation success criteria (BIO-4).

- Average plant spacing shall be determined based on an analysis of vegetation communities to be replaced. The applicant shall develop tree spacing specifications for all riparian vegetation communities to be restored (BIO-5).
- Each tree and shrub species used in restoration shall have a minimum of 80% survival after two years. Non-native species cover will be no more than 5% absolute cover through the term of the restoration. 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. Performance standards for percent cover, species richness, and exotics control shall be developed by the applicant or its designee for each individual vegetation community type being created, based on the observed natural cover in undisturbed land in the Project area, for approval by CDFG and the Corps. 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. Using the HARC assessment methodology, the compensatory mitigation site shall meet or exceed the baseline functional scores of the impact area in jurisdictional waters of the United States. If the compensatory mitigation site cannot meet or exceed the baseline functional score of the impact area in jurisdictional waters of the United States, additional mitigation area would be required to compensate for the functional loss (BIO-6).
- If, at any time prior to Agency approval of the restoration area, the site is subject to an act of God, the applicant shall be responsible for replanting the damaged area. Should a second act of God occur prior to Agency approval, the applicant and Agencies shall develop (an) alternative restoration strategy(ies) to meet success criteria (BIO-7).
- 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 (BIO-8).
- As an alternative to the creation/restoration of vegetation communities to compensate for permanent removal of riparian vegetation communities, in the Santa Clara River, the applicant may control invasive exotic plant species within the Upper Santa Clara River sub-watershed for a portion of the Santa Clara River mitigation required under BIO-2. The

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applicant may perform this work or contribute “in-lieu fees” to the Upper Santa Clara River Arundo/Tamarisk Removal Program to perform this work (BIO-9).

- 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 (VCRCRD 2006). Exotic plant species control credit will be credited at an acreage equivalent to the percentage of exotic vegetation at the restoration site (BIO-10).
- To provide an accurate and reliable accounting system for mitigation, the applicant, utilizing the RMDP, shall file a mitigation accounting form annually with the Corps and CDFG by April 1. This form shall document the amount of vegetation planted during the past year, any “in-lieu fees” paid for exotic, invasive plant species control, the status of all mitigation credits to date, and any credits subtracted by projects implemented during the past year (BIO-11).
- 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 BIO-6 (BIO-12).
- The mitigation program shall incorporate applicable principles in the interagency Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks (60 FR 58605–58614) to the extent feasible and appropriate. 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 (BIO-13).
- Temporary impacts from construction activities in the riverbed shall be restricted to areas shown on maps submitted with the Subnotification letter submitted to the Corps and CDFG for individual project approval. Any variation from these limits shall be noted, with a justification for a variation (BIO-14).
- 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, subject to the performance standards of BIO-6 (BIO-15).
- Vegetation communities temporarily impacted by the proposed Project shall be revegetated as described in BIO-2. Native mulch or native topsoil may be salvaged from the work area prior to construction and returned there following construction to facilitate restoration. In the event that native plant recruitment is determined by the Project biologist to be inadequate for successful habitat establishment, or native cover does not reach 50% of the

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pre-construction native plant cover within three years, Newhall Land shall revegetate the temporary construction areas in accordance with the methods designed for permanent impacts (BIO-16).

Wetlands Enhancement

- Wetlands enhancement, as referred to in this RMDP, is the rehabilitation of areas of native jurisdictional habitat that have been moderately disturbed by past activities (e.g., grazing, roads, and/or oil and natural gas operations) or have been invaded by non-native plant species, such as giant reed and tamarisk (SP-4.6-11).
- 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, has been removed from the River Corridor SMA pursuant to the Long-Term Management Plan set forth in Section 2.6(a)(2)(d) of the adopted RMP (SP-4.6-12).
- To provide guidelines for the installation of supplemental plantings of native species within enhancement areas, revegetation plans shall be prepared prior to implementation of mitigation. These supplemental plantings will be composed of plant species similar to those growing in the existing habitat patch (*Table 10*) (SP-4.6-13).
- Not all enhancement areas would require supplemental plantings of native species. Some areas may support conditions conducive for rapid, “natural” re-establishment of native species. The revegetation plans 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-4.6-14).
- Removal of non-native species, such as giant reed, saltcedar or tamarisk, tree tobacco, or castor bean, 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, special-status 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 that minimizes impacts to the existing native riparian plant species (SP-4.6-15).

Least Bell's Vireo

Permanent loss of nesting/foraging habitat in key population areas for the least Bell's vireo shall be mitigated at a 5:1 ratio unless otherwise authorized by the CDFG or USFWS. Temporary loss

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of nesting/foraging 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 BIO-1 through BIO-16. Nesting/foraging habitat within the 60 dBA sound contour shall be considered degraded and shall be mitigated at a ratio of 2:1 (BIO-55).

Coastal California Gnatcatcher

Impacts to documented occupied nesting habitat for coastal California gnatcatcher shall be mitigated through the acquisition or preservation of nesting coastal California gnatcatcher habitat at a 3:1 ratio, or by the ratio specified in BIO-2, which ever is greater (BIO-55).

Parish's Sagebrush

For individual projects resulting in significant impacts to Parish's sagebrush, a mitigation plan for *Artemisia tridentata* ssp. *parishii* shall be developed in accordance with general mitigation plan requirements discussed in BIO-1 through BIO-16.

Coastal Scrub

Implementation of the RMDP will require preservation of approximately 1,900 acres of coastal scrub on the Project site. Some of this habitat is recovering from wildfire and the expectation is that it will recover without active intervention. The functional values of any burned dedicated land areas shall be evaluated annually until such time that conditions are commensurate with the quality of the impacted habitat being mitigated. (BIO-20). In the event that the functional value of burned habitat preserved under BIO-20 has not recovered within five years of the dedication, supplemental restoration of coastal scrub shall occur. A restoration plan for coastal scrub shall be developed, subject to approval of the CDFG, and shall incorporate the findings of the *Newhall Ranch Mitigation Feasibility Report* (Dudek 2007a). The plan shall specify, at a minimum, the following: (1) the location of mitigation sites, (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; (5) the source of all plant propagules and the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; and (6) a schedule and action plan to maintain and monitor the restoration sites (BIO-21).

Slender Mariposa Lily

The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan (Dudek 2007c) 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

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habitat in selected areas to be managed as natural open space without conflicting with other resource management objectives. Habitat replacement/enhancement will be at a 1:1 ratio (acres restored/enhanced to acres impacted). A minimum of 133 acres of slender mariposa lily cumulative occupied area will be conserved in the RMDP and SCP Project boundaries (BIO-40).

Undescribed Everlasting

Prior to the issuance of a grading permit for any individual project or project phase located where undescribed everlasting plants may occur, an Undescribed Everlasting Mitigation and Monitoring Plan shall be implemented. 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 (BIO-76).

Oak Trees

The applicant shall prepare an oak resource replacement plan, to be submitted for approval to CDFG and County of Los Angeles, and implemented upon approval. The Plan shall identify areas suitable for oak woodland enhancement and creation (BIO-22a). To meet the minimum mitigation criteria set forth in CLAOTO, the applicant will replace impacted oaks (measuring 8 inches in diameter, or greater, or with a combined diameter of 12 inches for multi-stem oaks) at a ratio of 2:1. Additionally, oaks meeting the criteria for classification as a Heritage Tree (defined by CLAOTO as “any oak tree measuring 36 inches or more in diameter”) will be replaced at a ratio of 10:1 (BIO-22b). In addition, the Newhall Ranch RMDP-SCP EIS/EIR requires replacement of oak trees at a ratio of 0.5:1 for oak trees with dbh of 8 to 35 inches, and at a ratio of 2.5:1 for oak trees with dbh of 36+ inches lost or impacted in uplands (BIO-22c). These trees are in addition to the CLAOTO requirement described above. These additional trees may also be incorporated into woodland habitat enhancement or creation.

Standards for the restoration and enhancement of oak resources include those listed below. Oak resources include oak trees of the sizes regulated under CLAOTO, Southern California black walnut trees, and mainland (holly-leaf) 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. The Plan shall be reviewed by the CDFG, Los Angeles Department of Regional Planning and the County Forester and 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) performance standards, (6) remedial actions, and (7) a monitoring program (SP-4.6-48).

When a map revision or Substantial Conformance determination on any subdivision map or Conditional Use Permit (CUP) would result in changes to an approved oak tree permit, then the

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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 (SP-4.6-62).

Southern California Black Walnut and Mainland Cherry

Any Southern California black walnut and mainland cherry trees or shrubs (outside riparian areas) greater than one inch dbh shall be replaced in the ratio of at least two to one. Multi-trunk trees/shrub dbh shall be calculated based on combined trunk dbh (BIO-88).

7.1.3 Mitigation Opportunities

Areas within the River Corridor SMA have been disturbed by previous uses or activities (e.g., grazing, roads, and oil and natural gas operations) or non-native plant species, such as giant cane and tamarisk. These disturbed areas provide the opportunity for habitat restoration in the River Corridor SMA, including: (1) riparian revegetation activities, (2) oak tree replacement in, or adjacent to, existing oak woodlands and mixed and valley oak/grass, (3) coastal scrub preservation, (4) least Bell's vireo nesting and foraging habitat replacement, (5) California gnatcatcher nesting habitat replacement, and (6) Southern California black walnut and mainland cherry tree or shrub replacement, and (7) special-status plant restoration. Specifically, disturbed areas could be restored through invasive species removal and the planting of native plant species according to the mitigation terms described above. Additionally, grazing, except as permitted as a long-term resource management activity, has been removed from the River Corridor SMA, consistent with the provisions of the adopted Specific Plan RMP. Without ongoing disturbance from cattle, many riparian areas will recover naturally. The general areas in which riparian mitigation activities may take place are shown on *Figure 28*.

There are eight reaches of the Santa Clara River and Castaic Creek within the River Corridor SMA, including SCR-SA, SCR-PO, SCR-LO-DNST, SCR-LO-MID, SCR-LO-UPST, SCR-HU, SCR-MI, and CA . Stream reaches were divided based on substrate type (e.g., sand vs. silt), water regime (e.g., ephemeral vs. perennial stream segments), and adjacent land use (e.g., open space, paved road, and/or agricultural field). Additionally, each reach was classified according to wetland and riparian habitat categories. A detailed discussion of each stream reach is provided in the Newhall Ranch Mitigation Feasibility Study (Dudek 2007a), attached as *Appendix E* to this RMDP.

Wetlands mitigation opportunities identified in the Santa Clara River corridor include a combination of wetlands enhancement and wetlands creation. For wetlands enhancement, prevalent non-native, invasive plant species include giant reed, tree tobacco, and saltcedar. The patchiness and abundance of these invasive species varies; however, they are found throughout

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the existing wetlands habitats along the Santa Clara River. Wetlands creation along the River corridor primarily includes restoring and broadening the river floodplain (often in association with bank stabilization projects) by grading down some of the adjacent agricultural fields to an appropriate elevation for wetlands creation.

The proposed Project design also provides the opportunity to create riparian habitat adjacent to existing riparian habitats. The majority of the proposed buried bank stabilization would be installed outside of the existing riparian zone within disturbed upland habitats devoid of riparian or other native habitats. This bank stabilization technique provides the opportunity to create additional riparian habitat between the existing riparian corridor and the location of the proposed bank stabilization.

Least Bell's Vireo

Suitable opportunities for the replacement and creation of nesting and foraging habitat for the least Bell's vireo exist within the River Corridor SMA. The actual location and acreage of these areas will be determined upon mitigation implementation.

Coastal California Gnatcatcher

Suitable opportunities for the preservation of nesting habitat for the coastal California gnatcatcher exist within the River Corridor SMA. The actual location and acreage of these areas will be determined upon mitigation implementation.

Parish's Sagebrush

Suitable opportunities for Parish's sagebrush mitigation exist within the higher elevations of bank stabilization areas within the River Corridor SMA. The actual location and acreage of these areas will be determined upon mitigation implementation.

Undescribed Everlasting

Suitable opportunities for undescribed everlasting mitigation exist within the river wash areas within the River Corridor SMA. The actual location and acreage of these areas will be determined upon mitigation implementation.

Coastal Scrub

Suitable opportunities for coastal scrub mitigation are expected to occur within the higher elevations of bank stabilization areas within the River Corridor SMA. Approximately 1 acre was identified as suitable for coastal scrub restoration in the Newhall Ranch Mitigation Feasibility Study (Dudek 2007a).

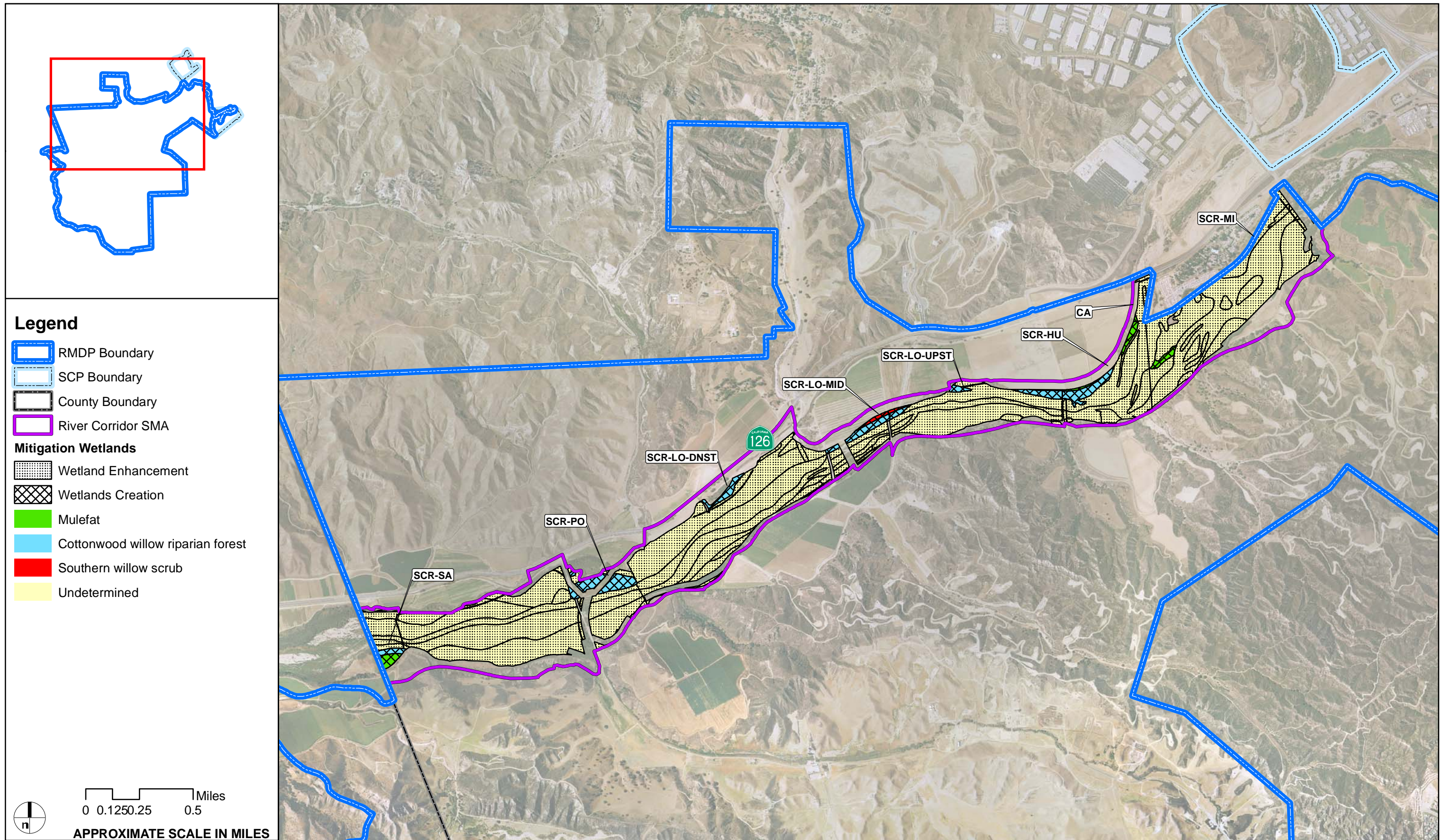
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Slender Mariposa Lily

Suitable opportunities for slender mariposa lily mitigation are expected to occur within coastal scrub mitigation areas at the higher elevations of bank stabilization areas within the River Corridor SMA (Dudek 2007c). The actual location and acreage of these areas will be determined upon mitigation implementation.

Oak Trees

Potential mitigation sites for coast live oak woodland totaling 6 acres were identified in the River Corridor SMA. The actual location and acreage of these areas will be determined upon mitigation implementation.



AERIAL SOURCE: AirphotoUSA, 2007

FIGURE 28

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River Corridor SMA - Riparian Mitigation Areas

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Southern California Black Walnut and Mainland Cherry

Suitable opportunities for Southern California black walnut and mainland cherry mitigation exist within the River Corridor SMA. The actual location and acreage of these areas will be determined upon mitigation implementation.

7.1.4 Management Requirements

Species and Habitat

The River Corridor SMA supports a substantial and diverse set of native species and habitats, many of which are rare or declining in the region. The RMDP provides for long-term preservation of these resources through active management of edge effects, restoration of existing disturbed portions of the preserve area, establishment of a monitoring program, and implementation of adaptive management measures based on the results of the monitoring program. The River Corridor SMA shall continue to support the same species and habitat as currently identified to occur in that area with equal or greater overall function and value.

With specific regard to species and habitat management, control of invasive species is generally the first priority for maintaining native species. Within the River Corridor SMA, the following groups of invasive species have been identified as potentially occurring and requiring active control measures:

Bullfrog, African clawed frog, crayfish, and non-native fishes will be monitored annually for the first five years after construction of Project facilities. After five years, bi-annual monitoring shall occur up to 50 years to determine if additional control is necessary. Control shall be conducted within Project facilities where monitoring results indicate that exotic species have colonized an area. Also, an Exotic Wildlife Species Control Plan shall be developed by a qualified biologist and a control program for bullfrog, African clawed frog, and crayfish shall be implemented. The program will require the control of these species during construction within the River Corridor SMA and modified tributaries (bridges, diversions bank stabilization, drop structures) (BIO-80).

Argentine ants will be monitored quarterly via ant pitfall traps 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) following the completion and occupancy of a development area. A qualified biologist shall determine the monitoring locations. Direct controls for Argentine ants may include, but are not limited to, nest/mound insecticide treatment and broadcast application of insecticides over large infested areas, or available natural control methods being developed. Also, a general reconnaissance of the infested area would be conducted to identify and correct the possible source of the invasion, such as uncontrolled urban

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runoff, leaking pipes, collected water. Argentine ants will be monitored for up to 50 years (BIO-87).

Brown-headed cowbirds shall be controlled through a cowbird trapping program implemented once vegetation clearing begins and maintained throughout the construction, maintenance and monitoring period of the riparian restoration sites. The applicant shall follow CDFG and USFWS protocol. In the event that trapping is terminated after the first few years, subsequent phases of the RMDP development will require initiation of trapping surveys, to determine whether re-establishment of the trapping program is necessary (BIO-78).

Invasive plant species shall be controlled mainly through implementation of restoration/mitigation efforts previously described, which explicitly target areas with the highest concentrations of these species. Additional efforts of weed control will occur in native habitat supporting 30% or more cover of invasive species (based on a once acre minimum mapping unit). These efforts are described in more detail in *Section 8.2.1*.

Recreation and Access

Recreational access to the River Corridor SMA helps to ensure its long-term preservation because the public will generally value resources that are part of their everyday lives as something they can view, interact with, and understand. However, recreational access also provides potential for adverse effects on species and habitat. Thus, 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 and BIO-73):

- Access to the River Corridor SMA for hiking, equestrian, and biking shall be limited to the river trail system (including the Regional River Trail and various local trails) as set forth in the Specific Plan.
- The river trail system shall be designed to avoid impacts to existing native riparian habitat, especially habitat areas known to support special-status species. Where impacts to riparian habitat are unavoidable, disturbance shall be minimized and mitigated as previously outlined under habitat restoration.
- 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 of equestrian use as permitted on established trails, shall be posted along the River Corridor SMA.

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- No hunting, fishing, or motorbike or off-trail bike riding shall be permitted.
- The trail system shall be designed and constructed to minimize impacts on native habitats.
- Permanent split rail fencing shall be installed along all River Corridor SMA 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.

Transition Areas

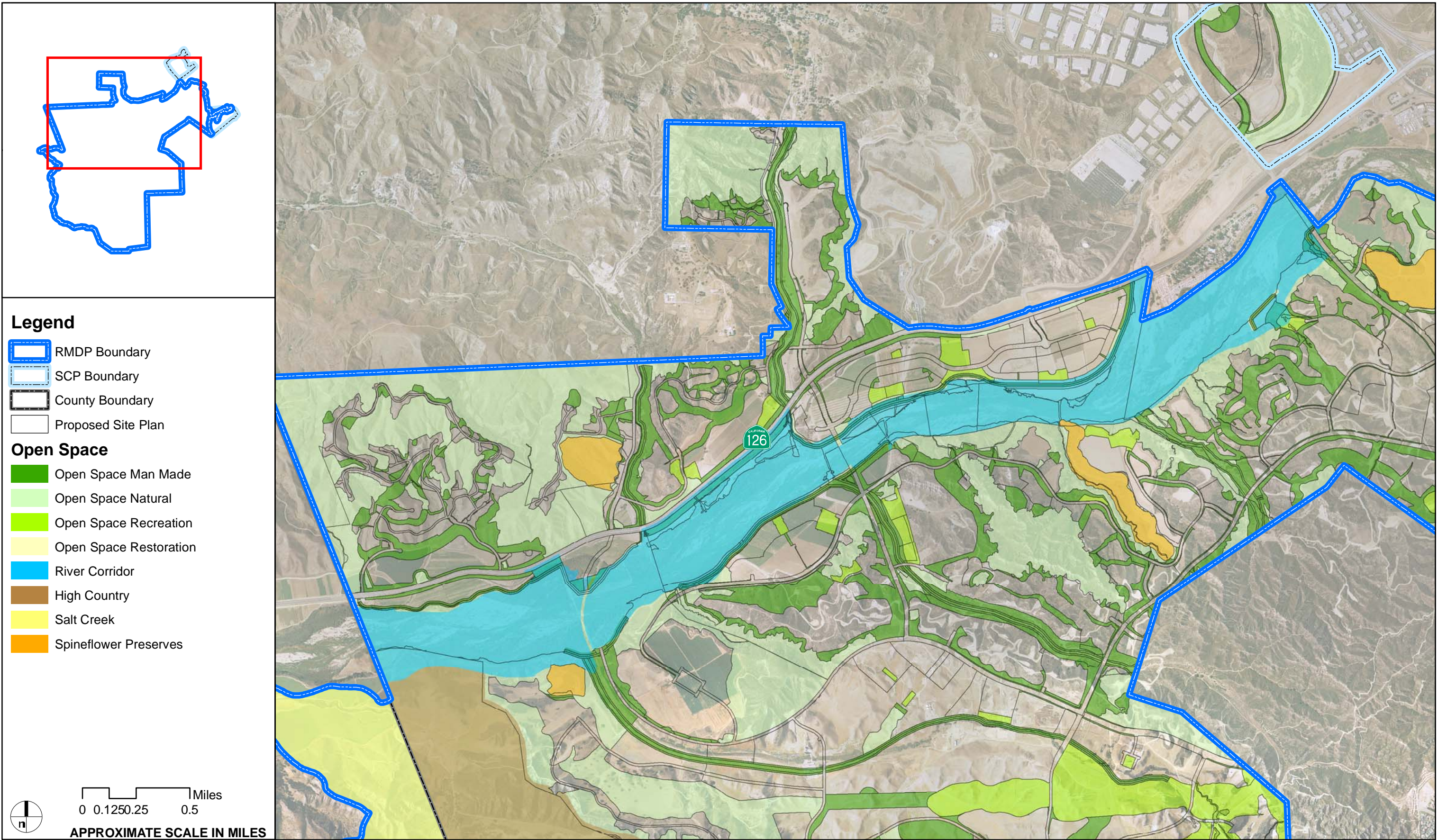
Where development lies adjacent to the boundary of the River Corridor SMA, a transition area shall be designed to lessen the impact of the development on the conserved area. Transition areas may comprise Open Area, natural or revegetated manufactured slopes, other planted areas, bank stabilization areas, and trails. *Figure 29* indicates the relationship between the River Corridor SMA and the Open Area of the Specific Plan. As indicated on the exhibits, the south side of the River Corridor SMA is separated from development by the river bluffs, except in one location. The Regional River Trail will serve as a transition area on the north side of the River, where development areas adjoin the River Corridor SMA (excluding Travel Village) (SP-4.6-18).

The following are the standards for design of transition areas (SP-4.6-19):

- A trail (i.e., for pedestrians) shall be provided along the edge in all locations where there is no steep grade separation between the River Corridor SMA and development.
- Native riparian and upland 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 in *Table 12*.
- 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.

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- Legend**
- RMDP Boundary
 - SCP Boundary
 - County Boundary
 - Proposed Site Plan

- Open Space**
- Open Space Man Made
 - Open Space Natural
 - Open Space Recreation
 - Open Space Restoration
 - River Corridor
 - High Country
 - Salt Creek
 - Spineflower Preserves

APPROXIMATE SCALE IN MILES

AERIAL SOURCE: AirphotoUSA, 2007

FIGURE 29

Newhall Ranch - Resource Management and Development Plan

River Corridor SMA - Open Areas and Development Relationship



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Table 12
Recommended Plant Species for Transition Areas Adjacent to the River Corridor SMA

Common Name	Scientific Name
Trees	
coast live oak	<i>Quercus agrifolia</i>
Fremont cottonwood	<i>Populus fremontii</i>
black cottonwood	<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>
western sycamore	<i>Platanus racemosa</i>
blue elderberry	<i>Sambucus mexicana</i>
Southern California black walnut	<i>Juglans californica</i>
valley oak	<i>Quercus lobata</i>
California laurel	<i>Umbellularia californica</i>
Shrubs	
California rose	<i>Rosa californica</i>
California blackberry	<i>Rubus ursinus</i>
coast goldenbush	<i>Isocoma menziesii</i>
arrow weed	<i>Pluchea sericea</i>
four-winged saltbush	<i>Atriplex canescens</i>
big saltbush	<i>Atriplex lentiformis</i>
encelia	<i>Encelia californica</i>
toyon	<i>Heteromeles arbutifolia</i>
monkeyflower	<i>Mimulus aurantiacus</i>
California wish-bush	<i>Mirabilis laevis</i> var. <i>crassifolia</i>
coastal prickley-pear	<i>Opuntia littoralis</i>
mainland (holly-leaf) cherry	<i>Prunus ilicifolia</i> ssp. <i>ilicifolia</i>
golden current	<i>Ribes aureum</i>
sugar-bush	<i>Rhus ovata</i>
squaw bush	<i>Rhus trilobata</i>
butterweed	<i>Senecio flaccidus</i> var. <i>douglasii</i>
big sagebrush	<i>Artemisia tridentata</i>
California sagebrush	<i>Artemisia californica</i>
California buckwheat	<i>Eriogonum fasciculatum</i>
Herbs	
mugwort	<i>Artemisia douglasiana</i>
tarragon	<i>Artemisia dracunculus</i>
bicolor cudweed	<i>Gnaphalium bicolor</i>
California everlasting	<i>Gnaphalium californicum</i>
deerweed	<i>Lotus scoparius</i>
California aster	<i>Lessingia filaginifolia</i>
shrubby phacelia	<i>Phacelia ramosissima</i>

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Table 12 (Continued)

Common Name	Scientific Name
Grasses	
California bromegrass	<i>Bromus carinatus</i>
saltgrass	<i>Distichlis spicata</i>
western wild-rye	<i>Elymus glaucus</i>
giant ryegrass	<i>Leymus condensatus</i>
beardless wild rye	<i>Leymus triticoides</i>
California melic	<i>Melica imperfecta</i>
littleseed muhly	<i>Muhlenbergia microsperma</i>
foothill needlegrass	<i>Nasella lepida</i>
purple needlegrass	<i>Nasella pulchra</i>
alkali sacaton	<i>Sporobolus airoides</i>
fescue	<i>Vulpia microstachys</i>
Annuals	
giant needlegrass	<i>Achnatherum coronatum</i>
yellow fiddleneck	<i>Amsinckia menziesii</i>
southern sun cup	<i>Caminossonia bistorta</i>
common owl's clover	<i>Castilleja exserta</i>
winecup clarkia	<i>Clarkia purpurea</i>
California poppy	<i>Eschscholzia californica</i>
globe gilia	<i>Gilia capitata</i>
coast goldfields	<i>Lasthenia californica</i>
Lindley's annual lupine	<i>Lupinus succulentus</i>
arroyo lupine	<i>Lupinus succulentus</i>
baby-blue eyes	<i>Nemophila menziesii</i>
caterpillar phacelia	<i>Phacelia cicutaria</i>
dot-seed plantain	<i>Plantago erecta</i>

Note: This list may be supplemented to include appropriate plants with the approval of the County Biologist.

Where bank stabilization is required to protect development areas, it shall be composed of ungrouted rock, open cell concrete interlocking systems, or buried bank stabilization, except at bridge crossings and other locations where public health and safety requirements necessitate concrete or other bank stabilization.

A 100-foot-wide minimum 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 not feasible for physical infrastructure planning. The buffer area may be

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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.

Public Education

The Home Owners' Association for each tract map shall supply educational information to future residents. This information, regarding pets, wildlife, and open space areas, will address the possibility of predators preying on pets that are allowed outdoors, and will indicate that no action may be taken. It will also specify that pets must remain leashed while on designated trail systems and/or in any areas within or adjacent to open space. This mitigation measure requires as-needed control of stray and feral cats and dogs in open space areas. Feral cats and dogs may be trapped and deposited with the local branch of the Society for the Prevention of Cruelty to Animals (SPCA) or the Los Angeles County Department of Animal Control (BIO-63).

An Integrated Pest Management (IPM) Plan that controls 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. Preparation of the Covenants, Conditions, and Restrictions (CC&Rs) for each tract map shall include language that prohibits the use of anticoagulant rodenticides on the Project site (BIO-64).

7.2 High Country SMA

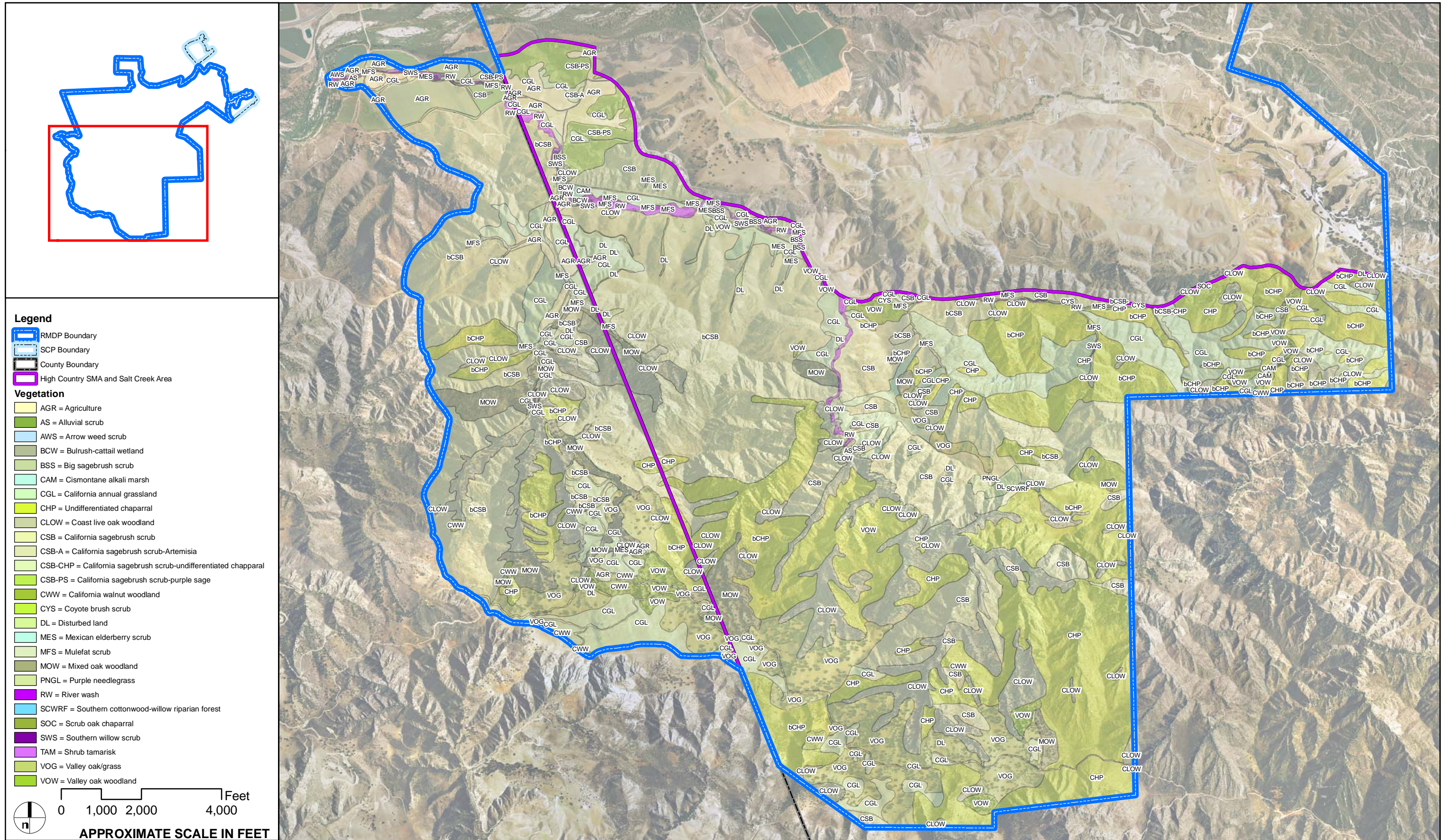
7.2.1 Resource Description

The Newhall Ranch High Country SMA is located in an unincorporated portion of the Santa Clara River Valley on the north slopes of the Santa Susana Mountains (*Figures 30 and 31*). Site elevations range from 800 feet AMSL in the Santa Clara River bottom in Ventura County, to approximately 3,500 feet AMSL on the ridgeline of the Santa Susana Mountains along the southern boundary. This study area is dominated by rugged terrain, the main feature being a south-to-north drainage area for Salt Creek and its associated tributaries.

Although largely preserved, construction of certain public use infrastructure facilities, as discussed in *Section 6.0*, would result in temporary impacts to 30 acres within the High Country SMA and Salt Creek area; the permanent footprint of the facilities would occupy 27 acres within the two preserve areas.

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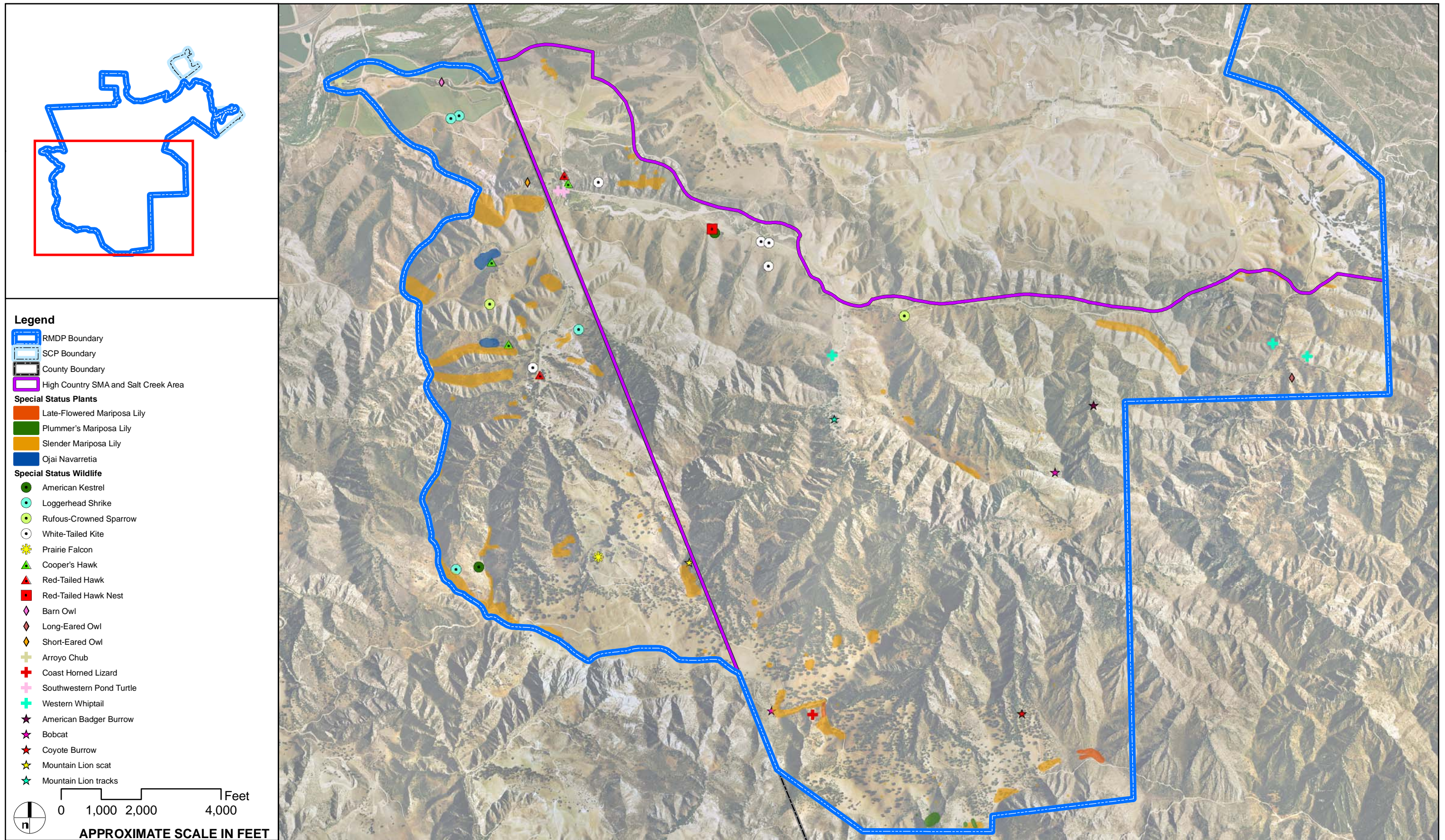
FIGURE 30

Newhall Ranch - Resource Management and Development Plan

High Country SMA and Salt Creek Area - Generalized Vegetation Communities and Land Covers



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AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 31

Newhall Ranch - Resource Management and Development Plan

High Country SMA and Salt Creek Area - Special Status Species Occurrences



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Plant Communities and Land Covers

Native and naturalized habitats within the study 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 in this area. Upland habitats dominate the landscape within the study area. The major upland plant communities include coastal scrub, undifferentiated chaparral, coast live oak woodland, mixed oak/grass, and California annual grassland. The Santa Clara River and portions of Salt Creek support a variety of riparian plant communities. These include river wash, mulefat scrub, alluvial scrub, big sagebrush scrub, cismontane alkali marsh, bulrush/cattail wetland, southern willow scrub and Mexican elderberry scrub. *Table 13* shows the acreage of vegetation communities and land cover types in the High Country SMA; these areas are mapped on *Figure 30*.

**Table 13
High Country SMA Vegetation Communities/Land Cover**

Vegetation Community/Land Cover	Associations (If Any)	Acres	Percent of Total
Upland Grassland			
California annual grassland		465.0	11.1%
Purple needlegrass		0.6	<0.1%
Subtotal: Upland Grassland		465.6	11.1%
Coastal Scrub			
California sagebrush scrub	California sagebrush scrub	437.0	10.4%
	Burned California sagebrush scrub	784.8	18.7%
	California sagebrush scrub-Artemisia	0.3	<0.1%
	California sagebrush scrub-purple sage	84.1	2.0%
California sagebrush scrub- undifferentiated chaparral	Burned California sagebrush scrub-undifferentiated chaparral	5.2	0.1%
Coyote brush scrub		2.2	<0.1%
Subtotal: Coastal Scrub		1,313.6	31.2%
Chaparral Scrub			
Scrub oak chaparral		0.2	<0.1%
Chaparral scrub	Undifferentiated chaparral scrub	537.0	12.8%
	Burned undifferentiated chaparral scrub	831.2	19.8%
Subtotal: Chaparral Scrub		1,368.4	32.5%
Upland Woodland and Savannah			
California walnut woodland		6.8	0.2%
Coast live oak woodland		446.7	10.6%
Mixed oak woodland		74.2	1.8%
Valley oak woodland	Valley oak woodland	47.8	1.1%
	Valley oak/grass	300.3	7.1%
Subtotal: Upland Woodland and Savannah		875.8	20.8
Riparian Waters and Wetlands			

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Table 13 (Continued)

Vegetation Community/Land Cover	Associations (If Any)	Acres	Percent of Total
Bulrush-cattail wetland		1.4	<0.1%
Cismontane alkali marsh		3.3	0.1%
River wash		33.3	0.8%
Subtotal: Riparian Waters and Wetlands		38.0	0.9%
Riparian Scrub			
Alluvial scrub		0.5	<0.1%
Big sagebrush scrub		8.5	0.2%
Mexican elderberry		3.2	0.1%
Mulefat scrub		14.1	0.3%
Southern willow scrub		4.3	0.1%
Subtotal: Riparian Scrub		30.6	0.7%
Riparian Forest Woodland			
Southern cottonwood/-willow riparian forest		0.9	<0.1%
Land Covers			
Agriculture		59.8	1.4%
Disturbed land		52.7	1.3%
Subtotal: Land Covers		112.5	2.7%
Total		4,205.4	100.0%

¹ The acreages and vegetation types depicted in this table were determined during field mapping in 2006 (Dudek and Associates 2006b)

There are an estimated 13,731 oak trees within the High Country SMA. The High Country SMA is a part of County's SEA 20, and the value of the habitats within the area are increased by their continuity and connectivity with the large areas of undeveloped and recently acquired public land in the Santa Susana Mountains, which is also part of SEA 20.

The applicant leases portions of the High Country SMA for oil and natural gas production, cattle grazing, and agricultural operations (e.g., food crop production, dryland farming, and honey farming). All such operations are currently ongoing. Grazing activities and oil and natural gas production have had a noticeable effect on much of the natural habitat on site. Scrub habitats have been displaced by non-native grasslands as a result of grazing. Southern California Edison and Southern California Gas Company have distribution lines within easements on site as well.

Soils

Soils in the High Country SMA are mapped as Balcom-Castaic-Saugus association, 30% to 50% slopes, eroded (USDA 1969). As previously mentioned, the mapping was done at a generalized level, so there are areas within the High Country SMA with lesser slopes and other soil types that were not mapped. Balcom-Castaic-Saugus association, 15% to 30%, slopes and small areas of

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San Andreas and San Benito soils may also be found within the High Country SMA (USDA 1969).

Soils found on site are characterized generally by steep to very steep, often eroded slopes. The soils are well drained, with moderate to moderately slow subsoil permeability and medium to very rapid runoff. The erosion hazard is moderate to very high, largely dependent on slope steepness (USDA 1969).

Special-Status Species

Habitat suitability calculations for the High Country SMA for various special-status species is presented in *Appendix C – Newhall Ranch Special-status Species Preserve Report*. This species list and set of habitat calculations are included as data for the habitat manager to utilize when monitoring the preserve. Although several surveys have been conducted to detect both special-status plant and animal species, and the results of those surveys are described below, additional species may occur in the preserve and, if detected, should also be managed for preservation in accordance with the RMP goals and objectives. Changes in habitat types and abundance will affect suitability for various species; such changes shall be monitored with specific regard to special-status species listed in *Appendix C*.

Special-status wildlife species previously identified within the High Country SMA are mapped on *Figure 31*. The following special-status species were identified during surveys conducted between 2002 and 2007: southwestern pond turtle, coastal western whiptail, coast horned lizard, white-tailed kite, Cooper’s hawk, loggerhead shrike, prairie falcon, long-eared owl, short-eared owl, Southern California rufous-crowned sparrow, mountain lion, and American badger. Special-status plant species previously identified within the High Country SMA are also mapped on *Figure 31* and include slender mariposa lily, Ojai navarretia, Plummer’s mariposa lily, and late-flowered mariposa lily.

7.2.2 Mitigation Requirements

Mitigation requirements in the High Country SMA include construction-related and preserve-related measures (*Appendix B*). The construction of RMDP components and related facilities within the High Country SMA requires the implementation of construction-related mitigation. Preserve-related measures, either for impacts associated with the construction of bank stabilization, a visitor center, trails or access roads, or for impacts identified during the subdivision process in other portions of the Specific Plan, include restoration of habitat and enhancement to existing habitat. Several types of habitat restoration may occur in the High Country SMA, such as: (1) riparian revegetation activities, (2) oak tree replacement in, or

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adjacent to, existing valley oak woodlands and mixed and valley oak/grass, (3) coastal scrub restoration, and (4) special-status plant species transplantation and restoration.

7.2.2.1 Construction-Related Mitigation Measures

Construction-related mitigation measures pertaining to the preservation of resources within the High Country SMA generally fall within the following categories: general measures, species avoidance, and avoidance through Project design.

General Measures

General measures listed in *Section 7.1.2.1* would also apply to the High Country SMA, especially where construction occurs on or near the edge of the preserve. These measures include stormwater and dust controls (SP-4.6-58, BIO-49, BIO-70, and BIO-71) and contractor education and monitoring (BIO-52) to protect resources in the High Country SMA. In addition, any grading activities within or adjacent to the High Country SMA shall have grading perimeters clearly marked and inspected prior to grading. The Project biologist shall work with the grading contractor to avoid inadvertent impacts (SP-4.6-34).

Species Avoidance

Some of the species avoidance measures listed in *Section 7.1.2.1* apply to resources within the High Country SMA. These include pre-construction surveys and avoidance for the California red-legged frog, arroyo toad, oak trees, southwestern pond turtle, American badger, western spadefoot toad, coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, coast patch-nosed snake, nesting birds, western burrowing owl, San Diego desert woodrat, San Diego black-tailed jackrabbit, special-status bat species, ringtail, two-striped garter snake, south coast garter snake, California condor, and mountain lion (SP-4.6-35, SP-4.6-53, SP-4.6-55, BIO-17, BIO-18, BIO-41, BIO-42, BIO-50, BIO-53, BIO-56, BIO-57, BIO-58, BIO-60, BIO-61, BIO-68, BIO-82, BIO-83, and BIO-89). Additional construction-related species avoidance measures pertaining to the preservation of resources within the High Country SMA include the following:

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 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 to February). Qualified biologists shall conduct surveys to capture and relocate individuals 30 days prior to construction activities in suitable habitat. The qualified biologist will be present during ground-

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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 (BIO-54).

A qualified Lepidoptera biologist shall conduct pre-construction surveys for San Emigdio blue butterfly in all areas containing host plants in sufficient density to support this species. The removal of quail brush or other documented host plants from occupied San Emigdio blue butterfly habitat in Potrero Canyon or other areas shall occur only when eggs and larvae are not present (i.e., mid-September to March) (BIO-65). 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. 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 (BIO-67).

Avoidance through Project Design

Development in the vicinity to the High Country SMA will need to conform to the following avoidance through Project design measures listed in *Section 7.1.2.1*: consultation with the County and CDFG at important benchmarks, design of culverts below channel grade, landscaping restrictions, Argentine ant management, lighting restrictions, road undercrossing construction and wildlife crossing signage, and new antenna and phone/utility tower surface design and operation standards (SP-4.6-56, SP-4.6-59, BIO-48, BIO-59, BIO-72, and BIO-82).

Also, the installation/relocation of phone and cell towers and utility poles is to be coordinated with the CDFG. Installation of utility poles, phone, and cell towers shall be 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) (BIO-81).

7.2.2.2 *Preserve-Related Mitigation Measures*

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, grassland, and woodland areas of the High Country SMA. The removal of grazing in the High Country SMA is discussed under “Long-Term Management” in Section 2.6(b)(3)(d) of the adopted RMP (SP-4.6-27 and SP-4.6-39).

Table 14 provides a list of appropriate plant species for use in enhancement areas in the High Country SMA.

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Table 14
Recommended Plant Species for Use in Enhancement Areas in the High Country SMA

Common Name	Scientific Name
East- and North-Facing Slopes	
Trees	
valley oak	<i>Quercus lobata</i>
coast live oak	<i>Quercus agrifolia</i>
Southern California black walnut	<i>Juglans californica</i>
Shrubs	
chamise	<i>Adenostoma fasciculatum</i>
hoaryleaf ceanothus	<i>Ceanothus crassifolius</i>
chaparral whitehorn	<i>Ceanothus leucodermis</i>
ceanothus	<i>Ceanothus oliganthus</i> var. <i>oliganthus</i>
manzanita	<i>Arctostaphylos glandulosa</i>
big-berried manzanita	<i>Arctostaphylos glauca</i>
Herbs	
foothill needlegrass	<i>Nasella lepida</i>
California broom	<i>Lotus scoparius</i>
miniature lupine	<i>Lupinus bicolor</i>
arroyo lupine	<i>Lupinus succulentus</i>
California poppy	<i>Eschschlozia californica</i>
fescue	<i>Vulpia microstachys</i>
South- and West-Facing Slopes	
Trees	
valley oak	<i>Quercus lobata</i>
blue elderberry	<i>Sambucus mexicana</i>
Shrubs	
California sagebrush	<i>Artemisia californica</i>
purple sage	<i>Salvia leucophylla</i>
black sage	<i>Salvia mellifera</i>
California buckwheat	<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>
grape soda lupine	<i>Lupinus excubitus</i> var. <i>hallii</i>
Herbs	
foothill needlegrass	<i>Nasella lepida</i>
California broom	<i>Lotus scoparius</i>
miniature lupine	<i>Lupinus bicolor</i>
arroyo lupine	<i>Lupinus succulentus</i>
California poppy	<i>Eschschlozia californica</i>
fescue	<i>Vulpia microstachys</i>

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

Wetlands and Stream Banks

Mitigation for wetlands and stream banks will be accomplished through wetlands creation/restoration and wetlands enhancement. Wetlands in the High Country SMA may be

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restored and enhanced in accordance with the provisions described in *Section 7.1.2.2* (SP-4.6-2, SP-4.6-3, SP-4.6-4, SP-4.6-6, SP-4.6-7, SP-4.6-8, SP-4.6-9, SP-4.6-10, SP-4.6-26a, SP-4.6-60, BIO-1 through BIO-16).

Least Bell's Vireo

Permanent loss of nesting/foraging habitat in key population areas for the least Bell's vireo shall be mitigated at a 5:1 ratio unless otherwise authorized by the CDFG or USFWS. Temporary loss of nesting/foraging 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 BIO-1 through BIO-16. Nesting/foraging habitat within the 60 dBA sound contour shall be considered degraded and shall be mitigated at a ratio of 2:1 (BIO-55).

Coastal California Gnatcatcher

Impacts to documented occupied nesting habitat for coastal California gnatcatcher shall be mitigated through the acquisition or preservation of nesting coastal California gnatcatcher habitat at a 3:1 ratio, or by the ratio specified in BIO-2, which ever is greater (BIO-55).

Parish's Sagebrush

For individual projects resulting in significant impacts to Parish's sagebrush, a mitigation plan for *Artemisia tridentata* ssp. *parishii* shall be developed in accordance with the provisions described in *Section 7.1.2.2* (BIO-1 through BIO-16).

Coastal Scrub

A mitigation plan for coastal scrub shall be developed prior to the issuance of grading permits for individual projects and implemented by the applicant or its designee, as described in *Section 7.1.2.2* (BIO-20 and BIO-21).

Slender Mariposa Lily

The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan (Dudek 2007c) 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 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 specify: (1) the location of mitigation sites; (2) a description of "target" vegetation; (3) site preparation measures; (4) methods for the removal of non-native plants; (5) the source of all plant propagules and the quantity and species of seed or potted stock of all plants to be introduced or planted into the

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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) measures such as fencing, signage, or security patrols as needed; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful. Slender mariposa lily propagules (seed or bulbs) will be introduced onto the site when habitat restoration/enhancement is judged successful, determined by: (1) percent cover and species richness of native species reach 50% 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. 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 feet of 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). Newhall Land 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). A minimum of 133 acres of slender mariposa lily cumulative occupied area will be conserved in the RMDP and SCP Project boundaries, 103 of which will be conserved and managed in the High Country SMA and Salt Creek area (BIO-40).

Oak Trees

The oak resource replacement plan shall be prepared, as described in *Section 7.1.2.2* (SP-4.6-26a, SP-4.6-48, BIO-22a, and BIO-22b) In addition to the CLAOTO requirements discussed in BIO-22b, oak trees lost or impacted in uplands shall be replaced at a ratio of 0.5:1 for oak trees with dbh of 8 to 35 inches, and at a ratio of 2.5:1 for oak trees with dbh of 36+ inches (BIO-22c). Lost oak woodlands occurring on upland sites shall be mitigated by creating or enhancing oak woodlands in the Salt Creek area and High Country SMA at a minimum 1:1 ratio. Alternatively, existing degraded woodland areas may be enhanced, improved, and managed at a minimum 2:1 ratio for lost woodland acreage (BIO-22d).

Southern California Black Walnut and Mainland Cherry

Mitigation for significant impacts to Southern California black walnut and mainland cherry trees or shrubs (outside riparian areas) greater than one inch dbh shall be conducted in accordance with the provisions described in *Section 7.1.2.2* (BIO-88)

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San Emigdio Blue Butterfly

Quail brush or other documented host plants from any occupied San Emigdio blue butterfly habitat shall be replaced at a minimum of a 1.5:1 ratio and 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 Measures BIO-6 and BIO-7 (BIO-66). A qualified biologist shall monitor the status of the Potrero Canyon San Emigdio blue butterfly colony for a period of five years after Potrero Canyon Road construction completion/operation commencement. Should it be determined that the operation of the road may be contributing to a population decline, a habitat creation plan will be prepared and implemented in suitable locations contiguous to the habitat but away from the road (BIO-79).

7.2.3 Mitigation Opportunities

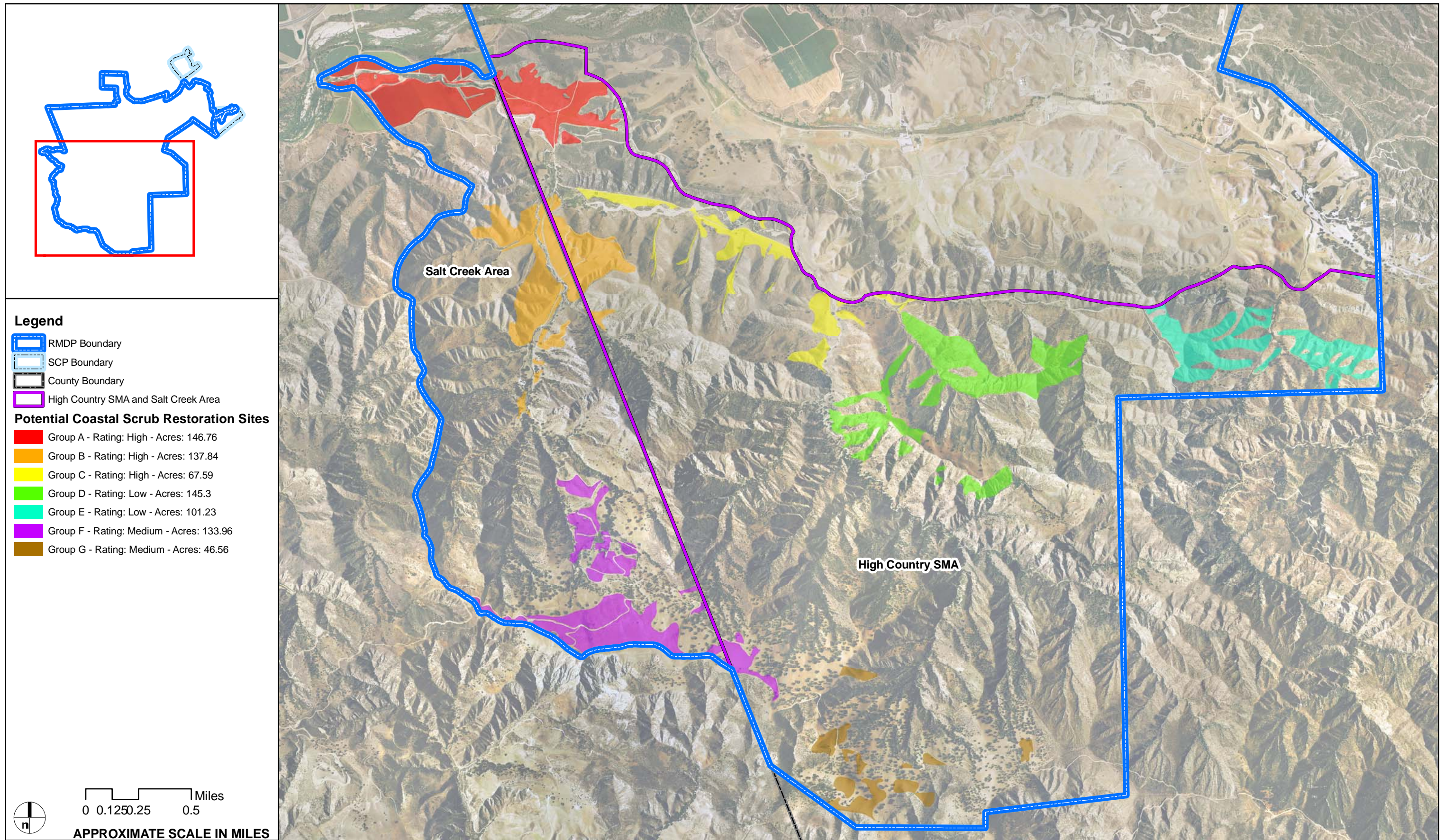
The approved RMP identified the High Country SMA as a primary location for oak resource planting and enhancement to mitigate impacts that will occur within the development areas of the Specific Plan. (The Salt Creek area provides similar mitigation opportunities and is to be managed in conjunction with, and in the same manner as, the High Country SMA.) *The Newhall Ranch Mitigation Feasibility Report* (Dudek 2007a) describes several types of habitat restoration that may occur in the High Country SMA, such as: (1) riparian revegetation activities and exotic removal, as described in *Section 7.1.3*, (2) oak tree replacement in or adjacent to existing oak woodlands and mixed and valley oak/grass, (3) coastal scrub preservation, (4) special-status plant species transplantation and restoration, (5) least Bell's vireo nesting and foraging habitat replacement, (6) California gnatcatcher nesting habitat replacement, and (7) Southern California black walnut and mainland cherry tree or shrub replacement. In order to determine the amount of suitable acreage available for each mitigation need, all mitigation types were evaluated both individually and then collectively based on specific mitigation needs for the Project in relation to mitigation availability (*Figures 32 through 35*). The findings of the report are summarized below, while the report in its entirety is included in *Appendix E*.

Wetlands and Stream Banks

There are five reaches of the Salt Creek Drainage within the High Country SMA, including SA-E1, SA-2, SA-3, SA-4, and a portion of SA-5 (*Figure 35*). Stream reaches were divided based on substrate type (e.g., sand vs. silt), water regime (e.g., ephemeral vs. perennial stream segments), and adjacent land use (e.g., open space, paved road, and/or agricultural field). Additionally, each reach was classified according to wetland and riparian habitat categories. A detailed discussion of each stream reach is provided in *Appendix E* to this RMDP.

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The primary wetlands mitigation opportunity identified in the High Country SMA was wetlands enhancement, including removal of non-native species and creation of new riparian areas, along the Salt Creek Drainage. The two non-native, invasive plant species that are prevalent in the Salt Creek Drainage are tree tobacco and saltcedar. Tree tobacco is abundant throughout the drainage, occupying up to 50% of the shrub cover in some areas. Saltcedar is abundant in SA-6, with occasional individuals observed in upstream reaches. A comprehensive wetlands enhancement program throughout all reaches of the Salt Creek Drainage would be extremely beneficial to the riparian system, removing competition from non-native, invasive plants and allowing better establishment of native plant species. Mitigation credit, in the form of wetlands enhancement, could be gained in multiple wetland habitat types occurring in the drainage, including river wash, mulefat scrub, southern willow scrub, coastal and valley freshwater marsh, cismontane alkali marsh, great basin sage scrub riparian, and alluvial scrub. *Appendix E* contains a detailed discussion of the mitigation opportunities available within each stream reach in the High Country SMA.



AERIAL SOURCE: AirphotoUSA, 2007

FIGURE 32

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High Country SMA and Salt Creek Area - Coastal Scrub Mitigation Areas



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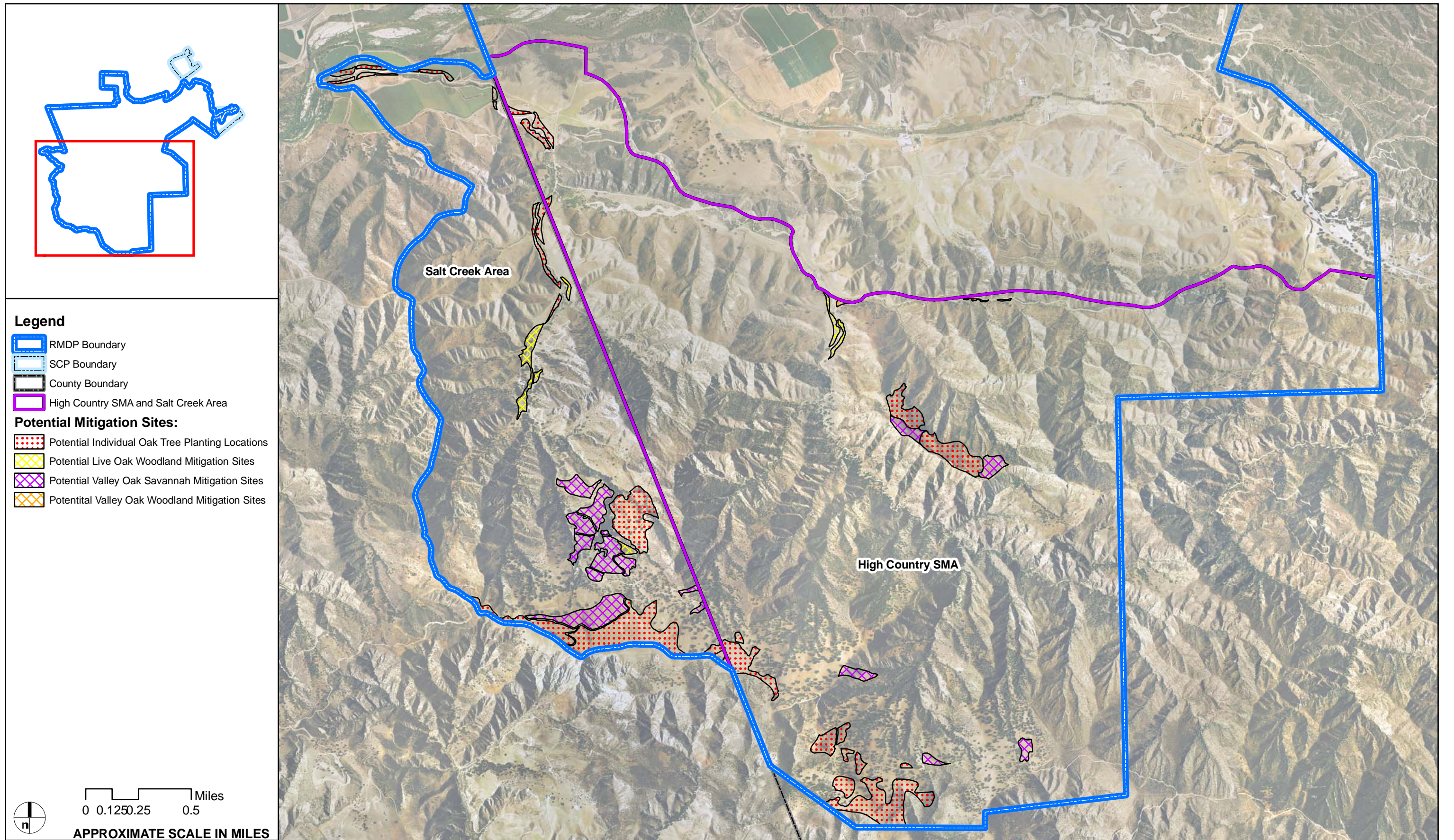


FIGURE 33

Newhall Ranch - Resource Management and Development Plan

High Country SMA and Salt Creek Area - Oak Mitigation Areas

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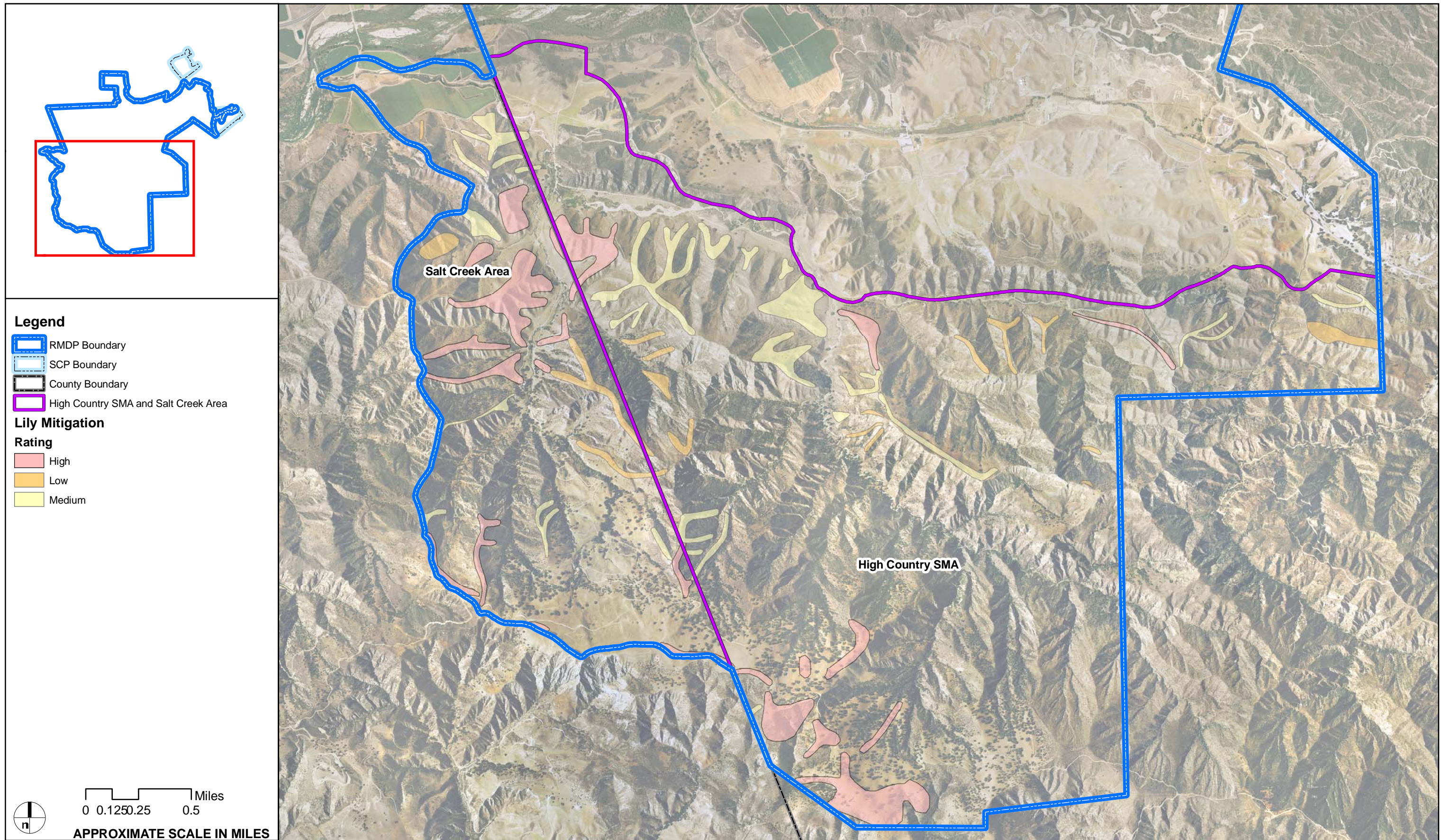


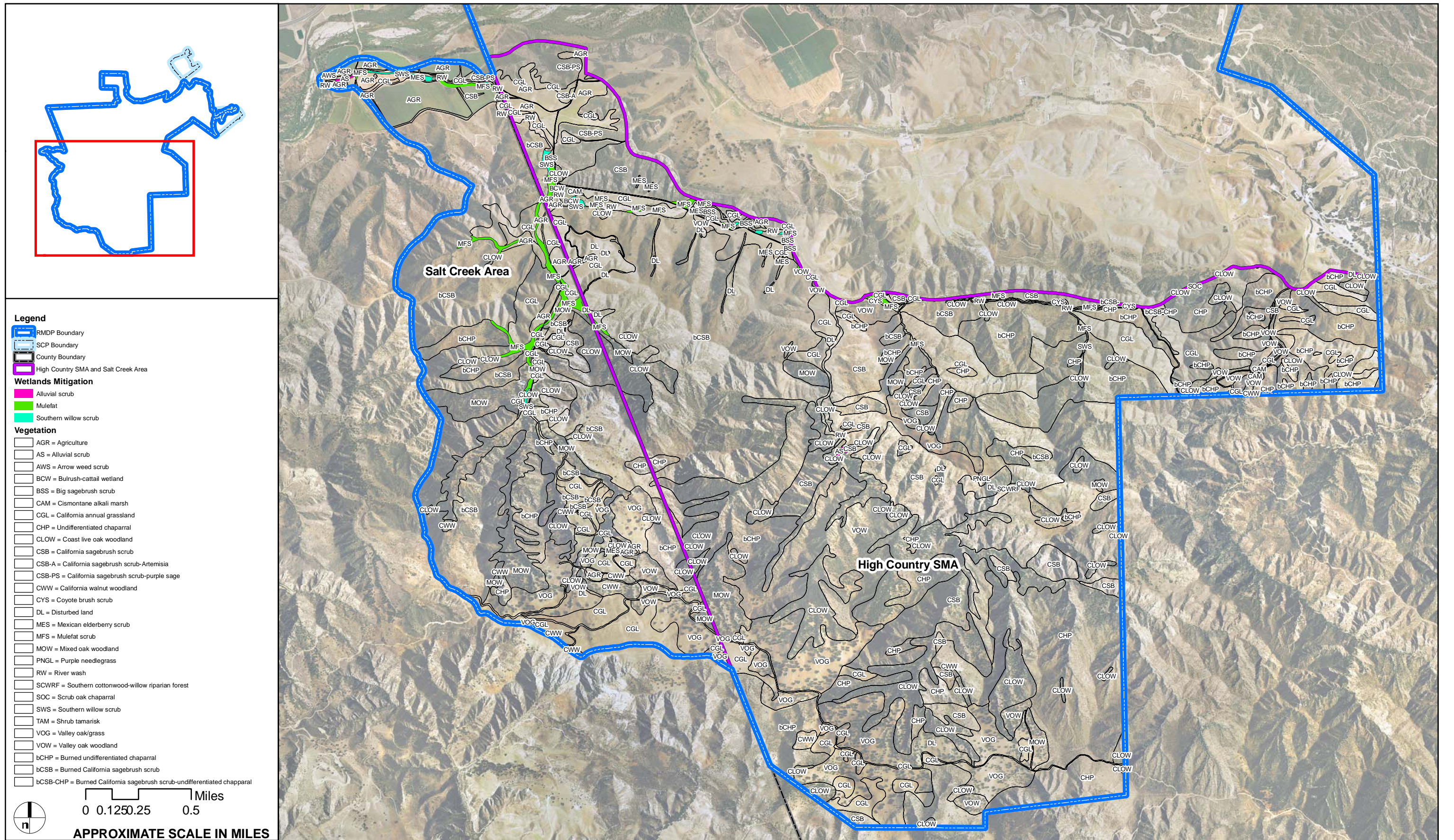
FIGURE 34

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High Country SMA and Salt Creek Area - Special Status Plant Mitigation Areas

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AERIAL SOURCE: AirphotoUSA, 2007

FIGURE 35

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High Country SMA and Salt Creek Area - Wetlands Mitigation Areas



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Least Bell's Vireo

Suitable opportunities for the replacement and creation of nesting and foraging habitat for the least Bell's vireo exist within the High Country SMA. The actual location and acreage of these areas will be determined upon mitigation implementation.

Coastal California gnatcatcher

Suitable opportunities for the preservation of nesting habitat for the coastal California gnatcatcher exists within the High Country SMA. The actual location and acreage of these areas will be determined upon mitigation implementation.

Southern California Black Walnut and Mainland Cherry

Suitable opportunities for the replacement of Southern California black walnut and mainland cherry trees or shrubs exist within the High Country SMA. The actual location and acreage of these areas will be determined upon mitigation implementation.

Parish's Sagebrush

Suitable opportunities for Parish's sagebrush mitigation are expected to occur along the margins of the riparian areas within the High Country SMA. The actual location and acreage of these areas will depend upon the Project alternatives selected.

Coastal Scrub

For purposes of discussing coastal scrub mitigation, the High Country SMA has been subdivided into areas A through G (*Figure 32*). Each area was ranked 1, 2, or 3 (1 being the highest rank) with respect to its suitability for mitigation and the approximate maximum area available for mitigation. A more detailed description of this evaluation can be found in *Appendix E*.

These areas were identified as suitable habitat based on the individual mitigation need evaluation for coastal scrub. The comprehensive evaluation from the Newhall Ranch Mitigation Feasibility Study (*Appendix E*), which applies priority rankings to areas that may be suitable for multiple types of restoration, identified 354 acres of suitable habitat for coastal scrub mitigation in addition to the 52 acres available for a combination of coastal scrub and slender mariposa lily mitigation.

Slender Mariposa Lily

Rare plant surveys for slender mariposa lily were conducted in the High Country SMA in 2003 and 2006 (Dudek and Associates 2004, 2006a). During a comprehensive evaluation of mitigation opportunities for slender mariposa lily that was conducted within the High Country SMA, Dudek identified 250 acres of habitat suitable for slender mariposa lily mitigation and 52 acres suitable

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for a combination of coastal scrub and slender mariposa lily mitigation (Dudek 2007a) (Figure 34). The mitigation requirement for slender mariposa lilies is on an individual plant basis (rather than acreage), and therefore, only the required amount of identified suitable habitat will be used in order to fulfill the mitigation requirement.

Oak Trees

Potential mitigation sites for valley oak/grass, coast live oak woodland, and valley oak woodland were identified in the High Country SMA (Figure 33).

The comprehensive evaluation resulted in 21 acres of valley oak/grass, 2.0 acres of coast live oak woodland habitat, and 0.4 acre of valley oak woodland habitat identified as suitable for mitigation as creation/enhancement habitat.

In addition to oak habitat mitigation, individual oak trees (including coast live oak and valley oak) could be planted in several areas within the High Country SMA. Approximately 97 acres were identified as suitable in the comprehensive evaluation.

Southern California Black Walnut and Mainland Cherry

Suitable opportunities for Southern California black walnut and mainland cherry mitigation exist within the High Country SMA. The 97 acres identified as suitable for oak habitat mitigation was also determined to be suitable for Southern California black walnut. The actual location and acreage of Southern California black walnut and mainland cherry mitigation areas will be determined upon mitigation implementation.

7.2.4 Management Requirements

Species and Habitat

The High Country SMA supports a substantial and diverse set of native species and habitats, many of which are rare or declining in the region. The RMDP provides for long-term preservation of these resources through active management of edge effects, restoration of existing disturbed portions of the preserve area, establishment of a monitoring program, and implementation of adaptive management measures based on the results of the monitoring program. The High Country SMA shall continue to support the same species and habitat as have currently been identified as occurring in that area with equal or greater overall function and value.

With specific regard to species and habitat management, control of invasive species along the edge of the preserve area is generally the first priority with maintaining native species. As discussed in Section 7.1.4, invasive species monitoring and control programs include measures to

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control brown-headed cowbirds, bullfrog, African clawed frog, crayfish, non-native fishes, and Argentine ants (BIO-78, BIO-80, and BIO-87).

Recreation and Access

The recreation opportunities presented by the High Country SMA are a major benefit of the SMA. However, recreational needs must be balanced with the preservation of the habitat values, which are conserved in the High Country SMA. Recreation and access will be governed by the following standards:

1. Access to the High Country SMA shall be limited to daytime use of the designated trail system (SP-4.6-29).
2. No pets of any kind shall be allowed within the High Country SMA, with the exception that equestrian use is permitted on established trails (SP-4.6-30).
3. No hunting, fishing, or motor bike riding shall be permitted (SP-4.6-31).
4. The trail system shall be designed and constructed to minimize impacts on native habitats (SP-4.6-32).
5. Trailhead and trail signage shall be installed indicating the High Country SMA is a biological conservation area and requesting that people and their animals stay on existing trails at all times (BIO-69).
6. 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 Joint Powers Authority (JPA) (BIO-69).

Transition Areas

Development areas are generally separated from the High Country SMA by steep slopes. Construction of buildings and other structures (e.g., patios and/or decks) 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 SMA boundary (SP-4.6-33). If disturbed by grading, all south-facing slopes that 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 14*.

Transition from the development edge to the natural area also must be controlled by the standards of wildfire FMZs as set forth in *Section 7.9*. Within fuel modification areas, trees and

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herbs from *Table 14* should be planted toward the top of slopes; trees at lesser densities and shrubs should be planted on lower slopes.

Public Education

Public education efforts discussed in *Section 7.1.4* shall also be implemented relative to resources present with the High Country SMA such that residents are aware of the potential effects of their activities and the health and persistence of biological resources in the preserve areas (BIO-63 and BIO-64). In addition, the 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 (BIO-69).

7.3 Salt Creek Area

7.3.1 Resource Description

The Salt Creek watershed encompasses approximately 5,816 acres. Of this total, approximately 1,517 acres of the watershed are within the Salt Creek area described for conservation in this RMDP. The rest of the watershed is included in the High Country SMA. The Salt Creek area includes the western portion of the watershed in Ventura County (*Figures 29 and 30*).

Although largely preserved, construction of certain public use infrastructure facilities, as discussed in *Section 6.0*, would result in temporary impacts to 30 acres within the High Country SMA and Salt Creek area; the permanent footprint of the facilities would occupy 27 acres within the two preserve areas.

Plant Communities and Land Covers

Table 15 shows the vegetation communities/land cover types within the Salt Creek area. Native upland habitat comprises the majority of the Salt Creek area, with 629.5 acres (41.5%) covered in coastal scrub. Mixed chaparral and coast live oak woodland encompass 124.7 acres (8.2%) and 148 acres (9.7%) within the Salt Creek area, respectively.

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**Table 15
Salt Creek Area Vegetation Communities/Land Cover**

Vegetation Community/Land Cover	Associations (If Any)	Acres	Percent of Total
Upland Grassland			
California annual grassland		187.9	12.4%
Coastal Scrub			
California sagebrush scrub	California sagebrush scrub	11.8	0.8%
	Burned California sagebrush scrub	615.5	40.6%
	California sagebrush scrub-purple sage	2.1	0.1%
Subtotal: Coastal Scrub		629.4	41.5%
Chaparral Scrub			
Undifferentiated chaparral scrub	Undifferentiated chaparral scrub	9.1	0.6%
	Burned undifferentiated chaparral scrub	115.5	7.6%
Subtotal: Chaparral Scrub		124.6	8.2%
Upland Woodland and Savannah			
California walnut woodland		20.4	1.3%
Coast live oak woodland		148.0	9.7%
Mixed oak woodland		94.6	6.2%
Valley oak woodland	Valley oak woodland	23.9	1.6%
	Valley oak/grass	113.0	7.4%
Subtotal: Upland Woodland and Savannah		399.9	26.4%
Riparian Waters and Wetlands			
River wash		7.4	0.5%
Riparian Scrub			
Alluvial scrub		0.4	<0.1%
Arrow weed scrub		0.7	<0.1%
Mexican elderberry		1.4	0.1%
Mulefat scrub		20.1	1.5%
Southern willow scrub		2.5	0.2%
Tamarisk scrub		0.2	<0.1%
Subtotal: Riparian Scrub		25.3	1.7%
Land Covers			
Agriculture		99.1	6.5%
Disturbed land		43.9	2.9%
Subtotal: Land Covers		143.0	9.4%
Total		1,517.5	100.0%

¹ The acreages and vegetation types depicted in this table were determined during field mapping in 2006 (Dudek and Associates 2006a)

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Soils

Soils in the Salt Creek area are similar to those of the High Country SMA and are mapped as Balcom-Castaic-Saugus association, 30% to 50% slopes, eroded. Soils also are mapped as Gaviota rocky sandy loam and Gazos silty clay loam (USDA 1969).

Soils found on site are characterized generally by steep to very steep, often eroded slopes (i.e., 15% to 75% slopes). The soils are well-drained, with moderate to moderately slow subsoil permeability and medium to very rapid runoff. The erosion hazard is moderate to very high, largely dependent on slope steepness (USDA 1969).

Special-Status Species

Habitat suitability calculations for the Salt Creek area for various species-status species are presented in *Appendix C – Newhall Ranch Special-Status Species Preserve Report*. This species list and set of habitat calculations are included as data for the habitat manager to utilize when monitoring the preserve. Although several surveys have been conducted to detect both special-status plant and animal species, and the results of those surveys are described below, additional species may occur in the preserve and, if detected, should also be managed for preservation in accordance with the RMP goals and objectives. Changes in habitat types and abundances will affect suitability for various species; such changes shall be monitored with specific regard to special-status species listed in *Appendix C*.

The following special-status animals have been sited in the Salt Creek area during surveys conducted between 2003 and 2007: short-eared owl, loggerhead shrike, white-tailed kite, Cooper's hawk, Southern California rufous-crowned sparrow, prairie falcon, and mountain lion. Only two special-status plants have been recorded in the Salt Creek area: Ojai navarretia and slender mariposa lily.

7.3.2 Mitigation Requirements

Mitigation opportunities in the Salt Creek area for impacts identified during the subdivision process in other portions of the Specific Plan include restoration of habitat and enhancement to existing habitat. The construction of RMDP components and related facilities within the Salt Creek area requires the implementation of construction-related mitigation. Preserve-related measures, either for impacts associated with the construction of trails or access roads, or for impacts identified during the subdivision process in other portions of the Specific Plan, include restoration of habitat and enhancement to existing habitat. Several types of habitat restoration may occur in the Salt Creek area: (1) riparian revegetation activities, (2) oak tree replacement in or adjacent to existing valley oak woodlands and mixed and valley oak/grass, (3) coastal scrub, restoration and (4) special-status plant species transplantation and restoration. The mitigation

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requirements for the Salt Creek area are the same as those of the High Country SMA, as described above. Restoration or enhancement, if proposed, is to be implemented in accordance with *Section 7.1.2*.

7.3.2.1 Construction-Related Mitigation Measures

Construction-related mitigation measures pertaining to the preservation of resources within the Salt Creek area are the same as described above for the High Country SMA.

7.3.2.2 Preserve-Related Mitigation Measures

Preserve-related mitigation measures pertaining to the preservation of resources within the Salt Creek area are the same as described above for the High Country SMA.

7.3.3 Mitigation Opportunities

Areas within the Salt Creek area that present mitigation opportunities were previously discussed in the context of the River Corridor SMA and High Country SMA mitigation opportunities, including: (1) riparian revegetation activities and exotic removal, as described in *Section 7.1.3*, (2) oak tree replacement in or adjacent to existing oak woodlands and mixed and valley oak/grass, (3) coastal scrub preservation, (4) least Bell's vireo nesting and foraging habitat replacement, (5) California gnatcatcher nesting habitat replacement, and (6) Southern California black walnut and mainland cherry tree or shrub replacement, and (7) special-status plant transplantation and restoration.

In order to determine the amount of suitable acreage available for each mitigation need, all mitigation types were evaluated both individually and then collectively based on specific mitigation needs for the Project in relation to mitigation availability (*Figures 32 through 35*). The findings of the report are summarized below, while the report in its entirety is included in *Appendix E*.

Wetlands and Stream Banks

There are three reaches of the Salt Creek Drainage within the Salt Creek area, including SA-W1-L, SA-6, and a portion of SA-5 (*Figure 35*). Stream reaches were divided based on substrate type (e.g., sand vs. silt), water regime (e.g., ephemeral vs. perennial stream segments), and adjacent land use (e.g., open space, paved road, and/or agricultural field). Additionally, each reach was classified according to wetland and riparian habitat categories. A detailed discussion of each stream reach is provided in *Appendix E*.

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Wetlands mitigation opportunities identified in the Salt Creek area include a combination of wetlands enhancement and wetlands creation. For wetlands enhancement, prevalent non-native, invasive plant species include tree tobacco and saltcedar. Both species are abundant throughout the drainages in the Salt Creek area. Proposed wetlands creation opportunities within the Salt Creek area include stream bank stabilization and wetlands creation through the installation of check dams.

In general, wetlands and stream bank creation/restoration in the Salt Creek Drainage would also entail stabilization of an unstable, existing channel bed with highly erosive, well-drained alluvial soils and routinely subject to extreme flood flow volumes and velocities. Substantial effort/cost would be expended to successfully implement this type of structural restoration, limiting its potential as effective mitigation. *Appendix E* contains a detailed discussion of the mitigation opportunities available within each stream reach.

Least Bell's Vireo

Suitable opportunities for the replacement and creation of nesting and foraging habitat for the least Bell's vireo exist within the Salt Creek area. The actual location and acreage of these areas will be determined upon mitigation implementation.

Coastal California gnatcatcher

Suitable opportunities for the replacement and creation of nesting habitat for the coastal California gnatcatcher exist within the Salt Creek area. The actual location and acreage of these areas will be determined upon mitigation implementation.

Parish's Sagebrush

Suitable opportunities for Parish's sagebrush mitigation exist along the margins of riparian areas within the Salt Creek area. The actual location and acreage of these areas will be determined in subsequent mitigation analyses and studies.

Slender Mariposa Lily

Rare plant surveys for slender mariposa lily were conducted in the Salt Creek area in 2003. A comprehensive evaluation of mitigation opportunities for slender mariposa lily was conducted within the Salt Creek area (*Figure 34*). Dudek identified 168 acres of habitat suitable for slender mariposa lily mitigation and 35 acres suitable for a combination of coastal scrub and slender mariposa lily mitigation (Dudek 2007a). The mitigation requirement for slender mariposa lilies is on an individual plant basis (rather than acreage), and, therefore, only the required amount of identified suitable habitat will be used in order to fulfill the mitigation requirement.

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Coastal Scrub

For purposes of discussing coastal scrub mitigation, the Salt Creek area has been subdivided into areas A through G (*Figure 32*). Each area was ranked 1, 2, or 3 (1 being the highest rank) with respect to its suitability for mitigation and the approximate maximum area available for mitigation. A more detailed description of this evaluation can be found in *Appendix E*.

These areas were identified as suitable habitat based on the individual mitigation need evaluation for coastal scrub. The comprehensive evaluation identified 115 acres of suitable habitat for coastal scrub mitigation in addition to the 35 acres available for a combination of coastal scrub and slender mariposa lily mitigation.

Oak Trees

Potential mitigation sites for valley oak/grass, coast live oak woodland, and valley oak woodland were identified in the Salt Creek area (*Figure 33*).

In the comprehensive evaluation, 65 acres of valley oak/grass and 8 acres of coast live oak woodland habitat were identified as suitable for mitigation as creation/enhancement habitat.

In addition to oak habitat mitigation, individual oak trees (including coast live oak and valley oak) could be planted in several areas within the Salt Creek area. Approximately 92 acres were identified as suitable in the comprehensive evaluation. This also includes areas suitable for Southern California black walnut.

Southern California Black Walnut and Mainland Cherry

Suitable opportunities for Southern California black walnut and mainland cherry mitigation exist within the Salt Creek area. The actual location and acreage of these areas will be determined upon mitigation implementation.

7.3.4 Management Requirements

The management requirements for the Salt Creek area are the same as those of the High Country SMA, as described in *Section 7.2.4*, with the exception of control for invasive species associated with the development-preserve edge. In addition, the EIS/EIR recommends additional mitigation due to the permanent loss of coastal scrub resulting from implementation of the RMDP component of the proposed Project.

The 1,517-acre Salt Creek area (including approximately 629 acres of coastal scrub communities) shall be offered for dedication to the public and shall be managed in conjunction with the 4,205-acre High Country SMA (BIO-19).

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7.4 Open Area

7.4.1 Resource Description

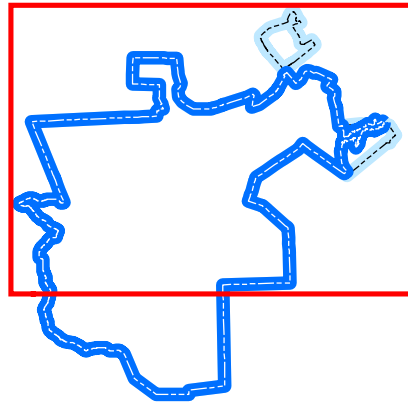
Open Area is a land use designation, which includes a total of approximately 3,420 acres outside of the SMAs and the Salt Creek area, 1,921 acres of which will be preserved to protect significant resources (BIO-62). The areas also will provide open space and community identification for Newhall Ranch residents. The Open Area designation includes community parks, prominent ridges, bluffs, slopes, creek beds, and utility and trail system easements and will often function as a transition between development areas and the SMAs (*Figures 36 and 37*).

Included in the Open Area are:

- Community parks
- Major drainages, which are those with flows of 2,000 cubic feet per second or more
- Significant landforms, such as the river bluffs, Sawtooth Ridge, and Ayres Rock
- Spineflower preserves
- Oak woodlands and grasses that are not part of the SMAs or the Salt Creek area
- Cultural sites.

Plant Communities and Land Covers

Open Area is configured to protect significant landforms and natural resources, providing an opportunity to integrate the proposed development within its natural context. *Table 16* provides an overview of the vegetation communities that would be preserved in the Open Area based on the Project applicant's preferred development alternative (*Figure 36*). The vegetation communities preserved include mostly a mixture of grassland, coastal scrub, chaparral scrub, and woodlands. Also present are riparian and wetland communities and disturbed land covers, which may be available for restoration. Significant additional biological resources, as yet to be calculated, will be part of the Open Area following Project grading and re-establishment of several drainages with restored native plant community treatments as discussed in *Section 5.3*.

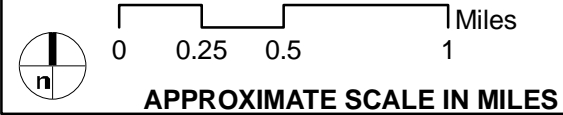


Legend

- RMDP Boundary
- SCP Boundary
- County Boundary

Vegetation

- AGR = Agriculture
- AWS = Arrow weed scrub
- 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 chapparral
- CSB-PS = California sagebrush scrub-purple sage
- CYS = Coyote brush scrub
- DEV = Developed
- DL = Disturbed land
- EDS = Eriodictyon scrub
- HW = Herbaceous wetlands
- MES = Mexican elderberry scrub
- MFS = Mulefat scrub
- 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



AERIAL SOURCE: DigitalGlobe, 2007

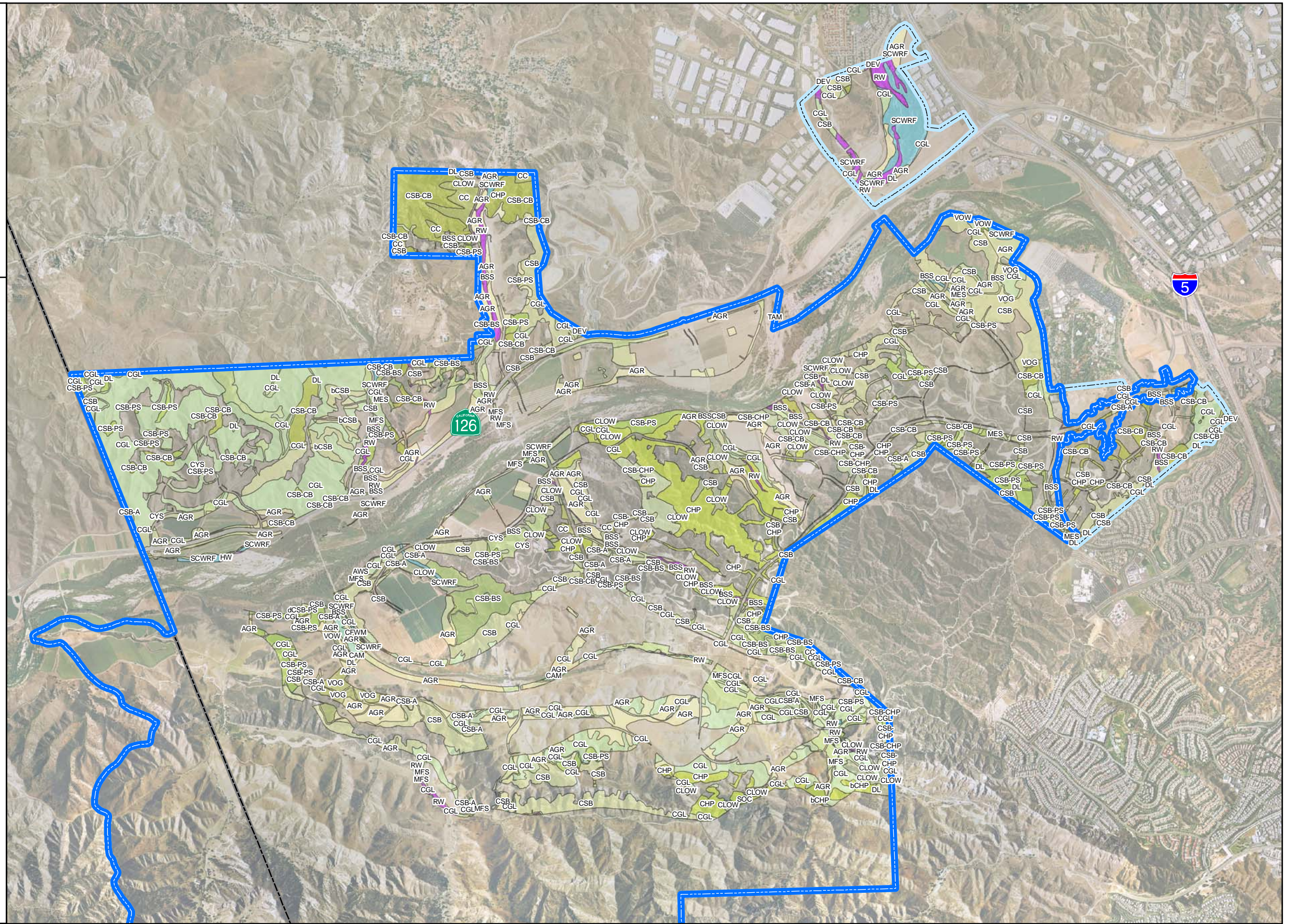


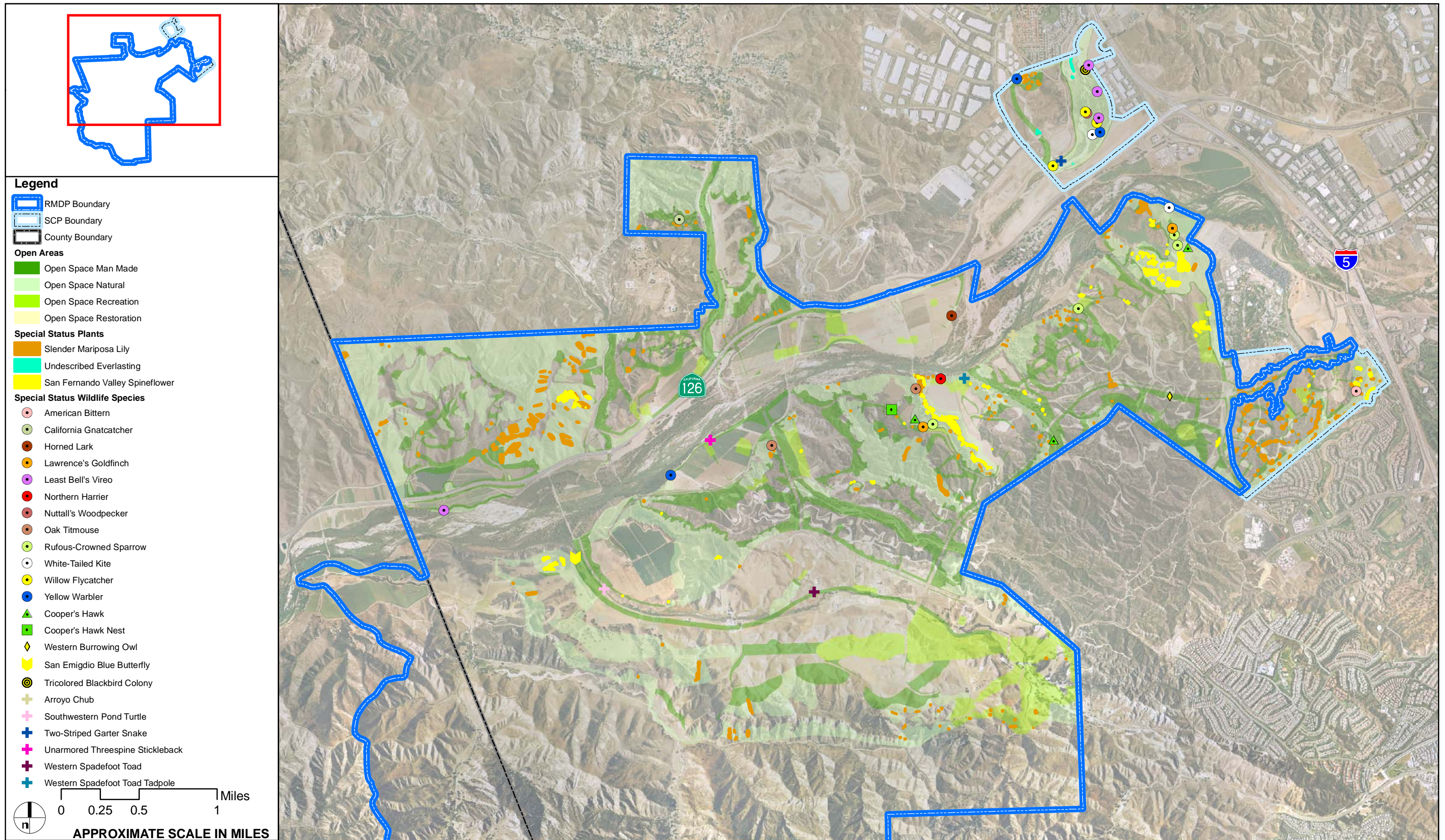
FIGURE 36

Newhall Ranch - Resource Management and Development Plan

Open Area - Generalized Vegetation Communities and Land Covers



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AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 37

Newhall Ranch - Resource Management and Development Plan
Open Area - Special Status Species Occurrences

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**Table 16
Open Area (Preserved Portion) Vegetation Communities/Land Cover**

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	RMDP Acreage	Percent of Total	
Grass and Herb Dominated Communities	Non-Native Grassland	California annual grassland	Not mapped to association level	537.0	28.0%	
Scrub and Chaparral	Coastal Scrub	California sagebrush scrub	Not mapped to association level	356.0	18.5%	
			Burned California sagebrush scrub	44.0	2.3%	
			California sagebrush– <i>Artemisia californica</i>	26.0	1.3%	
			California sagebrush–purple sage	80.0	4.1%	
			Disturbed California sagebrush–purple sage	4.5	0.2%	
			California sagebrush–black sage scrub	California sagebrush–black sage	87.0	4.6%
			California sagebrush–California buckwheat scrub	Not mapped to association level	149.0	7.8%
			California sagebrush scrub–undifferentiated chaparral	Not mapped to association level	42.0	2.2%
		Coyote brush scrub	Not mapped to association level	0.3	<0.1%	
	Undifferentiated Chaparral Scrubs	Not mapped to alliance level		Not mapped to association level	164.0	8.5%
				Burned undifferentiated chaparral	4.1	0.2%
	Chaparral with Chamise	Chamise chaparral		Not mapped to association level	32.0	1.7%
				Burned chamise chaparral	<0.1	<0.1%
	Chaparral with Oak	Scrub oak chaparral		Not mapped to association level	1.3	0.1%
Broad Leafed Upland Tree Dominated	Oak Woodland and Forest	Coast live oak forest and woodland	Coast live oak woodland	82.0	4.3%	
		Valley oak forest and woodland	Valley oak woodland	2.9	0.2%	
			Valley oak/grass	27.0	1.4%	
Bog and Marsh	Marsh	Cismontane alkali marsh	Not mapped to association level	4.2	0.2%	
		Fresh–brackish water marsh	Coastal and valley freshwater marsh	0	0	
Riparian and Bottomland	Other Riparian/Wetland	Herbaceous wetland	Not mapped to association level	0.7	<0.1%	

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Table 16 (Continued)

General Physiognomic and Physical Location	General Habitat Type	Floristic Alliance	Association	RMDP Acreage	Percent of Total
Habitat		River wash	Not mapped to association level	16.6	0.9%
		Big sagebrush scrub	Not mapped to association level	8.2	0.4%
		Big sagebrush scrub	Big sagebrush–California buckwheat	0.4	<0.1%
	Low to High Elevation Riparian Scrub	Arrow weed scrub	Not mapped to association level	0.3	<0.1%
		Mexican elderberry	Not mapped to association level	0.7	<0.1%
		Mulefat scrub	Not mapped to association level	2.9	0.2%
	Riparian Forest and Woodland	Southern willow scrub	Not mapped to association level	0.1	<0.1%
		Tamarisk scrub and woodland	Shrub tamarisk	0	0
		Coast live oak forest and woodland	Southern coast live oak riparian forest	<0.1	<0.1%
		Fremont cottonwood riparian forest and woodland	Southern cottonwood–willow riparian	17.0	0.9%
Man-Made Land Cover Types	Agriculture	NA	105.0	5.4%	
	Developed land	NA	0.3	<0.1%	
	Disturbed land	NA	126.0	6.6%	
Total				1,921	100.0%

NOTE: The acreages and vegetation types depicted in this table were determined during field mapping in 2006 (Dudek and Associates 2006a).

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Special-Status Species

Habitat suitability calculations were not performed for the Open Area, as these areas are not intended to provide resident habitat for special-status species. Although it is expected that many special-status species will reside within preserved and restored portions of the Open Area, the Open Area will be managed as a buffer between development and the major preserve areas.

Based on surveys conducted between 2002 and 2007, special-status wildlife species identified within the preserved portion of the Open Area include horned lark, Lawrence's goldfinch, least Bell's vireo, Nuttall's woodpecker, Southern California rufous-crowned sparrow, southwestern pond turtle, tricolored blackbird, two-striped garter snake, unarmored threespine stickleback, western spadefoot toad, white-tailed kite, willow flycatcher, yellow warbler, arroyo chub, Santa Ana sucker, western burrowing owl, Cooper's hawk, golden eagle, loggerhead shrike, and oak titmouse (*Figure 37*). No special-status plant species were identified within the preserved portion of the Open Area.

7.4.2 Mitigation Requirements

As with the River Corridor SMA, the Open Area is subject to both construction-related and preserve-related mitigation measures. Implementation of these measures ensures that potential adverse impacts on biological resource, both during construction and for the life of the Project, are minimized to a level which that is adverse but less than significant. There are additional mitigation measures related to long-term management of biological resources within the Open Area, and these measures are discussed in *Section 7.4.4*. The cumulative list of mitigation measures, which include the full text of each measure, is provided in *Appendix B*.

It should be noted that the spineflower preserves are within the Open Area. However, mitigation requirements and management measures for these resources are described in the SCP and are not repeated in this document.

7.4.2.1 Construction-Related Mitigation Measures

Construction-related mitigation measures pertaining to the preservation of resources within the Open Area generally fall within the following categories: general measures, species avoidance, and avoidance through Project design.

General Measures

All general mitigation measures related to control of construction impacts discussed in *Section 7.2.2.1*, including stormwater pollution, dust, and contractor education and monitoring, would apply to activities within and adjacent to the Open Area (SP-4.6-58, BIO-49, BIO-52, BIO-70, and BIO-71).

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Species Avoidance Measures

Species avoidance measures discussed for the River Corridor SMA (*Section 7.1.2.1*) apply to the Open Area including pre-construction surveys and avoidance of the California red-legged frog, arroyo toad, oak trees, undescribed species of everlasting, special-status wildlife species, western burrowing owl, unarmored threespine stickleback, arroyo chub, Santa Ana sucker, special-status aquatic species, special-status reptile and amphibians, southwestern pond turtle, western spadefoot toad, nesting birds, San Diego desert woodrat, San Diego black-tailed jackrabbit, American badger, mountain lion, California condor, two-striped garter snake, south coast garter snake, special-status bat species, undescribed species of snail, Middle Canyon Spring complex, and ringtail (SP-4.6-53, SP-4.6-54, SP-4.6-55, BIO-17, BIO-18, BIO-41, BIO-42, BIO-43, BIO-44, BIO-45, BIO-46, BIO-47, BIO-50, BIO 53, BIO-56, BIO-57, BIO-58, BIO-60, BIO-61, BIO-68, BIO-74, BIO-75, BIO-77, BIO-82, BIO-83, and BIO-89). In addition, species avoidance measures discussed for the High Country SMA (*Section 7.2.2.1*) apply to the Open Area, including pre-construction surveys and avoidance of the coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, coast patch-nosed snake, and San Emigdio blue butterfly (BIO-54, BIO-65, and BIO-67).

Avoidance through Project Design

Project design features that protect or minimize impacts to biological resources will be implemented throughout the Open Area and include many of those measures discussed in *Section 7.1.2.1*. These include consultation with the County and CDFG at important benchmarks, bridge and culvert design, landscaping design, lighting, signage, wildlife undercrossings, bridge and culvert design for roosting habitat for bats, and new antennae and phone/utility towers (SP-4.6-56, SP-4.6-59, BIO-48, BIO-59, BIO-72, BIO-82, and BIO-84).

7.4.2.2 *Preserve-Related Mitigation Measures*

Several types of habitat restoration may occur in the Open Area, such as: (1) riparian revegetation activities, (2) oak tree replacement in or adjacent to existing oak woodlands and mixed and valley oak/grass, (3) coastal scrub restoration, (4) special-status plant species transplantation and restoration, and (5) quail brush plantings related to protection of the San Emigdio blue butterfly. Mitigation activities within the Open Area shall be subject to the requirements described in *Sections 7.1.2.2*, as applicable.

Wetlands and Stream Banks

Mitigation for wetlands and stream banks will be accomplished through wetlands restoration and wetlands enhancement. Wetlands in the Open Area will be restored and enhanced in accordance with the provisions described in *Section 7.1.2.2* (SP-4.6-2, SP-4.6-3, SP-4.6-4, SP-4.6-6, SP-4.6-7, SP-4.6-8, SP-4.6-9, SP-4.6-10, SP-4.6-26a, SP-4.6-60, BIO-1 through BIO-16).

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Least Bell's Vireo

Permanent loss of nesting/foraging habitat in key population areas for the least Bell's vireo shall be mitigated at a 5:1 ratio unless otherwise authorized by the CDFG or USFWS. Temporary loss of nesting/foraging 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 BIO-1 through BIO-16. Nesting/foraging habitat within the 60 dBA sound contour shall be considered degraded and shall be mitigated at a ratio of 2:1 (BIO-55).

Coastal California Gnatcatcher

Impacts to documented occupied nesting habitat for coastal California gnatcatcher shall be mitigated through the acquisition or preservation of nesting coastal California gnatcatcher habitat at a 3:1 ratio, or by the ratio specified in BIO-2, which ever is greater (BIO-55).

Parish's Sagebrush

For individual projects resulting in significant impacts to Parish's sagebrush, a mitigation plan for *Artemisia tridentata* ssp. *parishii* shall be developed in accordance with the provisions described in *Section 7.1.2.2* (BIO-1 through BIO-16).

Coastal Scrub

A mitigation plan for coastal scrub shall be developed prior to the issuance of grading permits for individual projects and implemented by the applicant or its designee, as described in *Section 7.1.2.2* (BIO-20 and BIO-21).

Slender Mariposa Lily

A mitigation plan for slender mariposa lily has been developed and shall be implemented by the applicant or its designee, as described in *Section 7.2.2.2* (BIO-40).

Oak Trees

The oak resource replacement plan shall be prepared, as described in *Section 7.2.2.2* (SP-4.6-26a, SP-4.6-48, and BIO-22a-d).

Southern California Black Walnut and Mainland Cherry

Mitigation for significant impacts to Southern California black walnut and mainland cherry trees or shrubs (outside riparian areas) greater than one inch dbh shall be conducted in accordance with the provisions described in *Section 7.1.2.2* (BIO-88).

San Emigdio Blue Butterfly

Quail brush or other documented host plants from any occupied San Emigdio blue butterfly habitat shall be replaced at a minimum of a 1.5:1 ratio and planted contiguous to the existing

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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 Measures BIO-6 and BIO-7 (BIO-66). A qualified biologist shall monitor the status of the Potrero Canyon San Emigdio blue butterfly colony for a period of five years after Potrero Canyon Road construction completion/operation commencement. Should it be determined that the operation of the road may be contributing to a population decline, a habitat creation plan will be prepared and implemented in suitable locations contiguous to the habitat but away from the road (BIO-79).

7.4.3 Mitigation Opportunities

Areas within the Open Area that present mitigation opportunities were previously discussed in the context of the River Corridor SMA, High Country SMA, and Salt Creek area mitigation opportunities, including: (1) riparian revegetation activities and exotic removal, as described in *Section 7.1.2*, (2) oak tree replacement in or adjacent to existing oak woodlands and mixed and valley oak/grass, (3) coastal scrub preservation, (4) special-status plant species transplantation and restoration, (5) least Bell's vireo nesting and foraging habitat replacement, (6) California gnatcatcher nesting habitat replacement, and (7) Southern California black walnut and mainland cherry tree or shrub replacement. .

Wetlands and Stream Banks

Suitable opportunities for wetlands and stream banks mitigation are expected to occur within the Open Area. The actual location and acreage of these areas will depend upon the Project alternative selected, and will be primarily associated with modified and unmodified tributary drainages.

Least Bell's Vireo

Suitable opportunities for the replacement and creation of nesting and foraging habitat for the least Bell's vireo exist within the Open Area. The actual location and acreage of these areas will be determined upon mitigation implementation.

Coastal California Gnatcatcher

Suitable opportunities for the replacement and creation of nesting habitat for the coastal California gnatcatcher exist within the Open Area. The actual location and acreage of these areas will be determined upon mitigation implementation.

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Parish's Sagebrush

Suitable opportunities for Parish's sagebrush mitigation are expected to occur within the higher elevations of bank stabilization areas within the Open Area. The actual location and acreage of these areas will depend upon the Project alternative selected.

Coastal Scrub

Suitable opportunities for coastal scrub mitigation are expected to occur within the higher elevations of bank stabilization areas within the Open Area. The actual location and acreage of these areas will depend upon the Project alternative selected.

Slender Mariposa Lily

Suitable opportunities for slender mariposa lily mitigation are expected to occur within coastal scrub mitigation areas at the higher elevations of bank stabilization areas within the Open Area. The actual location and acreage of these areas will depend upon the Project alternative selected.

Oak Trees

Potential mitigation sites for valley oak/grass, coast live oak woodland, and valley oak woodland were identified in the Open Area. The actual location and acreage of these areas will depend upon the Project alternative selected.

Southern California Black Walnut and Mainland Cherry

Suitable opportunities for Southern California black walnut and mainland cherry mitigation exist within the Open Area. The actual location and acreage of these areas will be determined upon mitigation implementation.

San Emigdio Blue Butterfly

Potential mitigation sites for quail brush (host plant for San Emigdio blue butterfly) were identified in the Potrero Canyon portion of the Open Area. The actual location and acreage of these areas will depend upon the Project alternative selected.

7.4.4 Management Requirements

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 (BIO-62).

The Open Area will provide resident habitat for special-status species and serve as a buffer between development and the major preserve areas of High Country and River Corridor. However, due to its proximity to development, it will be subject to substantial edge effects. The Open Area will require significant management in order to ensure that these edge effects do not

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overwhelm resources within the Open Area and thereby have a high potential of extending into either the High Country or River Corridor preserves. All native habitat areas within the Open Area (either preserved in their current, natural state or restored following Project construction) shall be managed towards the preservation of native biological resources. As such, control of invasive species and human encroachment, as described in *Section 7.1.4*, shall also be implemented, as necessary, within and adjacent to the native habitat portion of the Open Area. *Section 7.7* includes additional management measures related to drainage infrastructure, much of which is located within or adjacent to the Open Area.

In addition to invasive species, recreation and public access, and public education measures listed in *Section 7.1.4*, the following measures will be implemented to ensure the long-term persistence of biological resources within the Open Area.

7.5 Oak Resources

7.5.1 Resource Description

Los Angeles County and the CDFG recognize oak resources as a sensitive habitat type, and the California Native Plant Society considers oak woodlands a rare community type. Oak resources include oak trees of the sizes regulated under CLAOTO, as well as Southern California black walnut trees and, mainland (holly-leaf) cherry trees/shrubs. Types of oak woodland communities that occur on the Newhall Ranch property include coast live oak woodland, valley oak woodland, and valley oak/grass. In addition, oak trees are often the dominant plant type within cottonwood/oak woodland and mainland (holly-leaf) cherry woodland communities (County of Los Angeles 2003b).

Mainland (holly-leaf) cherry trees/shrubs are found in Long and Lion Canyons, intermixed with coast live oak trees, while the Southern California black walnut is found mainly in the High Country SMA. Oak woodlands and oak/grass communities occur primarily on the north-facing slopes and within the major canyons and drainages of the study area.

An oak tree survey was conducted within the Specific Plan area by Impact Sciences (2006). The survey recorded 3,617 oak trees, including 333 valley oaks and 3,235 coast live oaks. An estimate of the number of oak trees occurring within the High Country SMA and Salt Creek area was made by Dudek (2007b) and included 13,731 oak trees within the High Country SMA and 5,640 oaks trees within the Salt Creek area.

The Concept Grading Plan for the Specific Plan results in the preservation of at least approximately 21,283 oaks. This represents 90% of the total estimated oak trees within the Specific Plan. Based on the preliminary oak tree impact analysis in the EIS/EIR, approximately

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1,701 oak trees may be impacted during the long-term build-out of the Specific Plan. At the time engineering plans are completed for the subdivision process, a more precise oak tree survey shall be conducted and oak tree permits pursuant to Title 22 of the Los Angeles County Code, Part 16, shall be obtained.

7.5.2 Mitigation Requirements

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 the Newhall Ranch RMDP-SCP EIS/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); and (3) additional measures recommended in the Newhall Ranch RMDP-SCP EIS/EIR for tree replacement or woodland restoration/enhancement to mitigate for oak trees and woodland occurring in uplands, outside CDFG and Corps jurisdiction (BIO-22).

The project's impacts to oak trees and oak woodlands are related but are not identical. Losses of oak trees are to be mitigated by planting replacement trees (per the requirements of CLAOTO, BIO-22b, and previously incorporated measure SP-4.6-48), supplementing those numbers with additional replacement trees as described in BIO-22c (for upland oak trees) and BIO-2.

This EIS/EIR requires additional oak woodland replacement at a range of 2:1 to 3:1 for any oak woodland lost within jurisdictional streambeds (BIO-2) and at a ratio of 1:1 for woodland acreages lost outside of jurisdictional areas (BIO-22d). For impacts to upland oak woodlands, Newhall may enhance existing degraded woodland areas, at the increased ratio of 2:1.

All oak trees to be planted for CLAOTO compliance will be subject to species and performance criteria as specified in CLAOTO (see BIO-22b). Where CLAOTO replacement trees are planted in natural open areas such as the High Country and Salt Creek areas, the planting areas will be planted and managed as natural woodlands, to include other characteristic woodland species and to provide habitat for a broader variety of wildlife than is possible in close proximity to development.

In addition, the Newhall Ranch RMDP-SCP EIS/EIR requires replacement of oak trees at a ratio of 0.5:1 for oak trees with dbh of 8 to 35 inches, and at a ratio of 2.5:1 for oak trees with dbh of 36+ inches lost or impacted in uplands (BIO-22c). These trees are in addition to the CLAOTO requirement described above. These additional trees may also be incorporated into woodland habitat enhancement or creation.

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This oak mitigation strategy will be outlined in an Oak Resource Management Plan, to be prepared by the applicant and submitted for approval to CDFG and County of Los Angeles, and implemented upon approval. The Plan shall identify areas suitable for oak woodland enhancement and creation. The Plan shall distinguish between oaks to be planted in compliance with CLAOTO (BIO-22b) and the additional measures required by the Newhall Ranch RMDP-SCPEIS/EIR (BIO-2 for woodlands in jurisdictional streambeds; and BIO-22c and 22d for upland areas).

7.5.3 Mitigation Opportunities

Oak resource mitigation areas are addressed in *Sections 7.1.3, 7.2.3, 7.3.3, and 7.4.3*. Suitable areas exist in the River Country SMA, High Country SMA, Salt Creek area, and Open Area.

7.5.4 Management Requirements

The management requirements for oak resources would incorporate findings of the oak tree inventory and evaluation of current health. Potential stressors related to changed conditions following development would be identified. A set of management measures would thereby be developed which acknowledge existing oak conditions and would provide for minimization of future perturbations of those conditions. In addition to managing individual tree health, a primary goal of the management of oak resource is ensure reproduction and thus the persistence of oak woodland communities within the preserve area. These management goals would be achieved through active monitoring of oak populations and particularly, regeneration rates. Based on monitoring results, adaptive management strategies, such as supplemental plantings, disease treatment, and/or restrictive fencing, would be implemented to maintain or improve oak health and regeneration.

7.6 San Fernando Valley Spineflower

The distribution of spineflower on Newhall Land's land holdings within the SCP area primarily consists of six general population occurrences, with four located within the Specific Plan, and one occurrence each within the VCC and Entrada planning areas. Both the Newhall Ranch SCP and associated Candidate Conservation Agreement are separately discussed in greater detail in the SCP and the Candidate Conservation Agreement.

The EIS/EIR recommends additional mitigation due to the loss of spineflower resulting from implementation of the RMDP component of the proposed Project. These mitigation measures are identified in the separately prepared Newhall Ranch SCP.

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7.7 RMDP Infrastructure Maintenance and Management

Management of RMDP infrastructure is essential to providing resource protection and conservation due to the wide-ranging potential effects adjacent development can have on species and habitats subsequent to development. Principal among these effects is the alteration of drainage patterns and water quality. Thus, a large component of the RMDP infrastructure management strategy is the sensitive design of drainage and water quality facilities, as described in *Section 6.0*. To ensure that these facilities perform their intended function, while also ensuring indirect effects are minimized, maintenance related restrictions and mitigation measures will be in place. As a component of the RMDP, a Maintenance Manual is being adopted (*Appendix A*), which is intended to undergo periodic review and updating to incorporate innovations which further reduce environmental effects or the costs of maintenance.

7.7.1 Access, Work Zone Restrictions, and Monitoring

- A-1 Temporary access roads to the work site shall be routed to avoid, to the extent feasible, riparian vegetation, live streams, and wetted areas. The boundaries of the maintenance site and any temporary access roads within the riverbed shall be marked in the field with stakes and flagging. No maintenance activities, vehicular access, equipment storage, stockpiling, or significant human intrusion shall occur outside the work area and access roads. If a live stream or pond is located within the maintenance site or access roads, the procedures described below would be followed to identify and relocate endangered species from live streams or ponded water.

- A-2 All native riparian trees with a three-inch diameter at breast height (dbh) or greater in maintenance areas shall be replaced using one- or five-gallon container plants, containered trees, or pole cuttings in the maintenance areas in the winter following the maintenance activities.

- A-3 Native vegetation within temporary maintenance work areas may be mulched and spread, where appropriate, over the temporary impact areas once maintenance work is complete in order to facilitate revegetation. If vegetation is cut to ground level only, with the likelihood of re-growth, then cuttings may be removed from the maintenance site for recycling.

- A-4 For those man-made features in areas not subject to Corps, CDFG, or RWQCB jurisdiction, that have not been abandoned or otherwise un-maintained, the Agencies will not exert jurisdiction unless other circumstances require otherwise.

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- A-5 Equipment shall not be operated in areas of ponded or flowing water unless authorized by CDFG and USFWS.
- A-6 Temporary sediment retention ponds shall be constructed downstream of maintenance sites which involve grading or excavating, and that contain flowing or ponded water that drains off site into the undisturbed stream flow or ponds. The sediment ponds shall be constructed of riverbed material and shall prevent sediment-laden water from reaching undisturbed ponds or stream flows. To the extent feasible, ponds shall be located in barren or sandy river bottom areas devoid of existing riparian scrub, riparian woodland, or aquatic habitat. The ponds shall be maintained and repaired after flooding events, and shall be restored to pre-disturbance grades and substrate conditions within 30 days after maintenance work has ended.
- A-7 Water containing mud, silt, or other pollutants from maintenance 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.
- A-8 If a stream channel has been altered during maintenance, the 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.
- A-9 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.
- A-10 Staging/storage areas for maintenance equipment and materials shall be located outside of the ordinary high water mark.
- A-11 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.
- A-12 Stationary equipment, such as motors, pumps, generators, and welders, that may be located within the riverbed maintenance zone shall be positioned over drip pans. No fuel tanks shall be allowed in the riverbed.
- A-13 No debris, bark, slash sawdust, rubbish, cement or concrete or washing thereof, oil, petroleum products, or other organic material from any maintenance activity shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into,

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watercourses included in the permit. When maintenance is completed, any excess materials or debris shall be removed from the work area.

- A-14 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.
- A-15 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.
- A-16 The operator shall install and use fully covered trash receptacles to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash.

7.7.2 Special-Status Aquatic (Fish, Amphibian, and Mollusk) Species Avoidance/Mitigation

- B-1 Prior to initiating in-channel maintenance activities, aquatic habitats within work sites and access roads, as well as aquatic habitats within 300 feet of the maintenance site 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 inspection and shall have the option of attending. 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 work sites, all activities within aquatic habitat will be suspended. Maintenance within aquatic habitats shall only occur when it is determined that juvenile fish are not present within the Project area.
- B-2 Prior to initiating in-channel maintenance activities, all work sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of the maintenance site and access roads shall be surveyed by a qualified biologist at the appropriate season for arroyo toad and California red-legged frog. 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 the CDFG and the Corps. If either species is present, the applicant shall develop and implement a monitoring plan in consultation with the USFWS and CDFG.
- B-3 Prior to initiating in-channel maintenance activities, all work sites and access roads within the riverbed as well as all riverbed areas within 500 feet of the maintenance site and access roads shall be surveyed by a qualified biologist at the appropriate season for

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the southwestern pond turtle. If detected in or adjacent to the Project, nesting surveys shall be conducted by a qualified biologist when suitable nesting habitat exists within 1,300 feet of occupied habitat in an area where ground disturbance will occur. If a southwestern pond turtle nesting area would be adversely impacted by maintenance 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 the written authorization from the 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 maintenance work each day.

- B-4 Prior to maintenance activities, a qualified biologist shall conduct surveys for the western spadefoot toad within all portions of the Project site containing suitable breeding habitat. If the western spadefoot toad is found on site, measures including habitat creation at a 2:1 ratio, pre-construction surveys, relocation of adults/tadpoles and egg masses, and monitoring for five years will be implemented.

- B-5 Prior to maintenance activities in any drainage area supporting perennial flow, a qualified biologist shall conduct focused surveys for the undescribed snail species. Any individuals of the undescribed snail species found within the Middle Canyon drainage shall be relocated to appropriate habitat within Middle Canyon Spring. If undescribed snails are discovered during aquatic and semi-aquatic focused surveys in any other perennial flowing water, the applicant shall consult with CDFG prior to initiating disturbance of the area.

- B-6 Stream diversion bypass channels will be constructed when the active wetted channel is within the maintenance work zone, supervised by a qualified restoration ecologist and in accordance with a Stream Crossing and Diversion Plan submitted to the USFWS and CDFG for approval at least 30 days prior to implementation. The diversion channel shall be of a width and depth comparable to the natural River channel and, where feasible, 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.

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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. If adult special-status fishes are present and spawning has not occurred, they shall be relocated prior to the diversion or crossing.

At the conclusion of the diversion, either at the commencement of the winter season, or the completion of maintenance, 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.

- B-7 A qualified biologist shall be present when any stream diversion or culvert installation takes place, and shall patrol the areas within, upstream, and downstream of the work area to rescue any species stranded by the diversion of the stream water. 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 the CDFG and USFWS within 24 hours.
- B-8 Repair of in-channel facilities shall not impair movement of fish and aquatic life. Bottoms of temporary culverts shall be placed at or below channel grade.

7.7.3 Special-Status Bird Species Avoidance/Mitigation

- C-1 All maintenance and repair work, excluding emergency work, shall occur between August 1 and March 15 (which is outside of the breeding season for special-status riparian birds, such as the least Bell's vireo) for facilities along the Santa Clara River. In-channel maintenance work that must occur between March 15 and August 1 in these areas shall follow the additional procedures below.
- C-2 Within 30 days of maintenance activities 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 maintenance zone or within 300 feet (500 feet for raptors) of the maintenance zone. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 7 days prior to the initiation of maintenance work. If ground-disturbing activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground-disturbing activities.

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- C-3 If active nests are found, maintenance activities within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist in consultation with the 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, the buffers will be established in consultation with the CDFG. Potential golden eagle nesting will be reported to the CDFG within 24 hours. Limits of maintenance to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and maintenance personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a monitor during those periods when maintenance activities will occur near active nest areas to ensure that no inadvertent impacts to these nests occur.
- C-4 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, maintenance activities within 300 feet of the nest shall be postponed or halted, at the discretion of the biologist in consultation with the 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. This buffer may be adjusted provided noise levels do not exceed 60 dBA hourly Leq at the edge of the nest site as determined by a qualified biologist in coordination with a qualified acoustician.
- C-5 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 maintenance-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 (1997) 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. Maintenance 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 maintenance area.
- C-6 At the discretion and direction of the qualified biological monitor, work may be conducted within the 300-foot zone if it can be determined/documented that maintenance activities are not impacting the nesting bird. Demonstration would include the biologist monitoring parent bird behavior during activities and having the authority to immediately

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halt activities in the event adverse reactions were observed. This condition is in consideration that some maintenance is completed using only hand tools and foot traffic, while other maintenance activities involve heavy equipment operation.

- C-7 Temporary loss of nesting/foraging habitat in key population areas for the least Bell's vireo due to maintenance 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 BIO-1 through BIO-16.
- C-8 Thirty days prior to maintenance activities, a qualified biologist shall conduct CDFG protocol surveys to determine whether the burrowing owl is present at the site. 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, maintenance 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 (CDFG 1995). Unless otherwise authorized by CDFG, a 500-foot buffer, within which no activity will be permissible, will be maintained between maintenance activities and nesting burrowing owls during the nesting season.
- C-9 During maintenance of antennae and phone/utility towers, the area shall be kept clean of debris, such as cable, trash, and maintenance materials and all microtrash and litter, vehicle fluids, and food waste from the Project area shall be collected on a daily basis. A qualified biologist with knowledge of California condors shall monitor maintenance activities within the Project area. If condors are observed landing in the Project area, the applicant shall avoid further maintenance within 500 feet of the sighting until the animals have left the area, or as otherwise authorized by CDFG and USFWS. Should condors be found roosting within 0.5 mile of the maintenance area, no maintenance activity shall occur between 1 hour before sunset to 1 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 maintenance area, no maintenance activity will occur until further authorization occurs from CDFG and USFWS.

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7.7.4 Special-Status Mammal, Reptile, and Insect Species Avoidance/Mitigation

- D-1 Prior to maintenance work, 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 the specific survey and relocation efforts that would occur for maintenance 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 to February). Qualified biologists shall conduct surveys to capture and relocate individuals 30 days prior to maintenance activities in suitable habitat. 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 maintenance activities each day.
- D-2 Thirty days prior to maintenance activities in suitable habitat, a qualified biologist shall conduct a survey, within the proposed 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 and a minimum 200 foot buffer established. This buffer may be reduced based on the location of the den upon consultation with the CDFG. Maternity dens shall be flagged for avoidance, identified on construction maps, and a qualified biologist shall be present during maintenance. If avoidance of a non-maternity den is not feasible, badgers shall be relocated either by trapping or by slowly excavating the burrow before or after the rearing season. Any relocation of badgers shall occur only after consultation with the CDFG.
- D-3 Thirty days prior to maintenance activities in suitable habitat, a qualified biologist shall conduct a survey, within the proposed disturbance zone and within 200 feet of the disturbance zone, for San Diego desert woodrat. 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. Maintenance activities within the fenced area will be postponed or halted until young have left the nest. The biologist shall serve as a 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, a qualified biologist shall relocate nests off site, to be spaced no closer than 100 feet apart.

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Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.

- D-4 Thirty days prior to maintenance activities in suitable habitat, a qualified biologist shall conduct a survey, within the proposed disturbance zone and within 200 feet of the disturbance zone, for San Diego black-tailed jackrabbit. 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. This buffer may be reduced based on the location of the den upon consultation with the CDFG. Occupied maternity dens, depressions, nests, or burrows shall be flagged for avoidance and a biological monitor shall be present during maintenance activities. Unattended young shall be relocated to suitable habitat by a qualified biologist. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.
- D-5 Prior to initiating in-channel maintenance activities, all work sites and access roads within the riverbed as well as all riverbed areas within 300 feet of the maintenance site and access roads shall be surveyed by a qualified biologist at the appropriate season for two-striped garter snake and south coast garter snake. 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, to be developed and submitted to CDFG for approval 60 days prior to any ground disturbing activities within potentially occupied habitat. A 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.
- D-6 No earlier than 30 days prior to maintenance work, a qualified biologist shall conduct a survey to determine if active roosts of special-status bats are present on or within 300 feet of the disturbance boundaries. If an active maternity roost is found, it shall not be disturbed and all work within 300 feet shall be postponed or halted until the roost is vacated and the juveniles fledged. Rock outcrops or trees occupied by maternity roosts shall be avoided. If avoidance of the maternity roost must occur, but the bat biologist determines in consultation with and with the approval of the 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 and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity

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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. If non-breeding bat hibernacula are found in trees scheduled to be removed or in crevices in rock outcrops within the maintenance footprint, the individuals shall be safely evicted under the direction of a qualified bat biologist. 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).

- D-7 Prior to maintenance activities in areas containing host plants in sufficient density to support San Emigdio blue butterfly, 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. 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. Prior to maintenance 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. Maintenance 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.

7.7.5 Invasive Species Control

- E-1 As the features constructed to treat and control stormwater and non-stormwater runoff often include permanent pools of water or hydraulic and soil conditions conducive to infestation by non-native species (both plant and animal), the following mitigation measures have been developed to establish criteria and methods to prevent or eradicate such species.
- E-2 Monitoring of storm-water height at Dry Basins:
- a. If standing water more than 6 inches in depth is found within any of the ponds during the summer months, measures should be implemented to change the outlet from the pond to assure continual draining and to allow the floor to dry for a period of at least six weeks.

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- b. The purpose of this maintenance action is to eradicate non-native frog species and mosquitoes within the pond, while allowing the pond to function as intended.
 - c. Alternatively, the ponds may be pumped and inflow diverted for 6 weeks during the summer to accomplish this same goal. Water removed from the pond facilities for maintenance may be spread in open space areas or trucked to an approved water disposal site.
 - d. This does not apply to Wet Ponds, Lakes, or other features where a permanent wetted pool is a function of the design. Other methods shall be employed in the event of an infestation.
- E-3 Invasive vegetation, such as giant reed, castor bean, Pampas grass, and tamarisk must be removed. Invasive species should never contribute more than 25% of the vegetated area of the basin or feature. For more information on invasive weeds, including biology and control of listed weeds, refer to the encyclopedia located at the California Department of Food and Agriculture website (<http://www.cdffa.ca.gov/wma>) or the California Invasive Plant Council website (<http://portal.cal-ipc.org/weedlist>).
- a. The Operator shall remove any non-native vegetation (e.g., tree tobacco, castor bean, giant cane) from the maintenance work area and shall dispose of it in a manner and a location which prevents its reestablishment.
 - b. Removal shall be done at least twice annually during the spring/summer season, as needed.
 - i. Giant cane, if present, shall be cut to a height of 6 inches or less, and the stumps painted with an herbicide approved for aquatic use within 5 minutes of cutting.
 - ii. Herbicides shall be applied at least three times during the period from May 1 to October 1 to eradicate these plants.
 - c. Where proposed methods for removing giant cane deviate from this procedure, the Operator shall present the alternate methods, in writing, to the Department for review and approval, prior to maintenance.
 - d. Whenever possible, invasive species shall be removed by hand or by hand-operated power tools, rather than by chemical means.

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- e. If there is a possibility that the herbicides could come into contact with water, the Operator shall employ only those herbicides, such as Rodeo (Glyphosate), which are approved for aquatic use. If surfactants are required, they shall be restricted to non-ionic chemicals, such as Agri-Dex, which are approved for aquatic use.
- f. The Operator shall apply any herbicides in accordance with state and federal law.
 - i. No herbicides shall be used where threatened or endangered species occur.
 - ii. No herbicides shall be used when wind velocities are above 5 miles per hour.
 - iii. No herbicides shall be used on native vegetation unless specifically authorized, in writing, by the Department.

7.7.6 Notification and Reporting

The Agencies (Corps, CDFG, RWQCB, and USFWS) shall be notified of individual maintenance activities on an ongoing basis, using the Subnotification procedures described in the Agency Permits. Prior to any maintenance activities, Owner/Operator shall submit a Maintenance Subnotification to the Agencies, as directed on the Subnotification form. At a minimum, the submittal will include: a map showing the limits of maintenance area with current vegetation and proposed impacts; location and details of any required stream diversions; species protection/relocation plans and any pertinent additional environmental protections measures; description of maintenance activities and schedule; statement on the consistency with RMDP, EIS/EIR, and Agency permits, including compliance with environmental protection measures for threatened and endangered species, water quality, and riparian habitat; and description of post-maintenance restoration efforts, if any.

The notification shall be submitted to the Agencies at least 30 calendar days prior to the planned activities. The Corps, CDFG, and RWQCB must respond within the 30-day period, either notifying the Owner/Operator that (1) the maintenance activities can proceed as planned because they are consistent with the RMDP, EIS/EIR, and conditions of the Agency Permits, or (2) the activities cannot proceed as planned. In the latter circumstance, the Agencies shall provide written reason for denial and suggest how the notification may be revised or corrected. The Agencies shall also make staff available to discuss inconsistencies or problems.

The Agencies have the discretion to add conditions to the authorization for any maintenance activities, if needed, to ensure compliance with applicable state and federal laws, regulations, and codes.

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Results of the surveys and relocation efforts for aquatic, reptile, and mammal species shall be provided to CDFG in the Annual Mitigation Status Report.

7.8 Mitigation Credit Accrual System

The Specific Plan RMP allows for the use of mitigation banking, as applicable; however, the RMDP does not include execution of a formal mitigation banking agreement and, therefore, a mitigation credit accrual system will be employed. Nothing in the section 404 or section 2081 permit, or section 1605 agreement, shall preclude Newhall Land or its designee from selling mitigation credits to other parties (BIO-15). As defined by federal guidance, mitigation banking is a process whereby a type of biotic resource, such as a wetland or riparian habitat, is created, enhanced, or, in some cases, preserved, as a means of providing compensatory mitigation in advance for authorized impacts to similar resources. The sponsor of the mitigation bank receives mitigation “credits” that the sponsor or other parties can use for the mitigation of impacts that occur on the sponsor’s property or in other locations. Mitigation banking can be advantageous to the protection of resources in that mitigation occurs in advance of impacts and generally results in consolidated mitigation in a single area (County of Los Angeles 2003b).

Depending on the timing of restoration activities and jurisdictional impacts, mitigation credits may accrue in accordance with the Subnotification form and associated Conceptual Mitigation Plan. Mitigation credits may accrue from restoration activities within the River Corridor SMA, High Country SMA, Salt Creek area, and Open Area, subject to the following requirements (SP - 4.6-16, SP-4.6-28, and SP-4.6-43):

1. Mitigation credits for riparian vegetation, brushland (scrub communities), native grassland, and special-status plant species will be subject to state and federal regulations and shall be conducted pursuant to the mitigation requirements set forth in *Sections 7.1.3, 7.2.3, 7.3.3, and 7.4.3.*
2. Mitigation credits for oak resources shall be conducted pursuant to the Oak Resources Replacement Program set forth in *Section 7.5.*
3. Mitigation credits for elderberry scrub shall be subject to approval of plans by the County Forester.

7.9 Wildfire Fuel Modification

The study area is within the extreme and moderate fire hazard zones, as identified in the Los Angeles County 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

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hillside areas. The extreme fire hazard zone includes high brush and woodlands and all steep slopes, regardless of vegetation (County of Los Angeles 2003b).

Development of Newhall Ranch will reduce the amount of native flammable vegetation present within the Specific Plan area. However, the development of homes potentially exposes residences of the Specific Plan area to wildfire hazards. Fire-fighting capabilities will be provided by two fire stations within the Specific Plan (see Specific Plan Land Use Plan, Exhibit 2.3-1), other nearby stations, a system 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 will be located adjacent to large Open Area dominated by native vegetation. This condition will occur primarily in the southern portion of the Specific Plan area and where portions of the development area in the northwest section of Riverwood Village abut large natural Open Area.

Access 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 Requirements

To minimize the potential exposure of the development areas and conservation areas (i.e., the SMAs, Salt Creek area, Open Area, oak resources, and spineflower preserves) to fire hazards, the Specific Plan is subject to the requirements of the Los Angeles County Fire Protection District, which provides fire protection for the area. At the time of final subdivision maps permitting construction in development areas that are adjacent to the conservation areas, a wildfire fuel modification plan shall be prepared in accordance with the fuel modification ordinance standards (i.e., Fire Protection Plans per 24 CCR Part 9) and shall be submitted for approval to the County Fire Department (SP-4.6-49).

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 (along with restrictions on flammable plants and structure within the fuel modification area) shall take place, as required by the fuel modification ordinance (SP-4.6-50).

In order to enhance the habitat value of plant communities that require fuel modification, fire-resistant plant species contributing habitat value may be planted within the fuel modification zone. Typical plant species suitable for FMZs are indicated in *Table 17*. FMZs adjacent to

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conservation areas including habitat of high value, such as oak woodland and grasses, shall utilize a more restrictive plant list, which shall be reviewed by the County Forester (SP-4.6-51).

**Table 17
Plant Species Suitable for Fuel Modification Zones**

Common Name	Scientific Name
Trees	
agave, cacti, succulents, and yucca species	
California bay	<i>Umbellularia californica</i>
Catalina cherry	<i>Prunus lyonil</i>
coast live oak	<i>Quercus agrifolia</i>
Mexican elderberry	<i>Sambucus mexicana</i>
Southern California black walnut	<i>Juglans californica</i>
strawberry tree	<i>Arbutus unedo</i>
valley oak	<i>Quercus lobata</i>
Shrubs and Groundcovers	
agave, cacti, succulents, and yucca species	
California lilacs	<i>Ceanothus species</i>
cotoneaster	<i>Cotoneaster species</i>
coyote bush	<i>Baccharis species</i>
currant, gooseberry	<i>Ribes species</i>
lemonadeberry	<i>Rhus integrifolia</i>
manzanita	<i>Arctostaphylos species</i>
native grass species	<i>Nasella (Stipa)</i>
rosemary	<i>Rosmarinus species</i>
sage	<i>Salvia species</i>
saltbush	<i>Atriplex species</i>
toyon	<i>Heteromeles arbutifolia</i>

Note: This is a general fuel modification plant list which may be modified. FMZs adjacent to conservation areas containing high value habitat may utilize a more restrictive list reviewed by the County Forester. FMZs adjacent to SMAs shall also be reviewed by the County Biologist.

The wildfire fuel modification plan shall include the following construction period requirements: (1) a fire watch during welding operations, (2) spark arresters on all equipment and vehicles operating in a high fire hazard area, (3) designated smoking and non-smoking areas, and (4) water availability pursuant to the County Fire Department requirements (SP-4.6-52).

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8.0 MONITORING AND MAINTENANCE

8.1 Monitoring Activities

Aerial photos of the preserved open space areas will be obtained every other year and compared against the previous aerial photos to identify any disturbances, changes, or trends in vegetative cover within the River Corridor SMA, High Country SMA, Salt Creek area, Open Area, and spineflower preserve areas. The vegetation map will be spot field-checked as deemed necessary. Vegetation categories will be identified according to the “List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database” (CDFG 2003). Mapping will be conducted to the series level, where appropriate.

8.2 Maintenance Activities

Preserve open space areas maintenance shall be performed at the direction of the preserve manager. Maintenance shall include controlling invasive weed species and performing weed control and management as necessary to maintain the preserves in compliance with the performance standards. Maintenance shall also include removing accumulated trash, repairing broken or damaged fences, gates, locks, signage, and other preserve-related items on a quarterly basis. In addition, maintenance shall include controlling plant diseases and animal pests determined by the preserve manager.

8.2.1 Weed Control

Weeding efforts in the preserved open space areas shall consider the overall preserve goal, which is to promote the long-term survival of multiple special-status species and supporting habitats. Prior to applying herbicides, it shall be determined by the preserve manager that the proposed herbicide, when applied per the labeled directions, will not directly or indirectly affect other preserve biological resources. Recommendations for herbicide use shall be prescribed by a Pest Control Adviser and applied by a licensed or certified pesticide applicator, as required by law.

All weed control work shall be supervised by a qualified foreman capable of readily distinguishing weeds from native plants. Weed control work shall utilize Integrated Pest Management techniques that focus on avoiding and minimizing potential weed invasion problems by minimizing soil disturbance and quickly controlling any new populations of invasive weed species before they spread and colonize. When weed control work is determined to be necessary, the least damaging, most selective method(s) available shall be used. Weed control work shall be carefully timed to control weeds before they set seed. Weeds should be controlled as early as effectively possible to minimize the amount of biomass produced, using methods that focus on reducing the weed seed bank, the amount of thatch, and weed biomass.

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Weed control and management will focus on controlling annual weeds seasonally. Methods used for weed control may include string trimmers, mowers, and/or herbicide treatment, using truck-mounted tank sprayers, backpack sprayers, and wicking or daubing devices. Maintenance personnel must have a fire extinguisher with them, or in the immediate vicinity, when operating mechanized equipment in preserve areas.

Weeding in areas that are dominated by native plants shall be performed using non-mechanized hand tools or herbicide daubers/wicks.

Weeds may also be controlled by a well-managed, timed, and monitored livestock grazing regime. Any proposed animal grazing shall be accompanied by a grazing plan prepared by the preserve manager and preapproved by CDFG. The grazing plan shall indicate the type of animal(s) used for grazing, the area to be grazed, the grazing time frame, the anticipated time of rotation from area to area, methods proposed to keep livestock out of non-grazing areas, and the proposed monitoring regime. Livestock shall be closely monitored and moved/rotated to prevent overgrazing. Grazing shall be timed to graze exotic grasses before the seed become ripe. Stands of native vegetation and spineflower populations shall be adequately protected during grazing operations.

If burn permits can be obtained from the necessary agencies, burning may be used as a method of weed control and management within the preserves. Burning only would be used in preserve areas that are strongly dominated by non-native grasses and weeds. Strongly dominated shall mean at least 90% weed cover. Burns would need to be prescribed by the preserve manager and preapproved by CDFG. The proposed burn date, location, and methods would need to be provided in advance to CDFG. It is most likely that this method would need to be implemented before any development is commenced.

Any large perennial exotic species, including exotic trees, will either be grubbed out and removed, or cut to grade and treated with the appropriate systemic herbicide. Resprouts of exotic species will be controlled quarterly before they get large. The method of control will depend on the situation (i.e., if grubbing exotic species' rootballs would exacerbate erosion or likely damage nearby native plants, rootballs would be cut to grade and stump treated). In general, weeds and exotic species will be controlled using the methods indicated in *Invasive Plants of California's Wildlands* (Bossard et al. 2000), and in accordance with the directives of the California Department of Pesticide Regulation.

All maintenance work will be closely monitored by the preserve manager. Preserve management is intended to be adaptive, and, therefore, maintenance methods are subject to changes and

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adjustments as deemed necessary by the preserve manager. Any changes in methodology, however, will be prescribed by the preserve manager in writing.

8.2.2 Pest Control

Pest control is not anticipated to be required in the preserve areas on a regular basis. A number of invasive species management measures would be implemented along the preserve edge as described in *Sections 7.1.2.2, 7.2.2.2, and 7.4.2.2*. However, it is possible that gophers, squirrels, rabbits, and other animals may need to be at least periodically controlled in preserve areas. In addition, if an herbivore is identified foraging on spineflower plants or plants installed during revegetation efforts, and the damage is determined by the preserve manager to be significant, it may need to be controlled.

The control methods will be dependent on the species that needs control; however, pest control will utilize IPM techniques. Emphasis will be placed on using controls such as exclusionary fencing, rodent traps, fake owls, scarecrows, and reflective silver ties. Plant shelters and gopher cages may be used on new plantings in restoration areas. All control methods will be prescribed in writing by the preserve.

Insect control is not anticipated to be needed on a regular basis but may be more likely once the surrounding areas are developed, especially along the urban fringes, and/or habitat restoration areas where establishing plants are more likely to become stressed and, therefore, predisposed to insect infestation. Although not expected, severe infestations of insects determined by the preserve manager to be detrimental to the survival of a significant number of native plants or spineflower shall be controlled using the least toxic controls available, including sticky yellow insect strips, non-copper horticultural oils, and biological controls such as ladybugs, damsel bugs, green lacewings, and/or minute pirate bugs.

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9.0 RESPONSIBLE PARTIES

Newhall Land, or a designee, will be responsible for implementing this RMDP. Newhall Land, or a designee, will be responsible for the management, monitoring, and reporting measures described in *Section 7.0*. The assigned party may include the Center for Natural Lands Management or another assigned party responsible for overseeing the River Corridor SMA, High Country SMA, Salt Creek area, Open Area, and oak resources, or any other entity that utilizes the permits authorizing this RMDP.

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10.0 ADAPTIVE MANAGEMENT

This section describes the adaptive management program and remedial measures for the River Corridor SMA, High Country SMA, Salt Creek, and Open Area preserve areas. The adaptive management program and remedial measures for the spineflower preserves are separately described in the Newhall Ranch SCP and associated Candidate Conservation Agreement.

McEachern et al. (2006) provide a description of the concept of adaptive management.

[Adaptive management] is an iterative process of strategy, design, implementation, monitoring, evaluation and adjusting management to maximize conservation success. It evaluates decisions or actions through carefully designed monitoring and proposed subsequent modification to management, threat abatement and monitoring. The modifications are in turn tested with an appropriate, perhaps redesigned, monitoring protocol. At each turn of the cycle, active learning through monitoring and evaluation reduces management uncertainty. Adaptive management is logical, can deal with uncertainty and data gaps, and is similar to the scientific process of hypothesis testing.

Preserve maintenance and remedial actions will be adaptive and based on the biannual assessments and may include adjusting management techniques and trigger points based on quantitative data collected during long-term monitoring. In general, remedial measures will include implementing maintenance tasks outlined in the maintenance section.

10.1 Wildfire/Geologic Events

In the event that a preserve or a portion of a preserve burns in a wildfire or suffers from mass movements (e.g., landslides, slope sloughing, or other geologic events), the preserve manager and/or NLMO shall promptly review the site and determine what action, if any, should be taken. The primary anticipated post-fire preserve management activity involves monitoring the site and controlling annual weeds that may invade burned areas following a fire event, especially when such weeds were not previously present or were present in lower densities. If fire control lines or other forms of bulldozer damage occur in the preserves, these areas would be repaired and revegetated to pre-burn conditions or better. An Emergency Fire Response Plan will be prepared prior to the establishment of the preserves.

In general, a burned site will be left to recover naturally from wildfire or geologic events. The native habitat types within the preserve are well adapted to recover from wildfires unless the fire

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frequency is artificially increased. Therefore, burned areas should not be seeded or sprayed with soil stabilizer, straw, or hay. The latter two items are usually contaminated with various problematic weed seeds and often include noxious weed seed. It should be noted that several species of weeds not considered to be noxious by the U.S. Department of Agriculture (USDA) may be considered a noxious weed in natural preserve areas and if introduced would be very expensive to control or eradicate. In addition, active post-fire revegetation and soil stabilization efforts interfere with natural post-fire successional species and vegetation development stages that should be allowed to occur for the habitat to properly recover and regenerate.

Erosion and ash distribution is an expected and naturally occurring event following a wildfire and is part of the ecological cycle. Therefore, erosion control devices, including seeding, straw wattles, and soil tackifiers, should be avoided following a fire event. An exception to this would be fires that occur at a higher than average frequency, which may artificially accelerate erosion processes. This situation is to be evaluated by the preserve manager. Imminent and unavoidable threats to human health, safety, and welfare represent another exception to this passive management approach in post-fire conditions. Fire frequencies have a tendency to increase at the urban-wildland interface. If the preserves are subject to a greater than natural fire frequency, the guidelines outlined herein shall be followed to help ensure that the preserves recover to a natural state.

When deemed necessary for fires that occur at a higher than average frequency that may artificially accelerate erosion processes, the preferred erosion control devices to be used include fabric silt fencing, gravel or sand bags (made of biodegradable burlap), straw wattles certified as weed-free (not just free of “USDA noxious weeds,” but free of all weeds), and judicious seeding with locally indigenous native species free of weed seed. Seed shall be tested by a certified laboratory and all weed seeds identified by species. The quantity of weed seed shall be indicated in units of quantity of weed seed per pound of native seed, and sorted by size and weight to eliminate weed seeds determined to be noxious or problematic by the preserve manager.

Items that often include problematic noxious or invasive weed seeds should be avoided. These include hay and straw bales, non-certified wattles, and non-native, non-locally indigenous seed species.

The same passive, successional regeneration holds true for mass-movement, landslide, or slope sloughing types of events. Some plant species, quite possibly including spineflower, have evolved and/or adapted to recruit into these types of geologically disturbed areas.

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10.2 Restoration and Enhancement Activities within Preserve Areas

Restoration of disturbed portions of the preserves will be performed as outlined in *Section 7.0*. In summary, areas that have greater than 30% cover by weeds (not including annual grasses) will be restored to have at least 70% native cover. In addition, any and all Cal-IPC List A and B plants that are present within the preserve will be controlled. Restoration and enhancement efforts within the preserve shall be performed in such a manner that the overall habitat is improved, if only by reducing the quantity of weeds within the preserve. Habitat or biological resources shall not be negatively impacted directly or indirectly by restoration or enhancement. Therefore, restoration and enhancement projects shall be determined not to negatively affect, either directly or indirectly, habitat and other biological resources on site and shall be reviewed and approved by the County and CDFG.

Restoration and enhancement projects shall utilize only locally indigenous plants appropriate to the habitat being restored or enhanced. Plants and seed shall be from the local region and from similar elevations. Seed shall be tested prior to delivery to ensure it is free of problematic weeds, pests, and disease. Restoration efforts will focus on the use of seed and only include container plants when seed is not available or able to be collected in a reasonable amount of time, or if germination of a particular species from seed is documented as difficult and/or typically requires specific conditions such as fire, scarification, or acidification.

Habitat restoration sites may be temporarily irrigated to establish native plants and seed. If irrigation is utilized, it shall not alter pre-existing hydrology conditions within the preserve areas and shall be programmed to eliminate runoff. In addition, the system shall be used to establish plants and be scheduled to acclimate them to natural rainfall cycles. Temporary irrigation systems, which will be subject to preapproval by the CDFG, shall be removed after a maximum of 5 years. Temporary erosion control devices may be used during restoration and enhancement work to prevent rills and gullies from forming and associated sedimentation and/or stream turbidity. Erosion control devices may include native, locally indigenous hydroseed mix, fabric silt fences, biodegradable burlap sand bags, or other preapproved devices. Hay and straw bales, wattles, and other devices that often host weed seeds shall be avoided. Erosion control devices shall be removed once the site is adequately vegetated.

Habitat restoration and enhancement plans (including restoration plans) for areas within the preserves shall be prepared by a qualified biologist and submitted to the County and CDFG for approval prior to implementation. Restoration and enhancement plans shall include the following information at a minimum:

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1. Maps showing the exact location and acreage of the site
2. A description of the restoration project and proposed methodology
3. Project proponent
4. Name of biologist who prepared the plan
5. Map and description of the existing habitat, adjacent habitat, and proposed habitat
6. List of proposed plant and seed species
7. Plant origins
8. Container sizes
9. Species composition
10. Installation schedule
11. Proposed monitoring and maintenance schedule and activities
12. Performance standards.

Seeds shall meet the requirements indicated herein and container plants shall be inspected by the preserve manager for weeds, disease, and the presence of pests, including Argentine ants, prior to delivery to the site and during delivery. Plants with pests, weeds, or diseases shall be rejected and immediately removed from the site. Mycorrhizal inoculation shall be used in areas where the soil is damaged, at the discretion of the preserve manager.

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11.0 FUNDING

Newhall Land, or a designee, will post bonds (or other CDFG-approved financial assurance mechanisms) for the management, monitoring, and reporting measures described in *Section 7.0*. Bonds shall be released by CDFG upon reaching identified milestones and/or upon receipt of verification of grants or special assessments obtained to implement this Plan.

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12.0 REPORTING

This section identifies the reporting requirements associated with the River Corridor SMA, High Country SMA, Salt Creek area, Open Area, and oak resources. It is anticipated that the various conservation areas may be established in phases in association with phased development of the surrounding areas (see *Section 5.4.2* of this document for a description of preserve assembly).

In addition to reporting required by mitigation measures related to restoration and enhancement of biological resources, an annual RMDP Preserve Report will be prepared and submitted to Newhall Land, the County, and CDFG by April 1 of each year. As the preserves may be established in phases, the long-term monitoring and reporting may be phased. The annual report will be comprehensive in addressing all the established preserve areas each year. The annual reports will contain a description of the revegetation activities, monitoring, maintenance, and adaptive management activities conducted in each of the preserve areas during the calendar year.

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13.0 DOCUMENTS CITED

- 14 CCR 783.0 et seq. Regulations for implementation of the California Endangered Species Act.
- 14 CCR 15000 et seq. California Environmental Quality Act (CEQA) Guidelines.
- 16 U.S.C. 1531 et seq. Endangered Species Act of 1973.
- 24 CCR Part 9. Chapter 47: Requirements for Wildland–Urban Interface Fire Areas.
- 33 CFR 320.4–328.4. General policies for evaluating permit applications. Corps of Engineers, Department of the Army, U.S. Department of Defense.
- 33 U.S.C. 1251 et seq. Federal Water Pollution Control Act (Clean Water Act).
- 40 CFR 230.10(a). Section 404(b)(1) guidelines for specification of disposal sites for dredged or fill material. Restrictions on discharge. Environmental Protection Agency.
- 42 U.S.C. 4321 et seq. National Environmental Policy Act (NEPA) of 1969.
- 50 CFR 17.1 et seq. Endangered and threatened wildlife and plants. U.S. Fish and Wildlife Service.
- 51 FR 41206–41217. Final rule: Final regulations for the regulatory program of the Corps of Engineers. November 13, 1986.
- 59 FR 4845–4867. Final rule: “Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Least Bell’s Vireo.” 1994.
- 60 FR 58605–58614. Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks.
- 66 FR 9413–9474. Final Rule: “Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Arroyo Toad.” 2001.
- APLIC (Avian Power Line Interaction Committee). 2006. *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*. Pier Final Project Report CEC-500-2006-022. Washington, D.C. and Sacramento, California: Edison Electric Institute, APLIC, and the California Energy Commission.

Newhall Ranch Resource Management and Development Plan

Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. 2000. *Invasive Plants of California's Wildlands*. Berkeley, California: California Invasive Plant Council.

California Fish and Game Code. Section 1600 et seq.

California Fish and Game Code. Section 2081.

California Fish and Game Code. Section 3511.

California Fish and Game Code. Section 4700.

California Fish and Game Code. Section 5050.

California Fish and Game Code. Section 5155.

California Public Resources Code. Section 21000 et seq. CEQA.

Cal-IPC (California Invasive Plant Council). 2006. *California Invasive Plant Inventory*. Berkeley, California. February 2006.
<http://www.cal-ipc.org/ip/inventory/pdf/Inventory2006.pdf>

Cal-IPC. 2007. "New Weeds Added to Cal-IPC Inventory." *Cal-IPC News* Spring 2007:10.
<http://www.cal-ipc.org/ip/inventory/pdf/WebUpdate2007.pdf>

CBI (Conservation Biology Institute). 2000. *Review of Potential Edge Effects on the San Fernando Valley Spineflower (Chorizanthe parryi var. fernandina)*. Prepared for Ahmanson Land Company and Beveridge and Diamond, LLP. January 19, 2000.

CDFG (California Department of Fish and Game). 1995. *Staff Report on Burrowing Owl Mitigation*. October 17, 1995.

CDFG. 1998. *Natural River Management Plan*. SCH # 1997061090. August 1998.

CDFG. 2003. The Vegetation Classification and Mapping Program: "List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database." *California Natural Diversity Database*. Vegetation Classification and Mapping Program. September 2003 Edition.

CH2MHill. 2005. *S.R. 126 Feasibility Study*.

Newhall Ranch Resource Management and Development Plan

- Corps (U.S. Army Corps of Engineers). 1987. *Corps of Engineers Wetlands Delineation Manual*. Vicksburg, Mississippi: Corps, Environmental Laboratory, Waterways Experiment Station. Wetlands Research Program. Technical Report Y-87-1. January 1987.
- County of Los Angeles. 1988. Oak Tree Ordinance. Los Angeles (California) County Code; Municipal Codes, Title 22, Chapter 56, Part 16: Oak Tree Permits, Section 2050 et seq.
- County of Los Angeles. 1990a. *Santa Clarita Valley Area Plan*. Department of Regional Planning, County of Los Angeles. Adopted February 16, 1984; updated December 6, 1990.
- County of Los Angeles. 1990b. *Valencia Commerce Center Environmental Impact Report*. Project # 86-106, SCH # 87-123005. April 1990. Prepared by Sikand for the County of Los Angeles Department of Regional Planning.
- County of Los Angeles. 1993. *Hydrology/Sedimentation Manual*. Hydraulic/Water Conservation Division. Department of Public Works. December 1991; updated 1993.
- County of Los Angeles. 2003a. *Newhall Ranch Specific Plan*. Project # 94087, SCH # 95011015. 2 vols, May 27, 2003. Prepared by Forma for the County of Los Angeles Department of Regional Planning. Irvine, California: Forma.
- County of Los Angeles. 2003b. *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 and Water Reclamation Plant Final Environmental Impact Report* (Volumes 3–7). Project # 94087, SCH # 95011015. 7 vols, November 2002 to May 2003. Prepared by Impact Sciences, Inc. for Los Angeles County Department of Regional Planning. Agoura Hills, California: Impact Sciences, Inc.
- Dudek. 2007a. *Newhall Ranch Mitigation Feasibility Report*. Prepared for the Newhall Land and Farming Company. Encinitas, California: Dudek. January 2007.
- Dudek. 2007b. "Oak Tree Estimate for High Country SMA and the Salt Creek Area." Memorandum from A. Thomson (Dudek) to M. Carpenter and S. Rojas (Newhall Land and Farming), January 10, 2007.
- Dudek 2007c. *Slender Mariposa Lily Mitigation and Monitoring Plan for the Newhall Ranch Resource Management and Development Plan*. Prepared for the Newhall Land and Farming Company. Encinitas, California: Dudek. August 2007.

Newhall Ranch Resource Management and Development Plan

- Dudek. 2007d. *Spineflower Conservation Plan*. Draft. Prepared for the Newhall Land and Farming Company by Dudek and Associates, Inc. Valencia, California: Dudek. December 2007.
- Dudek. 2008a. *Newhall Ranch Resource Management and Development Plan: Wildlife Habitat Buffers and Connectivity White Paper*. Prepared for the Newhall Land and Farming Company; Encinitas, California: Dudek.
- Dudek. 2008b. *Newhall Ranch Resource Management and Development Plan: Maintenance Manual*. Prepared for the Newhall Land and Farming Company; Encinitas, California: Dudek.
- Dudek and Associates, Inc. 2004. *2003 Sensitive Plant Survey Results for the Salt Creek Site, Los Angeles County, California*. Prepared for The Newhall Land and Farming Company. Encinitas, California: Dudek and Associates, Inc. June 2004.
- Dudek and Associates, Inc. 2006a. *Biological Resources Technical Report for the Newhall Ranch High Country Specific Management Area and the Salt Creek Area*. Prepared for the Newhall Land and Farming Company by Dudek and Associates, Inc.
- Dudek and Associates, Inc. 2006b. *Biological Resources Technical Report for the Newhall Ranch Specific Plan Area, Los Angeles County, California*. Prepared for the Newhall Land and Farming Company by Dudek and Associates, Inc.
- Dudek and Associates, Inc. 2006c. *Biological Resources Technical Report for the Valencia Commerce Center, Los Angeles County, California*. Prepared for the Newhall Land and Farming Company by Dudek and Associates, Inc.
- Dudek and Associates, Inc. 2006d. *Biological Resources Technical Report for the Entrada Site, Los Angeles County, California*. Prepared for the Newhall Land and Farming Company by Dudek and Associates, Inc.
- ENTRIX, Inc. 2007. *Focused Special-Status Fish Species Habitat Assessment—Santa Clara River and Tributary Drainages, Newhall Ranch, Los Angeles County, California*. Prepared for Newhall Land. Ventura, California: ENTRIX
- Holland, D.C. 1994. *The Western Pond Turtle: Habitat and History*. Portland, Oregon: U.S. Department of Energy, Bonneville Power Administration.

Newhall Ranch Resource Management and Development Plan

- Impact Sciences, Inc. 2006. *Newhall Ranch Oak Tree Survey*. Camarillo, California: Impact Sciences, Inc.
- McEachern, K., B. Pavlik, J. Rebman, and R. Sutter. 2006. *San Diego Multiple Species Conservation Program (MSCP) Rare Plant Monitoring Review and Revision*. Technical Report Draft Prepared for the City of San Diego. U.S. Geological Survey (USGS) Western Ecological Research Center.
- PACE (Pacific Advanced Civil Engineering, Inc). 2006. *Flood Technical Report*. Prepared for Newhall Land. Fountain Valley, California: PACE. August 8, 2006.
- Penrod, K., C. Cabanero, P. Beier, C. Luke, W. Spencer, E. Rubin, R. Sauvajot, S. Riley, and D. Kamradt. 2006. *South Coast Missing Linkages Project: A Linkage Design for the Santa Monica-Sierra Madre Connection*. Produced by South Coast Wildlands, Idyllwild, California. Produced in cooperation with the National Park Service, Santa Monica Mountains Conservancy, California State Parks, and The Nature Conservancy.
- PWA (Phil Williams & Associates, Inc.). 2007. *Newhall Ranch Tributaries Basis of Design*. Prepared for Newhall Land.
- RWQCB (Los Angeles Regional Water Quality Control Board). 2006. *State of the Watershed – Report on Surface Water Quality: The Santa Clara River Watershed*. California Regional Regional Water Quality Control Board—Los Angeles Region. November 2006.
- Singleton, P.H., and J.F. Lehmkuhl. 1999. “Assessing Wildlife Habitat Connectivity in the Interstate 90 Snoqualmie Pass Corridor, Washington.” Technical paper in *Proceedings of the 1999 International Conference on Wildlife Ecology and Transportation*, Missoula, Montana.
- URS. 2008a. *Draft Biological Assessment for the Newhall Ranch Resource Management and Development Plan; Los Angeles County, California*. Prepared for Newhall Land and Farming Company. Santa Barbara, California: URS. February 13, 2008.
- URS. 2008b. *Hybrid Assessment of Riparian Conditions*. Prepared for Newhall Land.
- USDA (U.S. Department of Agriculture). 1969. Soil Survey, Antelope Valley Area, California.
- USFWS (U.S. Fish and Wildlife Service). 1997. “Coastal California Gnatcatcher (*Poliioptila californica californica*) Presence/Absence Survey Guidelines.” Carlsbad, California: USFWS, Carlsbad Fish and Wildlife Office. February 28, 1997.

Newhall Ranch Resource Management and Development Plan

http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/docs/cagn/coastal-gnatcatcher_survey-guidelines.pdf

VCRC (Ventura County Resource Conservation District). 2006. Upper Santa Clara River Watershed Arundo/Tamarisk Removal Plan Final Environmental Impact Report. February 2006.

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Resource Management and Development Plan – Maintenance Manual

RMDP

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**STORM DRAIN & WATER QUALITY FEATURE
ROUTINE MAINTENANCE PRACTICES**

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1.0 Introduction & Background

The development of the Newhall Ranch Specific Plan (NRSP) requires that stormwater runoff, dry weather urban runoff, and other waters discharged from the project satisfy Los Angeles Basin Plan, Los Angeles County MS4 Permit, Construction NPDES Permit, and NRSP Sub-Regional Stormwater Mitigation Plan requirements. Additional requirements are developed from specific planning areas during flood protection design reviews, Standard Urban Storm Water Mitigation Plan (SUSMP) review, and final transportation infrastructure elements needed to satisfy traffic circulation. A Resource Management and Development Plan (RMDP) has been developed to describe construction of facilities to meet these various requirements, specifically where impacts from the facilities occur to native habitats or special-status species under the jurisdiction of California Department of Fish and Game (CDFG) or Army Corps of Engineers (Corps).

Construction of many of the facilities will require authorization under several environmental permits: (1) Master Streambed Alteration Agreement (MSAA) from CDFG; (2) Individual 404 Permit from Corps; (3) 401 Water Quality Certification or WDRs from Los Angeles Regional Water Quality Control Board (RWQCB); and (4) Biological Opinion from US Fish and Wildlife (USFWS). These permits and approvals also specify water quality, treatment, and flow requirements for waters leaving the project site in addition to specific restrictions and mitigation measures for the protection of sensitive environmental resources. Facilities that may be required include: Debris Retaining Inlets (DRIs); Dry Extended Detention Basins; Infiltration Facilities; Wetponds; Vegetated Swales; Culverts; Drop Structures; Grade Control Structures; Storm Drain Outfalls; Bridges; Bridge abutments; and Bank Stabilization. The RMDP describes the NRSP development along the Santa Clara River, its main Tributaries (Castaic Creek, Chiquito Canyon, San Martinez Grande, Potrero Canyon, Long Canyon, and Lion Canyon) and minor unnamed drainages (Middle, Ayers, Magic Mountain canyons, and others) with specific focus on elements within jurisdiction.

Of note, many of the treatment features include components that are “naturalized,” whereby treatment is dependent upon such things as wet soils, open/ponded water, native and wetland vegetation growth, buried or vegetated rip-rap or gravel, or other components that mimic the natural environment. As the more anthropogenic features (hard armoring, gunite, grouted riprap, pavement, soil cement, concrete, pipe, or other engineering systems) are integral to the systems, it is necessary to identify the extent and frequency of various maintenance activities that may occur and describe impacts that may result.

1.1 Maintenance Manual Organization

This manual has been organized into the following Sections:

- 1.0 Introduction & Background
 - 1.1 Maintenance Manual Organization
 - 1.2 Storm Drain System Features Discussion
 - 1.2.1 *Partially-Engineered Open Channels*

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- 1.2.2 *Bank Stabilization on the Santa Clara River*
- 1.3 Need for Maintenance
- 1.4 Regulatory Setting
- 1.5 Developer Responsibilities Prior to Transfer
- 1.6 Owner/Operator Responsibilities
- 1.7 Effects of Maintenance Activities
 - 1.7.1 *Impact of Emissions from Maintenance*
- 2.0 Maintenance Manual
 - 2.1 General Measures
 - 2.1.1 *Access, Work Zone Restrictions & Monitoring*
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 - 2.1.5 *Invasive Species Control*
 - 2.2 Feature-Specific Measures
 - 2.2.1 *Channel Clearing Near Bridges*
 - 2.2.2 *Removal of Vegetation from Rip-Rap*
 - 2.2.3 *Cleaning Storm Drain Outfalls*
 - 2.2.4 *Bridge Repair*
 - 2.2.5 *Repairs to Bank Stabilization*
 - 2.2.6 *Water Quality Treatment and Flow Attenuation Facilities*
 - 2.2.7 *Restored Tributaries*
- 3.0 Associated Documents

1.2 Storm Drain System Features

Various types of facilities may be constructed in response to meeting treatment and hydromodification control standards for development area runoff. Each feature is designed to meet certain functions, primarily related to flow attenuation or control of hydromodification and water quality treatment through removal of pollutants of concern. While certain features are depended upon only for infiltration/control of irrigation dry weather urban runoff, others may be dedicated to treating the first flush of a storm event. Regional control features (such as the restored tributaries, extended detention basins, and wetponds/lakes) may be integral to passing the entire flow from the watershed while providing infiltration, attenuation, and water quality treatment.

Each facility is likely to include stormwater inlet or outlet structures, soil cement/gunite/grouted or un-grouted rip-rap bank stabilization, and access points. The runoff controls are integral to the overall discharge treatment train (such as Debris Retaining Inlets, flow splitters, and catch basin inserts) but due to their physical location may not be within the limits of RMDP jurisdiction, and as such are not subject to the RMDP permit conditions or maintenance provisions/restrictions. To the extent that the RMDP permits provide coverage for impacts to biological resources similar to those that may develop at these features, it is intended that the RMDP Maintenance Manual can be utilized. The long-term use of the RMDP Maintenance Manual for non-jurisdictional features is at the discretion of the Operator for such maintenance (Newhall Land, Home

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Owners Association (HOA), Landscape Maintenance District (LMD), Los Angeles County Department of Public Works (LACDPW), or other 3rd Party).

1.2.1 Partially-Engineered Open Channels

In the Tributaries, geomorphic principles will be used in combination with on-site controls to design stable stream channels given the expected hydrologic and sediment regimes of each tributary. A minimum of hard, engineered structural elements will be used within the stream channel so that a natural appearance will be preserved while the new stream channel form can remain stable. The NRSP includes five partially-engineered open channels: Chiquito Canyon, San Martinez Grande Canyon, Lion Canyon, Long Canyon, and Potrero Canyon. These open channels will include management measures (a combination of in-stream grade control structures (point stabilizers and step-drop pools), bank protection, and stormwater runoff volume reduction and detention) to protect the channel bed and banks from hydromodification impacts.

The grade control structures are designed to contain the hydraulic “jump” of the ultimate drop in streambed elevation within the structure so higher velocities are dissipated within this area. The drop may be from 5 to 40 feet in vertical height. The hard structures may be backfilled with natural soil to re-establish the existing streambed.

1.2.2 Bank Stabilization on the Santa Clara River

While the Santa Clara River will generally remain in a natural condition, the RMDP includes installation of bank stabilization along portions of the Santa Clara River over the approximately next 20 years for bridge abutments and flood control stabilization for various development projects. The location of bank stabilization along the river was selected so that it would generally be located in non-jurisdictional upland areas adjacent to the river.

1.3 Need For Maintenance

LACDPW requires that all flood control and drainage improvements be maintained to ensure performance at their design levels. As described below, both hard and soft systems may require Minor and Major Maintenance to restore intended functions. Many of the features are components of restored creek systems, and as such, should require little to no routine minor maintenance. Major maintenance may be required in the event of a failure or damage from an unusually large storm (> than the 10 year event), and may be expected, if ever, once in a decade or less frequently. Minor maintenance may occur at frequencies from monthly, quarterly, annually, or other frequency determined during design (life cycle/replacement period).

These facilities generally are designed to reduce flow velocities, and therefore may create nuisance standing water, sediment deposition, and excessive growth conditions if not properly maintained. Maintenance involves the periodic inspection of the improvements to: (1) verify that the structures are intact; (2) monitor vegetative growth at or near the structures that may affect the integrity of the structure; and (3) determine if sediment or vegetation is blocking the conveyance of storm flows. Vegetation and accumulated sediment would be removed when the design capacity has been reduced to

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pre-determined levels and any damage that impairs the function of the structure would need to be repaired.

Periodic vegetation removal within the River and main Tributaries would not be required under the RMDP. However, individual structures within the conveyance system will require some maintenance, such as removal of woody vegetation, sediment and debris that may block or impede the function of inlets, outlets, culverts, drop structures, water quality and flow attenuation basins, and infiltration structures. Other features may be dependent upon routine scarification of the ground surface to maintain intended function, such as with infiltration basins, and retention basins, or to clear standing water from outfalls or infiltration swales. A third class of treatment facilities are wholly dependent upon establishment of stable wetland and open water habitats, with most routine maintenance restricted to removal of accumulated sediments and replacement of wetland vegetation at established service intervals.

This manual also includes a monitoring and remedial response plan for stabilized tributary drainages where major flood events could precipitate maintenance events that necessitate repair, replacement, or modification of an improperly functioning channel system. In those cases, review of the project may be appropriate as a Maintenance action or as a Construction Project depending on the extent of repairs/replacement or design changes that substantially alter the extent or nature of the original project impacts.

As discussed above, many of the control features are constructed outside of Agency jurisdiction (i.e., waters of the U.S. or waters of the State). As maintenance of these features may, from time to time, encounter issues similar to those encountered at features in the jurisdictional zones, at the discretion of the Operator, this Maintenance Manual, and the Subnotification process, may be used to notify Agencies of proposed maintenance activities. It is expected that the following maintenance activities, in general, will not submit pre-maintenance notification or require any reporting due to their size and likelihood of generating sensitive habitats or supporting special-status species:

- Vegetation clearing and/or sediment removal at Debris Basins with <5,000 cubic yards of debris capacity.
- Vegetation clearing or sediment removal of Debris Retaining Inlets (DRIs).
- Vegetation clearing or sediment removal from seasonally dry culverts and outlets, if maintenance is conducted during periods of no flowing water.
- Areas where “permanent impacts” were determined and mitigated for during the Subnotification Process and special-status species habitat is not present or reasonably expected at the time of maintenance activities.
- Visual Inspections, where no equipment access is required. This may include hand trimming of brush, scrub species, or minor pruning of native trees to facilitate access (foot trail).

It is anticipated that all other maintenance activities would provide notification to the applicable Agencies to ensure adequate protection of Federal and State Endangered (ESA) and California Species of Special Concern species during maintenance activities,

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although where jurisdiction is not present, that notification will be at the discretion of the owner.

1.4 Regulatory Setting

This Maintenance Manual is a component of the jurisdictional permits for the implementation of the Resource Management and Development Plan (RMDP) for the Newhall Ranch Specific Plan Area. This manual constitutes the post-construction maintenance plan for facilities constructed pursuant to RMDP approvals. The RMDP permits recognize maintenance beyond the term of the maintenance of the NRSP, therefore 50 year permit terms Apply to RMDP permits, including: **Master Streambed Alteration Agreement (CDFG MSAA #1600-2004-0016-R5); Incidental Take Permit – Multiple Species (CDFG ITP #2081-XXXXXXXXXX); Master Corps 404 Permit (404 Permit #XX-XXX-XXX); 401 Certification/Waste Discharge Requirements (WDR) LARWQCB (WDR #XX-XXX); and Biological Opinion (FWS BO #XX-XXX-X)**. Collectively these permits and agreements constitute the environmental approvals necessary to construct and maintain facilities within waters of the United States and/or waters of the State.

The features described in this Maintenance Manual are also integral to the implementation of the Newhall Ranch Specific Plan (NRSP) stormwater management plans, and in many cases, specifically implement concepts of hydromodification control, zero discharge, nuisance flow management, first flush trash and debris containment, and other concepts of federal, state, and local storm water requirements. The NRSP stormwater plan involves three submittal Tiers, to be completed at various stages of project development, approval and construction. Tier plans are intended to be further refined as project elements are taken to final design and approval. The first Tier is the Sub-Regional Stormwater Mitigation Plan (SWMP), which describes management of the entire NRSP area. The Sub-regional SWMP includes concept-level, low impact/site design development criteria and source control, treatment control, and hydromodification control Best Management Practices (BMPs) to be incorporated into each development project within the sub-region. The NRSP Sub-regional SWMP has been developed using a watershed-based approach that addresses pollutants of concern and hydrologic conditions of concern that can affect aquatic and riparian habitat and natural resources, including species associated with these habitats and natural communities. The Tier one plan has been submitted to LA Regional Water Quality Control Board for review.

The second Tier involves submittal and approval of a Project Water Quality Technical Report (WQTR) by Los Angeles County. The WQTR is prepared to ensure consistency with the terms and content of the NRSP Sub-Regional SWMP for each project within the sub-region (e.g., Landmark Village, Mission Village, Homestead Village, and Potrero Valley). The Project WQTR will provide more specific information and detail concerning how the provisions of the NRSP Sub-Regional SWMP will be implemented within the area covered by the Project WQTR, based upon the actual proposed land uses from the tentative tract maps filed with the County of Los Angeles.

The third Tier consists of a final Project SUSMP (Standard Urban Storm Water Mitigation Plan) that will be consistent with the terms and content of both the NRSP Sub-

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Regional SWMP and the Project WQTR and Drainage Concept Report for each project within the sub-region. The Project SUSMP will demonstrate that the project applicant is complying with the County-certified EIR mitigation measures. The Project SUSMP will identify, at a minimum: (1) implementation of low impact/site design strategies (as appropriate); (2) source control BMPs; (3) treatment control BMPs; (4) hydromodification control BMPs; and (5) the mechanism(s) by which long-term operation and maintenance of all structural BMPs will be provided, at the project site level.

This Maintenance Manual provides a summary of anticipated maintenance activities, expected impacts from maintenance activities, and minimization/mitigation measures incorporated into flood protection, stormwater, and nuisance water control system operations to meet the long-term maintenance needs of the SUSMP. Typical approaches to maintenance for each of the features is presented along with standard restrictions and special-status species protection measures to ensure impacts from such operations are minimized. These measures are generally the same as those required during new construction.

1.5 Developer Responsibilities Prior to Transfer

Prior to the transferring of a storm drain or water quality feature to the ultimate system owner/operator, it is the responsibility of the Developer to maintain the system in proper operating condition. This may include maintaining vegetation growth, as needed, to facilitate the final inspection and acceptance of the structure by the long term maintenance owner/operator. The original Subnotification authorization for construction of the feature will be considered enforce during this period of time and no further Subnotifications will be completed for any maintenance activities prior to transfer. As some temporal habitat may form at the structure, the species protection measures required for construction shall be followed during this transition period (e.g., restrictions on equipment operating in ponded water, storage of petroleum products, nesting restrictions, etc).

1.6 Owner/Operator Responsibilities

Each of the features contemplated in the SUSMP will be transferred to another entity for long-term operation and maintenance. This manual provides structure maintenance guidelines to the following anticipated post-development owners/operators:

- LACDPW, LMD or an HOA will assume responsibility for maintaining the improvements as part of their routine maintenance program.
 - A Geologic Hazard Abatement District (GHAD) may also be developed to assume responsibility and ownership of these features. If a GHAD is established, it would possess specific funding for minor and major maintenance/repairs, a professional management team with technical expertise in the features being maintained; and responsibility for system wide operations.
- LACDPW will likely assume operation and maintenance responsibilities for the BMPs that are constructed by the County or are “regional” in nature.

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- Upon agreement, LACDPW may assume operations and maintenance responsibilities for BMPs constructed by others on County property, including right-of-ways or stormwater easements.
- Other entities, such as an HOA, an LMD, or an independent maintenance contractor may have maintenance responsibility for BMPs located on private property, such as parking lots.
- LA County will have overriding authority, thru Builder-Agreements, to restore proper function to any feature they deem necessary in the event the HOA or LMD fails to perform maintenance.
- Maintenance activities may be contracted out to local firms; however, the maintenance responsibility remains with the owner.
- The natural or created creek channel and riverbed areas, which may contain HOA, LMD or LA County facilities, will be under the stewardship and control of Centers for Natural Land Management (CNLM) with maintenance easements, established as necessary, to ensure that flood protection and treatment/conveyance systems function properly. The open-space areas between hard structures are expected to be free of routine maintenance, reverting to a “natural” state.

As this document applies to a development that will be implemented over approximately 20 years, it is reasonable to expect technological advances to result in modification of the flood protection and runoff treatment systems. Therefore, this document should be considered a “living document,” subject to addition and revision. The Subnotification process, described further below, may be used for requesting Agency approval of revisions or changes to this document.

1.7 Effects of Maintenance Activities

The project includes routine maintenance activities associated with the proposed bank stabilization, bridges, culverts, storm drain outlets, inlet structures, and water quality/storm flow attenuation features. Impacts were evaluated for the maintenance activities described later in this document and are presented here for ease of reference.

Maintenance activities would be implemented on an as-needed basis. The widths of the proposed bank stabilization and bridges were designed to allow the vegetation in the river channel to grow to its natural maximum density without the need for clearing the channel for conveyance. The main tributary drainages have been designed to be bed-stable, with hydromodification effects mitigated while still carrying the design storm flow. As such, the length of bank stabilization to be inspected and cleared of vegetation under this program is limited to exposed gunite bank stabilization at bridge abutments. This manual, as a component of the RMDP, shall constitute the approved maintenance procedures to minimize and avoid impacts to endangered species and to minimize impacts to other riparian resources and special-status species. The following project design features have been incorporated to reduce, and in many cases, eliminate routine maintenance, and therefore, avoid impacts:

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- The use of buried soil cement, and other buried bank stabilization, eliminates the need to clear a zone at the base of the riverbank or creek-bank where buried bank stabilization is located.
- Grade control and drop structures are designed to be primarily self-cleaning with limited need for sediment removal or vegetation control.
- Bridges, in general, are designed with sufficient clearance to allow passage of flood flows while allowing natural vegetation in the channel bottom.
- Large trees would be allowed to grow in the upland or transitional habitat zones (typically consisting of upland scrub and grassland mitigation areas constructed along the margins of stream courses), at or near buried soil cement and other bank stabilization features.

Where maintenance is necessary, activities would be subject to the *General* and *Feature-Specific* Maintenance Measures discussed in this manual (*Sections 2.1 and 2.2, below*). Based on these considerations, routine maintenance activities in the project area are anticipated to be minor in scope and effect, although the location, frequency, and aerial extent of future maintenance activities cannot be fully predicted. Typical impacts to riparian habitat due to a single routine maintenance activity can be estimated as is done in the following examples:

Example No. 1: Channel Clearance near Bridges. There is a need to clear vegetation 25 feet upstream and downstream of proposed culverts and certain bridges. This clearing would be accomplished by mechanical equipment that would access the riverbed or creekbed via a service ramp or across dry scrub habitat, travel across the riverbed or creekbed to the bridge or culvert location, and then remove woody vegetation (i.e., large trees that may collect flood debris). The estimated extent of impact for each bridge is indicated in the *Feature-Specific* section below.

Example No. 2: Removing Trees from Rip-rap. Owner/operator will need to remove large trees that are four or more inches in diameter from rip-rap, and from a 15-foot-wide zone at the base of the rip-rap or exposed gunite lining at bridges to ensure that the structural integrity of the rip-rap or lining is maintained. If feasible, trees would be removed by hand or equipment from the service road at the top of the bank stabilization. If this method is not feasible, crews would access the riverbed from the nearest service ramp, travel across the riverbed to the maintenance location, then remove vegetation working from a 30-foot-wide zone at the base of the rip-rap or exposed gunite. Only hand held equipment would be used to cut the vegetation. Equipment would primarily be limited to that equipment necessary to provide access to the upper branches of large trees and equipment necessary to haul the cut materials from the riverbed. Typical disturbance of riverbed habitats under this example would be less than 0.2 acre, assuming a work area 100 by 30 feet and a 500-foot-long temporary access road.

Example No. 3: Clearing Storm Drain Outlets. There will be an ongoing need to remove sediments and woody vegetation from storm drain outlets. The proposed outlet design would include concrete, or grouted riprap, apron on selected outlets to discourage the establishment of vegetation at the mouth of the outlet. If sufficient vegetation and

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sediments accumulate at an outlet, owner/operator would need to access the river and remove the obstruction using light equipment (e.g., bobcat, small excavator, backhoe, D-6 Dozer) or hand crews, and create up to a 10-foot-wide pilot channel up to 75 feet in length. Typical disturbance of riverbed habitats under this example would be less than 0.2 acre.

Example No. 4: Clearing Debris Basin/water quality or flow attenuation basins. There will be an ongoing need to remove sediments and woody vegetation from debris basins and water quality or flow attenuation basins to ensure adequate flood capacity and infiltration performance. The proposed designs would include soft-bottom basin areas with subdrains, underdrains, and specialized outlet structures, some to discourage the establishment of vegetation while in other areas being fully dependent upon vegetation establishment for proper function. If sufficient vegetation and sediments accumulate, vegetation is no longer performing as intended, or infiltration is no longer occurring, owner/operator would need to access the feature and remove, repair, replace or otherwise correct the deficiency using heavy equipment (e.g., Dozer, loader, excavator), light equipment (e.g., Bobcat tractors) and/or hand crews. The extent of maintenance is graphically indicated in *Feature-Specific* information below. Depending on the capacity of any given structure, the acreage would be highly variable (from less than 1 acre-foot up to 50 acre-foot capacity).

1.7.1 Impact of Emissions from Maintenance

Maintenance activities would cause emissions due to equipment operation, vehicle trips, and dust emissions associated with the periodic clearing of vegetation from bridges and culverts, removal of vegetation from rip-rap, and repair of flood control facilities. These emissions would be localized and short-term. Emissions from periodic maintenance activities are expected to be minimal.

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2.0 Maintenance Manual

2.1 General Measures

Subsection 7.7 of the RMDP provides descriptions of restrictions and conditions to avoid, minimize and mitigate impacts to sensitive habitats and special-status species during implementation of maintenance activities. These measures mirror those measures to be implemented during RMDP component construction, with slight modifications to account for the specifics of maintenance activities.

2.1.1 Access, Work Zone Restrictions & Monitoring

- A-1 Temporary access roads to the work site shall be routed to avoid, to the extent feasible, riparian vegetation, live streams, and wetted areas. The boundaries of the maintenance site and any temporary access roads within the riverbed shall be marked in the field with stakes and flagging. No maintenance activities, vehicular access, equipment storage, stockpiling, or significant human intrusion shall occur outside the work area and access roads. If a live stream or pond is located within the maintenance site or access roads, the procedures described below would be followed to identify and relocate endangered species from live streams or ponded water.
- A-2 All native riparian trees with a three-inch diameter at breast height (dbh) or greater in maintenance areas shall be replaced using one- or five-gallon container plants, containered trees, or pole cuttings in the maintenance areas in the winter following the maintenance activities.
- A-3 Native vegetation within temporary maintenance work areas may be mulched and spread, where appropriate, over the temporary impact areas once maintenance work is complete in order to facilitate revegetation. If vegetation is cut to ground level only, with the likelihood of re-growth, then cuttings may be removed from the maintenance site for recycling.
- A-4 For those man-made features in areas not subject to Corps, CDFG, or RWQCB jurisdiction, that have not been abandoned or otherwise un-maintained, the Agencies will not exert jurisdiction unless other circumstances require otherwise.
- A-5 Equipment shall not be operated in areas of ponded or flowing water unless authorized by CDFG and USFWS.
- A-6 Temporary sediment retention ponds shall be constructed downstream of maintenance sites which involve grading or excavating, and that contain flowing or ponded water that drains off site into the undisturbed stream flow or ponds. The sediment ponds shall be constructed of riverbed material and shall prevent sediment-laden water from reaching undisturbed ponds or stream flows. To the extent feasible, ponds shall be located in barren or sandy river bottom areas devoid of existing riparian scrub, riparian woodland, or aquatic habitat. The ponds shall be maintained and repaired after flooding events, and shall be restored to pre-disturbance grades and substrate conditions within 30 days after maintenance work has ended.

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- A-7 Water containing mud, silt, or other pollutants from maintenance 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.
- A-8 If a stream channel has been altered during maintenance, the 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.
- A-9 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.
- A-10 Staging/storage areas for maintenance equipment and materials shall be located outside of the ordinary high water mark.
- A-11 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.
- A-12 Stationary equipment, such as motors, pumps, generators, and welders, that may be located within the riverbed maintenance zone shall be positioned over drip pans. No fuel tanks shall be allowed in the riverbed.
- A-13 No debris, bark, slash sawdust, rubbish, cement or concrete or washing thereof, oil, petroleum products, or other organic material from any maintenance activity 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 maintenance is completed, any excess materials or debris shall be removed from the work area.
- A-14 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.
- A-15 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.
- A-16 The operator shall install and use fully covered trash receptacles to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash.
- 2.1.2 *Special-Status Aquatic Species Avoidance/Mitigation***
- B-1 Prior to initiating in-channel maintenance activities, aquatic habitats within work sites and access roads, as well as aquatic habitats within 300 feet of the maintenance site and access roads, shall be surveyed by a qualified biologist for the presence of the unarmored three-spine stickleback, arroyo chub, and Santa Ana sucker. The Corps and CDFG shall be notified at least 14 days prior to the

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- inspection and shall have the option of attending. 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 work sites, all activities within aquatic habitat will be suspended. Maintenance within aquatic habitats shall only occur when it is determined that juvenile fish are not present within the Project area.
- B-2 Prior to initiating in-channel maintenance activities, all work sites and access roads within the riverbed as well as all riverbed areas within 1,000 feet of the maintenance site and access roads shall be surveyed by a qualified biologist at the appropriate season for arroyo toad and California red-legged frog. 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 the CDFG and the Corps. If either species is present, the applicant shall develop and implement a monitoring plan in consultation with the USFWS and CDFG.
- B-3 Prior to initiating in-channel maintenance activities, all work sites and access roads within the riverbed as well as all riverbed areas within 500 feet of the maintenance site and access roads shall be surveyed by a qualified biologist at the appropriate season for the southwestern pond turtle. If detected in or adjacent to the Project, nesting surveys shall be conducted by a qualified biologist when suitable nesting habitat exists within 1,300 feet of occupied habitat in an area where ground disturbance will occur. If a southwestern pond turtle nesting area would be adversely impacted by maintenance 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 the written authorization from the 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 maintenance work each day.
- B-4 Prior to maintenance activities, a qualified biologist shall conduct surveys for the western spadefoot toad within all portions of the Project site containing suitable breeding habitat. If the western spadefoot toad is found on site, measures including habitat creation at a 2:1 ratio, pre-construction surveys, relocation of adults/tadpoles and egg masses, and monitoring for five years will be implemented.
- B-5 Prior to maintenance activities in any drainage area supporting perennial flow, a qualified biologist shall conduct focused surveys for the undescribed snail species. Any individuals of the undescribed snail species found within the Middle Canyon drainage shall be relocated to appropriate habitat within Middle Canyon Spring. If undescribed snails are discovered during aquatic and semi-aquatic focused

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surveys in any other perennial flowing water, the applicant shall consult with CDFG prior to initiating disturbance of the area.

- B-6 Stream diversion bypass channels will be constructed when the active wetted channel is within the maintenance work zone, supervised by a qualified restoration ecologist and in accordance with a Stream Crossing and Diversion Plan submitted to the USFWS and CDFG for approval at least 30 days prior to implementation. The diversion channel shall be of a width and depth comparable to the natural River channel and, where feasible, 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.

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. If adult special-status fishes are present and spawning has not occurred, they shall be relocated prior to the diversion or crossing.

At the conclusion of the diversion, either at the commencement of the winter season, or the completion of maintenance, 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.

- B-7 A qualified biologist shall be present when any stream diversion or culvert installation takes place, and shall patrol the areas within, upstream, and downstream of the work area to rescue any species stranded by the diversion of the stream water. 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 the CDFG and USFWS within 24 hours.
- B-8 Repair of in-channel facilities shall not impair movement of fish and aquatic life. Bottoms of temporary culverts shall be placed at or below channel grade.

2.1.3 *Special-Status Bird Species Avoidance/Mitigation*

- C-1 All maintenance and repair work, excluding emergency work, shall occur between August 1 and March 15 (which is outside of the breeding season for special-status riparian birds, such as the least Bell's vireo) for facilities along the Santa Clara River. In-channel maintenance work that must occur between March 15 and August 1 in these areas shall follow the additional procedures below.
- C-2 Within 30 days of maintenance activities 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

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- 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 maintenance zone or within 300 feet (500 feet for raptors) of the maintenance zone. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 7 days prior to the initiation of maintenance work. If ground-disturbing activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground-disturbing activities.
- C-3 If active nests are found, maintenance activities within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist in consultation with the 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, the buffers will be established in consultation with the CDFG. Potential golden eagle nesting will be reported to the CDFG within 24 hours. Limits of maintenance to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and maintenance personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a monitor during those periods when maintenance activities will occur near active nest areas to ensure that no inadvertent impacts to these nests occur.
- C-4 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, maintenance activities within 300 feet of the nest shall be postponed or halted, at the discretion of the biologist in consultation with the 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. This buffer may be adjusted provided noise levels do not exceed 60 dBA hourly Leq at the edge of the nest site as determined by a qualified biologist in coordination with a qualified acoustician.
- C-5 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 maintenance-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' (1997) 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. Maintenance 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 maintenance area.

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- C-6 At the discretion and direction of the qualified biological monitor, work may be conducted within the 300-foot zone if it can be determined/documentated that maintenance activities are not impacting the nesting bird. Demonstration would include the biologist monitoring parent bird behavior during activities and having the authority to immediately halt activities in the event adverse reactions were observed. This condition is in consideration that some maintenance is completed using only hand tools and foot traffic, while other maintenance activities involve heavy equipment operation.
- C-7 Temporary loss of nesting and foraging habitat for the least Bell's vireo due to maintenance 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 BIO-1 through BIO-16.
- C-8 Thirty days prior to maintenance activities, a qualified biologist shall conduct CDFG protocol surveys to determine whether the burrowing owl is present at the site. 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, maintenance 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 (CDFG 1995). Unless otherwise authorized by CDFG, a 500-foot buffer, within which no activity will be permissible, will be maintained between maintenance activities and nesting burrowing owls during the nesting season.
- C-9 During maintenance of antennae and phone/utility towers, the area shall be kept clean of debris, such as cable, trash, and maintenance materials and all microtrash and litter, vehicle fluids, and food waste from the Project area shall be collected on a daily basis. A qualified biologist with knowledge of California condors shall monitor maintenance activities within the Project area. If condors are observed landing in the Project area, the applicant shall avoid further maintenance within 500 feet of the sighting until the animals have left the area, or as otherwise authorized by CDFG and USFWS. Should condors be found roosting within 0.5 mile of the maintenance area, no maintenance activity shall occur between 1 hour before sunset to 1 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 maintenance area, no maintenance activity will occur until further authorization occurs from CDFG and USFWS.
- 2.1.4 *Special-Status Mammal, Reptile, and Insect Species Avoidance/Mitigation***
- D-1 Prior to maintenance work, 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

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- the specific survey and relocation efforts that would occur for maintenance 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 to February). Qualified biologists shall conduct surveys to capture and relocate individuals 30 days prior to maintenance activities in suitable habitat. 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 maintenance activities each day.
- D-2 Thirty days prior to maintenance activities in suitable habitat, a qualified biologist shall conduct a survey, within the proposed 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 and a minimum 200 foot buffer established. This buffer may be reduced based on the location of the den upon consultation with the CDFG. Maternity dens shall be flagged for avoidance, identified on construction maps, and a qualified biologist shall be present during maintenance. If avoidance of a non-maternity den is not feasible, badgers shall be relocated either by trapping or by slowly excavating the burrow before or after the rearing season. Any relocation of badgers shall occur only after consultation with the CDFG.
- D-3 Thirty days prior to maintenance activities in suitable habitat, a qualified biologist shall conduct a survey, within the proposed disturbance zone and within 200 feet of the disturbance zone, for San Diego desert woodrat. 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. Maintenance activities within the fenced area will be postponed or halted until young have left the nest. The biologist shall serve as a 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, a qualified biologist shall relocate nests off site, to be spaced no closer than 100 feet apart. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.
- D-4 Thirty days prior to maintenance activities in suitable habitat, a qualified biologist shall conduct a survey, within the proposed disturbance zone and within 200 feet of the disturbance zone, for San Diego black-tailed jackrabbit. 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. This buffer may be reduced based on the location of the den upon consultation with the CDFG. Occupied maternity dens,

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- depressions, nests, or burrows shall be flagged for avoidance and a biological monitor shall be present during maintenance activities. Unattended young shall be relocated to suitable habitat by a qualified biologist. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.
- D-5 Prior to initiating in-channel maintenance activities, all work sites and access roads within the riverbed as well as all riverbed areas within 300 feet of the maintenance site and access roads shall be surveyed by a qualified biologist at the appropriate season for two-striped garter snake and south coast garter snake. 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, to be developed and submitted to CDFG for approval 60 days prior to any ground disturbing activities within potentially occupied habitat. A 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.
- D-6 No earlier than 30 days prior to maintenance work, a qualified biologist shall conduct a survey to determine if active roosts of special-status bats are present on or within 300 feet of the disturbance boundaries. If an active maternity roost is found, it shall not be disturbed and all work within 300 feet shall be postponed or halted until the roost is vacated and the juveniles fledged. Rock outcrops or trees occupied by maternity roosts shall be avoided. If avoidance of the maternity roost must occur, but the bat biologist determines in consultation with and with the approval of the 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 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. If non-breeding bat hibernacula are found in trees scheduled to be removed or in crevices in rock outcrops within the maintenance footprint, the individuals shall be safely evicted under the direction of a qualified bat biologist. 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).
- D-7 Prior to maintenance activities in areas containing host plants in sufficient density to support San Emigdio blue butterfly, 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. 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

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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. Prior to maintenance 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. Maintenance 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.

2.1.5 *Invasive Species Control*

- E-1 As the features constructed to treat and control stormwater and non-stormwater runoff often include permanent pools of water or hydraulic and soil conditions conducive to infestation by non-native species (both plant and animal), the following mitigation measures have been developed to establish criteria and methods to prevent or eradicate such species.
- E-2 Monitoring of storm-water height at Dry Basins:
- a. If standing water more than 6 inches in depth is found within any of the ponds during the summer months, measures should be implemented to change the outlet from the pond to assure continual draining and to allow the floor to dry for a period of at least six weeks.
 - b. The purpose of this maintenance action is to eradicate non-native frog species and mosquitoes within the pond, while allowing the pond to function as intended.
 - c. Alternatively, the ponds may be pumped and inflow diverted for 6 weeks during the summer to accomplish this same goal. Water removed from the pond facilities for maintenance may be spread in open space areas or trucked to an approved water disposal site.
 - d. This does not apply to Wet Ponds, Lakes, or other features where a permanent wetted pool is a function of the design. Other methods shall be employed in the event of an infestation.
- E-3 Invasive vegetation, such as giant reed, castor bean, Pampas grass, and tamarisk must be removed. Invasive species should never contribute more than 25% of the vegetated area of the basin or feature. For more information on invasive weeds, including biology and control of listed weeds, refer to the encyclopedia located at the California Department of Food and Agriculture website (<http://www.cdffa.ca.gov/wma>) or the California Invasive Plant Council website (<http://portal.cal-ipc.org/weedlist>).
- a. The Operator shall remove any non-native vegetation (e.g., tree tobacco, castor bean, giant cane) from the maintenance work area and shall dispose of it in a manner and a location which prevents its reestablishment.

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- b. Removal shall be done at least twice annually during the spring/summer season, as needed.
 - i. Giant cane, if present, shall be cut to a height of 6 inches or less, and the stumps painted with an herbicide approved for aquatic use within 5 minutes of cutting.
 - ii. Herbicides shall be applied at least three times during the period from May 1 to October 1 to eradicate these plants.
- c. Where proposed methods for removing giant cane deviate from this procedure, the Operator shall present the alternate methods, in writing, to the Department for review and approval, prior to maintenance.
- d. Whenever possible, invasive species shall be removed by hand or by hand-operated power tools, rather than by chemical means.
- e. If there is a possibility that the herbicides could come into contact with water, the Operator shall employ only those herbicides, such as Rodeo (Glyphosate), which are approved for aquatic use. If surfactants are required, they shall be restricted to non-ionic chemicals, such as Agri-Dex, which are approved for aquatic use.
- f. The Operator shall apply any herbicides in accordance with state and federal law.
 - i. No herbicides shall be used where threatened or endangered species occur.
 - ii. No herbicides shall be used when wind velocities are above 5 miles per hour.
 - iii. No herbicides shall be used on native vegetation unless specifically authorized, in writing, by the Department.

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2.2 Feature-Specific Measures

2.2.1 *Channel Clearing Near Bridges*

FS-A1 Vegetation and/or debris will be removed on an as-needed basis, as determined by OPERATOR from the bridges listed below. Vegetation and debris may be removed by heavy equipment. Equipment within the river shall be operated within the above-described removal areas which shall be demarcated with temporary fencing or staking:

- A. Commerce Center Bridge: no clearing required
- B. Hwy 126 Bridge over Castaic Creek: 25 feet upstream, 25 feet downstream, 420-foot-wide bridge
- C. Hwy 126 Bridge/Culvert & bike trail over Chiquito Canyon Creek: 25 feet upstream & 25 feet downstream along 100-foot-wide bridge; and Sediment removal to maintain minimum vertical clearance beneath roadway
- D. Hwy 126 Culvert & bike trail over San Martinez Grande Canyon Creek: 25 feet upstream & 25 feet downstream along 100-foot-wide bridge; and Sediment removal to maintain minimum vertical clearance beneath roadway
- E. Long Canyon Bridge: no clearing required
- F. Potrero Canyon Bridge: no clearing required

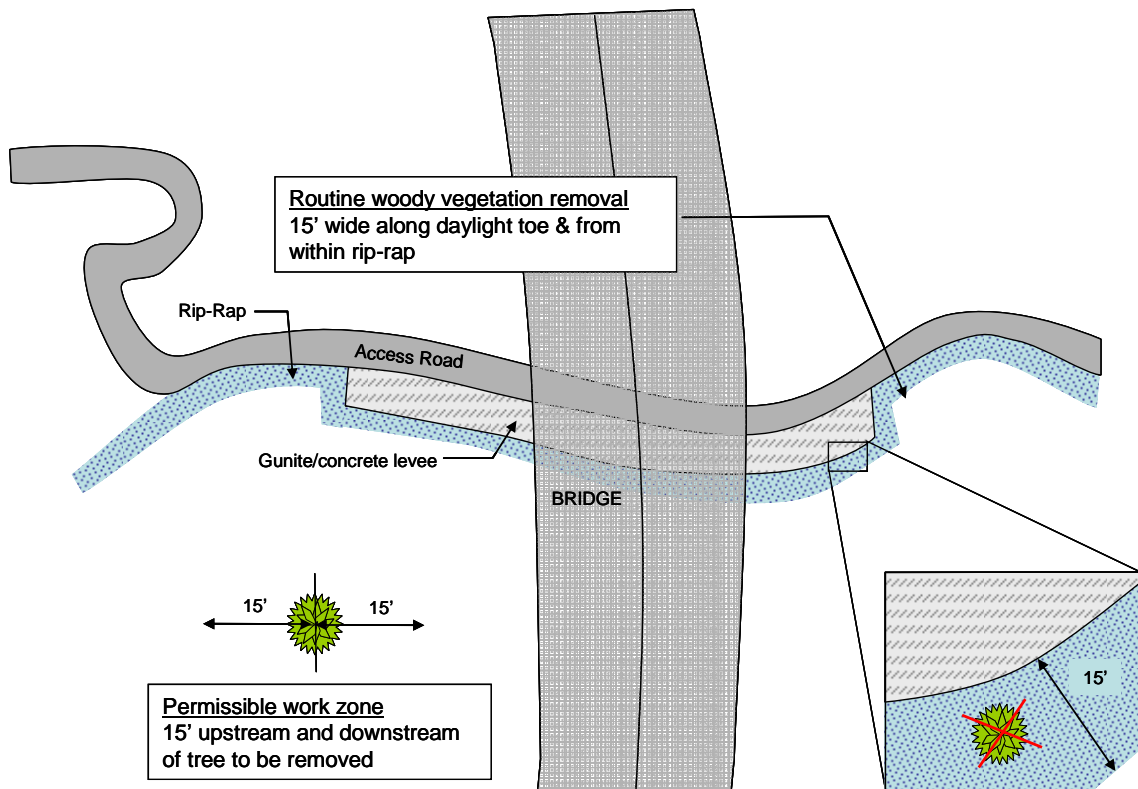
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2.2.2 Removal of Vegetation from Rip-Rap

FS-B1 For new rip-rap constructed along the Santa Clara River under the 404 permit and 1605 Agreement, Operator may remove trees that grow in levees, and may remove large trees, defined as trees with trunks 4 inches in diameter at breast height (dbh), within 15 feet of the levee toe in order to maintain the structural integrity of the levees. Whenever possible this work shall be performed from the levee access road. If access to the bottom of the river is required, the work area shall be limited to a 30-foot-wide zone extending outward from the levee at the invert and 15 feet upstream and downstream on either side of the tree to be removed. Hand held equipment shall be used.

Vegetation Removal from Rip-Rap



FS-B2 For new rip-rap constructed as a component of a drop structure, stormwater quality or flow attenuation basin, storm drain inlet or outlet, or other management system, where vegetation growth will impede the proper function of the rip-rap, Operator may remove trees that grow in the structure, and may remove large trees, defined as trees with trunks 4 inches in diameter at breast height (dbh), within 15 feet of the exposed rip-rap structure to maintain the structural integrity of the structure. Where vegetation is specifically designed to be integral to the rip-rap structure, then such maintenance will not be performed. See specific facilities below for further details.

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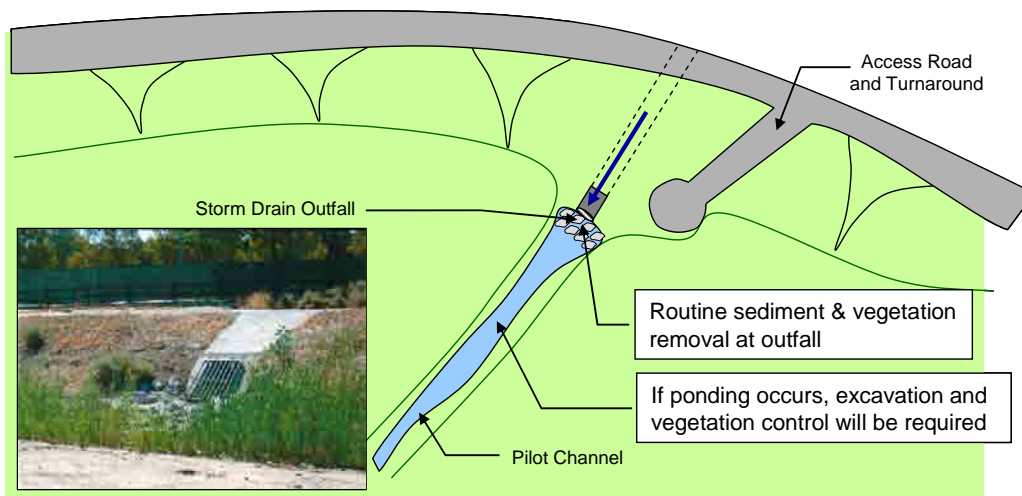
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2.2.3 *Cleaning Storm Drain Outfalls*

FS-C1 Sediment buildup at existing storm drain outfalls shall be removed on an as needed basis as determined by the Operator. The County shall use light equipment to create a swale up to 75 feet long and 10 feet wide, to allow water to drain. Equipment such as a Caterpillar D-8 or equivalent may enter areas of the river as long as they avoid areas of ponded or flowing water (not including water discharging from the storm drain) to remove sediment. Large riparian trees defined as trees with trunks in excess of four inches in diameter at breast height (dbh) shall be avoided. The maintenance area shall be demarcated with flagging. New storm drain outfalls shall be designed with a rock apron to maintain a clear area large enough to provide hydraulic capacity to maintain flow from the storm drain. Equipment shall be introduced into the river by means of an earth ramp constructed on the sideslope in the immediate vicinity, or from an adjacent invert access ramp if within 1,000 feet of the area to be maintained. If the equipment must access the riverbed, care will be taken to minimize impacts to vegetation and to avoid destruction of large trees, defined as trees with trunks in excess of four inches in diameter.

FS-C2 In order to drain stagnant water that is causing an odor problem at any outfall, the Operator may dig a swale using a Caterpillar D-6 or its equivalent or may hand shovel a swale, up to 75 feet long and 10 feet wide to allow standing water to percolate. The Operator shall notify the Corps and CDFG prior to performing this work. The procedures described to identify and relocate endangered species from live streams and ponded water shall be followed.

Storm Drain Outfall



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2.2.4 *Bridge Repair*

FS-D1 Whenever practical, repairs to bridges shall be made from the bridge deck. If this is not practical, minimum encroachment upstream and/or downstream of the bridge will be acceptable. The maintenance work area for structural repairs shall be limited to 30 feet on either side of the bridge and under the bridge itself. Equipment shall be introduced into the river by means of an earth ramp constructed on the sideslope in the immediate vicinity, or from an adjacent invert access ramp if within 1,000 feet of the bridge. If the equipment must access the riverbed, care shall be taken to minimize impacts to vegetation and to avoid destruction of large trees, defined as trees with trunks in excess of four inches in diameter at breast height (dbh). Best management practices shall be employed during the bridge repair work to prevent pollutants from being discharged to the stream channel.

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2.2.5 *Repairs to Bank Stabilization*

FS-E1 Structural repairs to levees, storm drain outfalls, water quality facilities, utility crossings, etc. shall be performed on an as-needed basis to maintain the integrity of the structures. The work area shall be limited to the section of the structure, plus a 30-foot work area extending out from the levee at the invert and upstream and downstream within the 30-foot width of the structure to be repaired. Best management practices shall be employed during the repair work to prevent pollutants from being discharged to a stream channel.

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2.2.6 *Water Quality Treatment and Flow Attenuation Facilities*

FS-F1 Water quality treatment and flow attenuation facilities (basins, swales, and filters) are installed outside of the river or creek bed. These facilities may be planted with wetland plants and may include permanent open water features. The water quality treatment and flow attenuation facilities shall be maintained on a regular basis to ensure proper function while also paying strict attention to prevention and abatement of nuisance conditions. Depending on the extent that any such feature supports special-status riparian or other nesting bird species, maintenance of these facilities is recommended to occur between August 15st and March 15th. The additional survey requirements discussed previously may be conducted to work outside of this period where work is required in areas that support nesting of special-status species. These features are further discussed below with specific activities applicable to each.

2.2.6.1 **Extended Detention Basin**

FS-G1 **Description** - Extended detention basins (EDBs) store stormwater runoff for sufficient periods of time to promote the removal of pollutants primarily through sedimentation. EDBs 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 particulates and associated pollutants to settle out. These basins are not designed or anticipated to contain standing water for periods in excess of 48 hours. The EDBs will also incorporate a series of gravel-filled subsurface flow trenches that will provide water quality treatment and facilitate evapotranspiration and percolation of dry weather flows and small storm events within the basin footprint. In addition, a specially constructed dry well that will support deep subsurface percolation of dry weather flows that may exceed the capacity of the gravel trenches will be provided. EDBs are constructed outside of jurisdictional areas, although if abandoned, or otherwise not properly maintained, native riparian habitats may develop.

FS-G2 **EDB Basin Vegetation** - Vegetation provides erosion protection from both wind and water and biofiltration of stormwater. Intended basin vegetation includes:

- A. The bottom and slopes of the extended detention basin shall be vegetated. Where located in CDFG jurisdiction, only appropriate native plants are allowed.
- B. The basin bottom should not be planted with trees, shrubs, or other large woody plants that may interfere with sediment removal activities.
- C. Only native perennial grasses, forbs, or similar vegetation that can be replaced via seeding should be used on the basin bottom

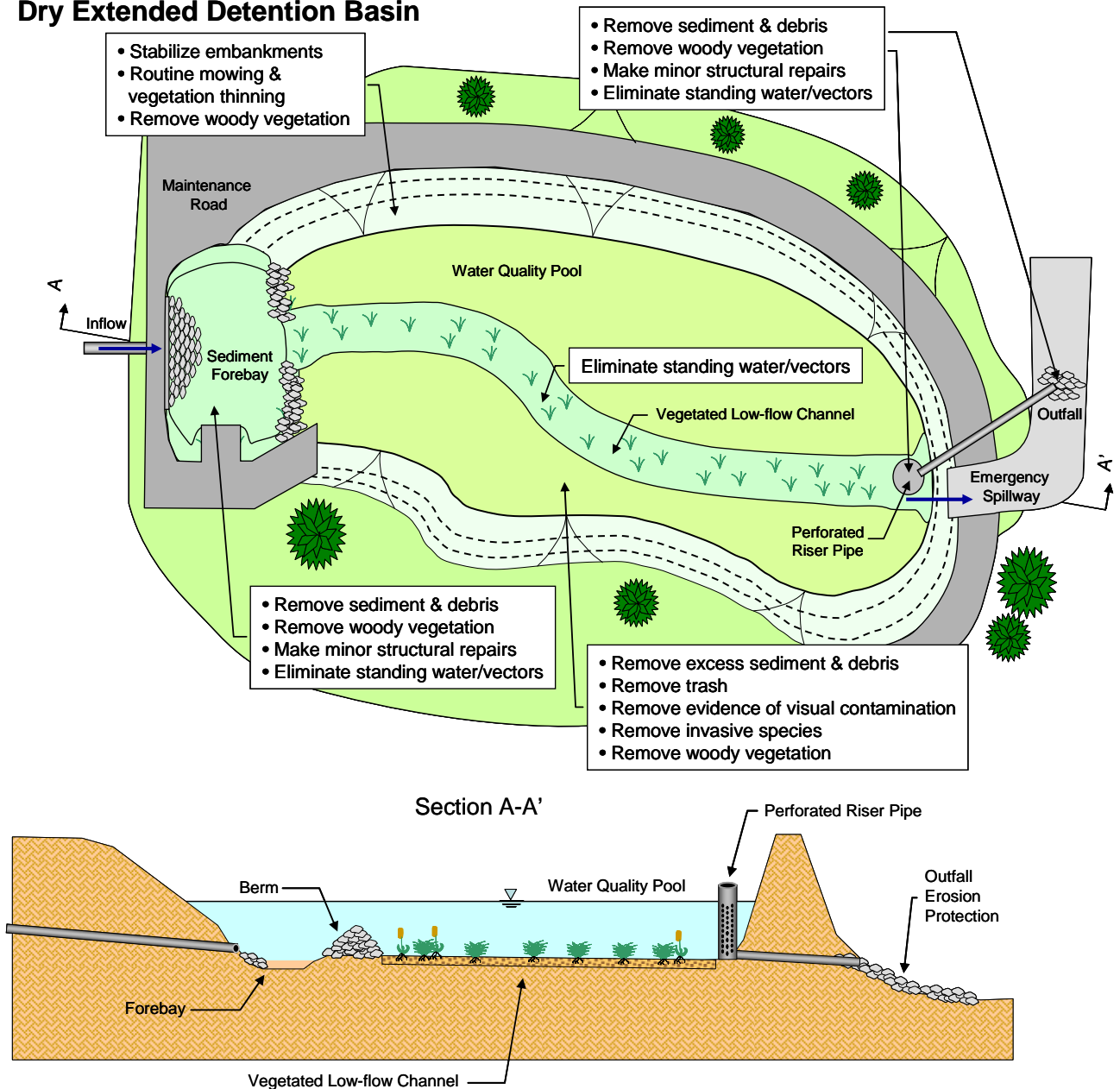
FS-G3 **EDB Basin Maintenance Access** - Maintenance access road(s) shall be provided for and maintained to the control structure and other drainage structures associated with the basin.

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- A. An access ramp should extend to the basin bottom to avoid damage to vegetation planted on the basin slope.
- B. Access roads may terminate with a maintained turn around areas of 40 feet by 40 feet.

Dry Extended Detention Basin



FS-G4 **EDB Basin General Requirements** - Maintenance is of primary importance if extended detention basins are to continue to function as originally

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designed. A specific maintenance plan shall be formulated for each facility outlining the schedule and scope of maintenance operations, as well as the data handling and reporting requirements. The following are general maintenance requirements:

- A. The basin should be inspected annually prior to the wet season and after major storm events (>0.75 in/24 hrs) if spot checks of some basins indicated widespread damage/maintenance needs.
- B. Trash and debris should be removed as needed, but at least annually prior to the beginning of the wet season.
- C. Site vegetation should be maintained as follows:
 - 1. Vegetation, large shrubs, or trees that limit access or interfere with basin operation should be pruned or removed.
 - 2. Slope areas that have become bare should be revegetated and eroded areas should be regraded prior to being revegetated.
 - 3. Grass should be mowed to 4 to 9 inches high, and grass clippings should be removed.
 - 4. Fallen leaves and debris from deciduous plant foliage should be raked and removed.
 - 5. Invasive vegetation must be removed and replaced with noninvasive species. Invasive species should never contribute more than 25% of the vegetated area (5% if located in CDFG jurisdiction).
 - 6. Dead vegetation should be removed if it exceeds 10% of area coverage. Vegetation should be replaced immediately to maintain cover density and control erosion where soils are exposed.
 - 7. No herbicides or other chemicals shall be used to control vegetation.
- D. Sediment buildup exceeding 50% of the forebay capacity should be removed.
- E. Sediment from the remainder of the basin should be removed when 6 inches of sediment accumulates.
- F. Sediments should be tested for toxic substance accumulation in compliance with current disposal requirements if land uses in the catchment include commercial or industrial zones, or if visual or olfactory indications of pollution are noticed.
- G. Following sediment removal activities, replanting and/or reseedling of vegetation may be required for reestablishment.

2.2.6.2 Vegetated Swales

FS-H1 Description - Vegetated swales are open, shallow channels with low-lying vegetation covering the side slopes and bottom that collect and slowly convey runoff flow to downstream discharge points. Vegetated swales provide pollutant

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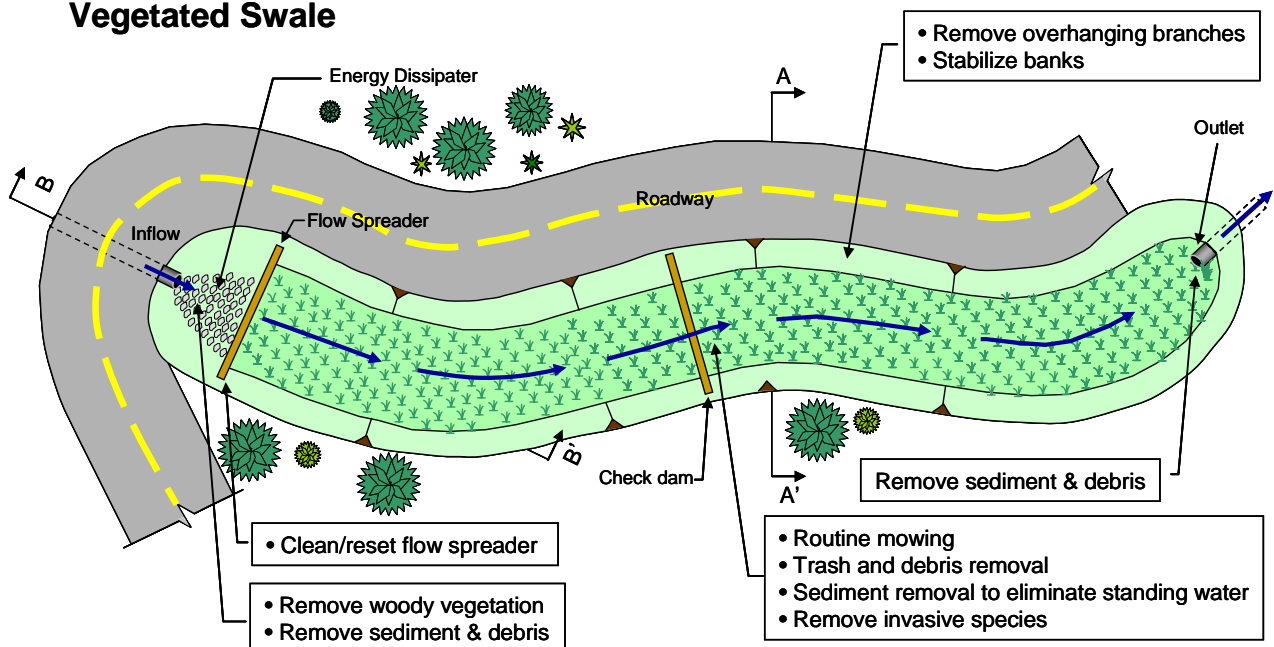
removal through settling and filtration in the vegetation (usually grasses) lining the channels, provide the opportunity for volume reduction through infiltration and evapotranspiration, and reduce the flow velocity in addition to conveying stormwater runoff. An effective vegetated swale achieves uniform sheet flow over and through a densely vegetated area for a period of several minutes. Swales that are integrated within a project may use turf or other more intensive landscaping, while swales that are located on the project perimeter, within a park, or close to an open space area may be planted with a more naturalistic plant palette.

FS-H2 Swales Vegetation - Swales must be vegetated in order to provide adequate treatment of runoff. It is important to maximize water contact with the vegetation and the soil surface. Intended swale vegetation includes:

- A. Mix of erosion-resistant plant species that effectively bind the soil.
- B. A diverse selection of low growing plants that thrive under the specific site, climatic, and watering conditions should be specified.
- C. A mixture of dry-area and wet-area grass species that can continue to grow through silt deposits is most effective.
- D. Drought-tolerant grasses should be specified to minimize irrigation requirements.

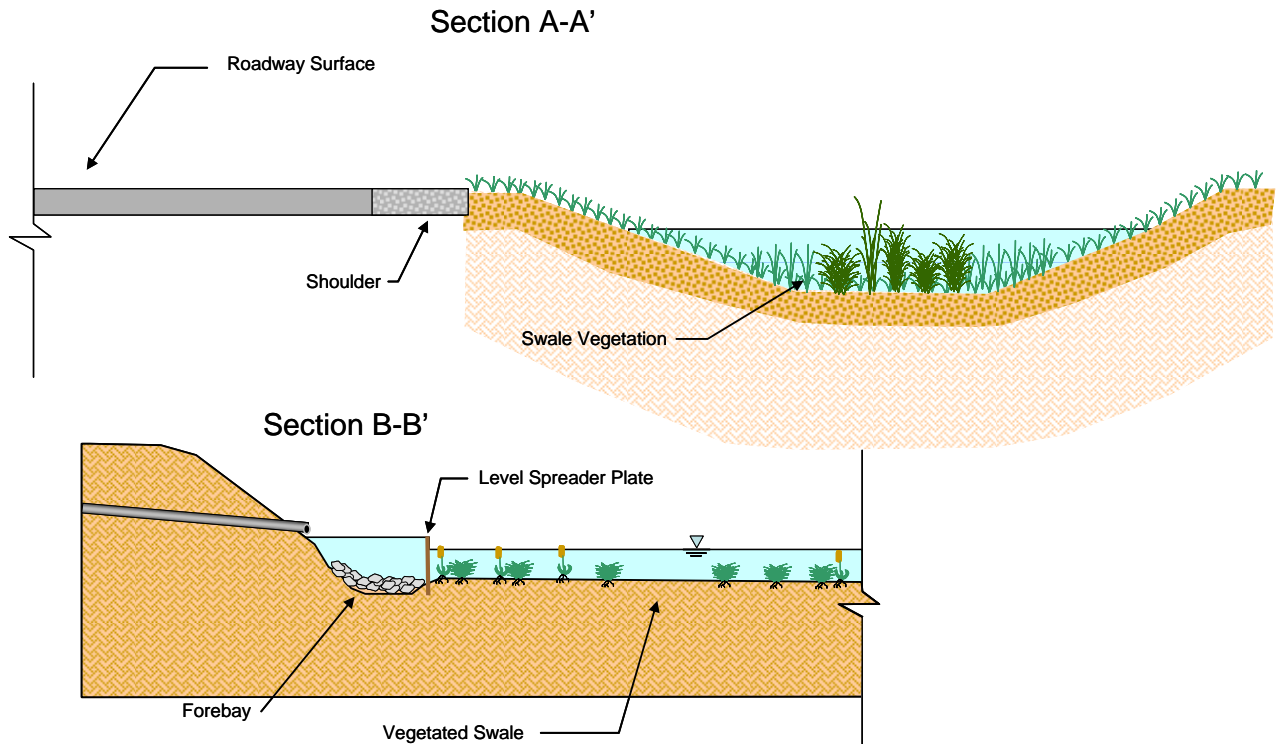
FS-H3 Swales Maintenance Access - A maintenance access road may or may not be incorporated into a swale design. A suitable location for an access road may exist at the inlet or outlet. Along the length of the swale, access will be dependent upon adjacent land uses: paved roadways; parking lots; bike paths; park or open space; or otherwise developed areas.

Vegetated Swale



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FS-H4 Swales General Requirements

- A. Inspect vegetated swales for erosion or damage to vegetation after every storm greater than 0.75 inch for on-line swales, if spot checks of some swales indicated widespread damage/maintenance needs, and at least twice annually for off-line swales.
- B. Each swale should be checked for debris and litter and areas of sediment accumulation.
- C. Swale inlets (curb cuts or pipes) should maintain a calm flow of water entering the swale. Remove sediment as needed at the inlet if vegetation growth is inhibited in greater than 10% of the swale or if the sediment is blocking even distribution and entry of the water.
- D. Flow spreaders should provide even dispersion of flows across the swale. Sediment and debris should be removed from the flow spreader if blocking flows. Splash pads should be repaired if needed to prevent erosion. Spreader level should be checked and re-leveled if necessary.
- E. Side slopes should be maintained to prevent erosion that introduces sediment into the swale.
- F. Slopes should be stabilized and planted using appropriate erosion control measures when native soil is exposed or erosion channels are forming.

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- G. Swales should drain within 48 hours of the end of a storm. Till the swale if compaction or clogging occurs. The perforated underdrain pipe, if present, should be cleaned if necessary.
- H. Vegetation should be healthy and dense enough to provide filtering while protecting underlying soils from erosion:
 - 1. Vegetation, large shrubs or trees that interfere with landscape swale operation should be pruned.
 - 2. Fallen leaves and debris from deciduous plant foliage should be removed.
 - 3. Grassy swales should be mowed to keep grass 4 to 6 inches in height.
 - 4. Invasive vegetation must be removed and replaced with noninvasive species. Invasive species should never contribute more than 25% of the vegetated area (5% if located in CDFG jurisdiction).
- I. Check dams (if present) should control and distribute flow across the swale. Causes for altered water flow and/or channelization should be identified and obstructions cleared. Check dams and swale should be repaired if damaged.
- J. Trash and debris, sediment, visual contamination (e.g., oils), noxious or nuisance weeds, should all be removed.

2.2.6.3 Infiltration Facilities

FS-II **Description** - Infiltration facilities include infiltration basins and infiltration trenches. In general, infiltration facilities are similar to stormwater detention systems but are constructed with a highly permeable base that is specifically designed to infiltrate runoff. It is usually not practical to infiltrate runoff at the same rate that it is generated; therefore, these facilities generally include both a storage component and a drainage component.

- A. Infiltration Basins are usually shallow with flat, vegetated bottoms and side slopes and can be incised by excavating a depression below the existing grade or constructed above grade by constructing a perimeter berm.
- B. Infiltration Trenches are long, narrow, rock-filled trenches that receive stormwater runoff from small drainage areas. These facilities may include a shallow depression at the surface, but the majority of runoff is stored in the void space between the stones and infiltrates through the sides and bottom of the trench.
- C. Infiltration facilities are ideal for hydromodification control, where surface runoff volume reductions are desired. Infiltration facilities are also good candidates for the removal of sediment, particulate bound pollutants, and bacteria. The primary pollutant removal processes in infiltration facilities include volume and associated pollutant load reduction, sedimentation, filtration, and adsorption.

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FS-I2 **Infiltration Vegetation**

A. Infiltration Basin

1. A thick mat of drought tolerant grass should be established on the basin floor and sideslopes. Grass may need to be irrigated during establishment.

B. Infiltration Trench

1. Infiltration trenches shall be kept free of vegetation. Trees and other large vegetation should be planted away from trenches such that drip lines do not overhang infiltration beds.

FS-I3 **Infiltration Maintenance Access**

A. Infiltration Basin - require access provisions similar to EDBs. Maintenance access road(s) shall be maintained to the control structure and other drainage structures associated with the basin (e.g., inlet, emergency overflow or bypass structures).

1. An access ramp should extend to the basin bottom to avoid damage to vegetation planted on the basin slope.
2. Access roads may terminate with a maintained turn around areas of 40 feet by 40 feet.

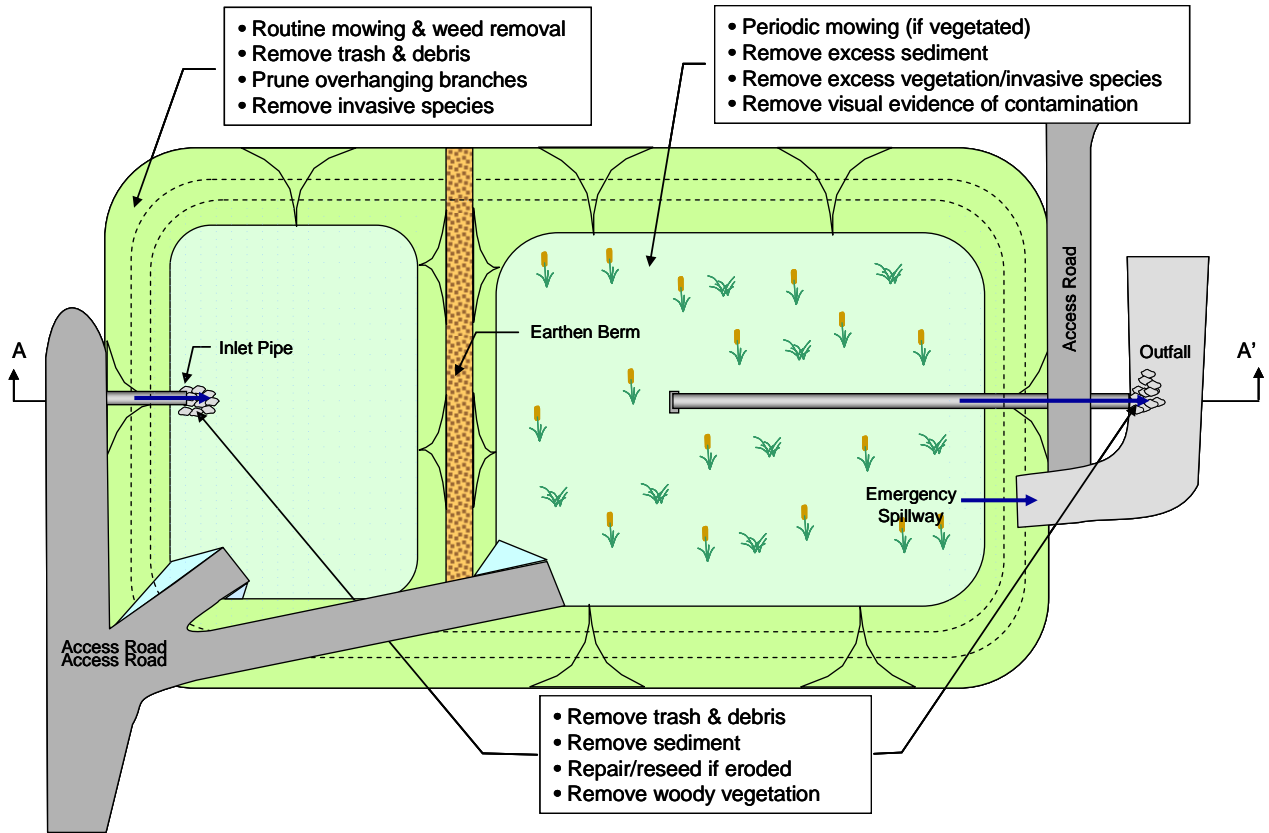
B. Infiltration Trench

1. The facility and outlet structures must all be safely accessible during wet and dry weather conditions.
2. An access road along the entire length of the trench is required unless the trench is located along an existing road or parking lot that can be safely used for maintenance access.
3. If the infiltration facility becomes plugged and fails, then access is needed to excavate the facility to remove and replace the filter bed media, as well as to increase all dimensions of the facility by 2 inches to provide a fresh surface for infiltration. To prevent damage and compaction, access must be able to accommodate a backhoe working at “arms length.”

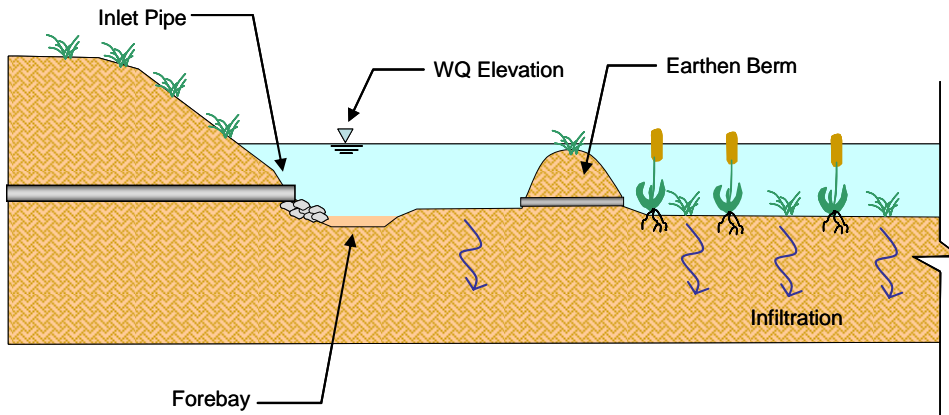
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Infiltration Basin



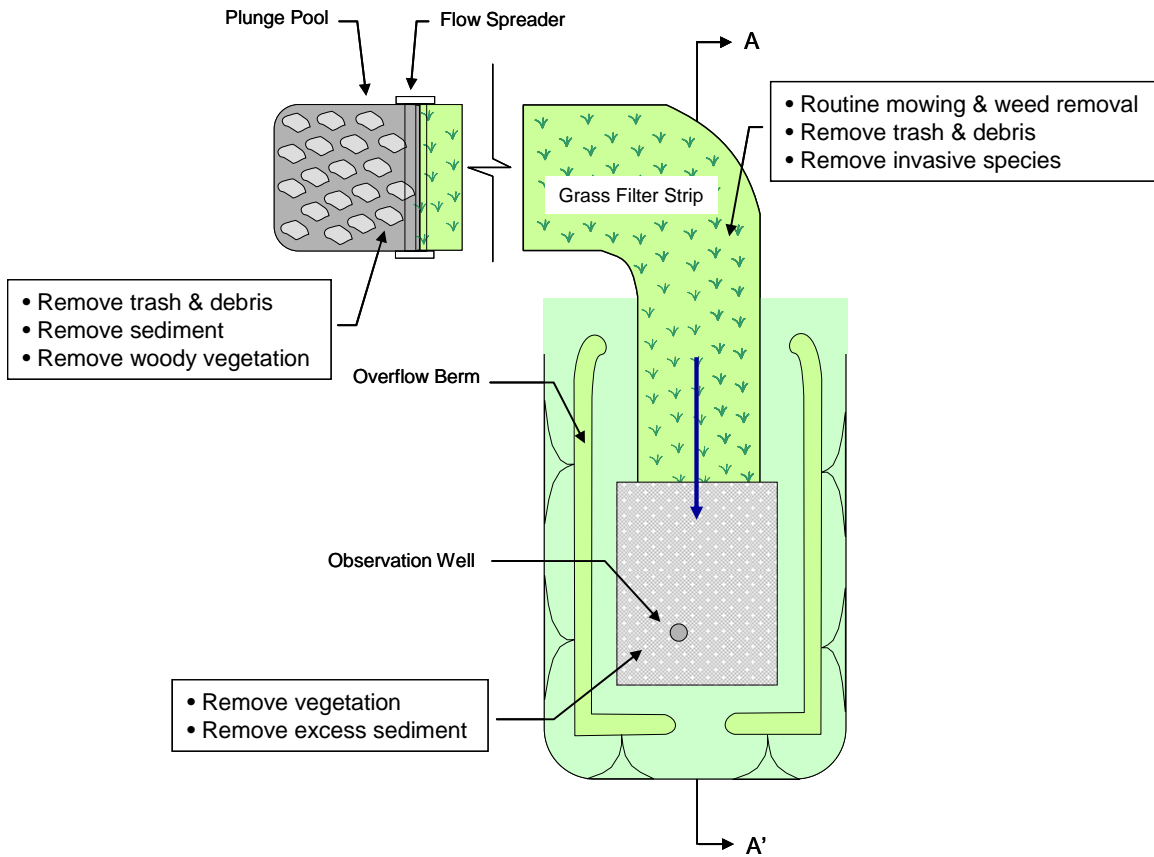
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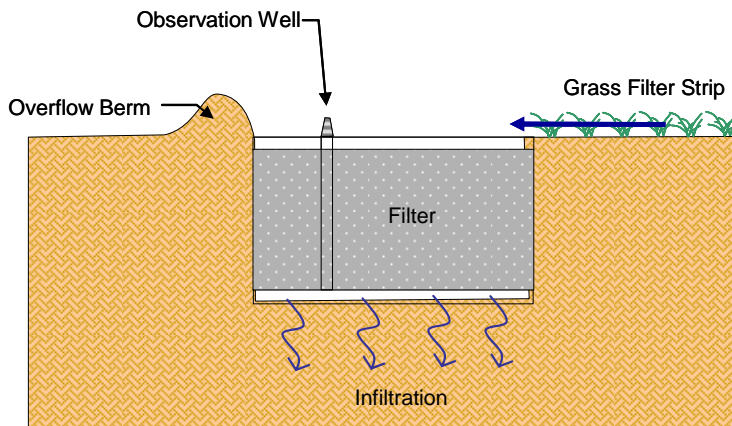
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Infiltration Trench



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FS-I4 Infiltration General Requirements - Infiltration facility maintenance should include frequent inspections to ensure that water infiltrates into the subsurface completely within the recommended infiltration time of 72 hours or less after a storm. A specific maintenance plan shall be formulated specifically for each

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facility outlining the schedule and scope of maintenance operations, as well as the data handling and reporting requirements. The following are general maintenance requirements:

- A. Regular inspection should determine if the sediment removal structures require routine maintenance. Facilities should be inspected at least annually.
- B. Maintenance activities triggered by a potentially clogged facility include:
 - 1. Check for debris/sediment accumulation, rake surface and remove sediment (if any) and evaluate potential sources of sediment and debris.
 - 2. For basins, removal of the top layer of native soil may be required to restore infiltrative capacity.
 - 3. For trenches, assess the condition of the top aggregate layer for sediment buildup and crusting. Remove top layer of pea gravel and replace, or if necessary, the entire trench may need to be excavated and replaced.
 - 4. For trenches, if there is a tear in the filter fabric, repair or replace.
 - 5. Any debris or algae growth located on top of the infiltration facility should be removed.
- C. Trash and debris should be removed as needed, but at least annually prior to the beginning of the wet season.
- D. Site vegetation should be maintained as frequently as necessary to maintain the aesthetic appearance of the site, and as follows:
 - 1. Large shrubs, or trees that limit access or interfere with basin operation, should be pruned or removed.
 - 2. Slope areas that have become bare should be revegetated and eroded areas should be regraded prior to being revegetated.
 - 3. Invasive vegetation must be removed and replaced with noninvasive species. Invasive species should never contribute more than 25% of the vegetated area (5% if located in CDFG jurisdiction).
- E. For infiltration basins, sediment buildup exceeding 50% of the forebay capacity should be removed. Sediment from the remainder of the basin should be removed when 6 inches of sediment accumulates.
- F. Following sediment removal activities, replanting and/or reseeded of vegetation may be required for reestablishment.

2.2.6.4 Wetponds

FS-J1 **Description** - Wetponds are constructed, naturalistic ponds with a permanent or seasonal pool of water. Aquascape facilities, such as artificial lakes, are a special form of wet pool facility that can incorporate innovative design elements to allow them to function as a stormwater treatment facility in addition to

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an aesthetic water feature. Wetponds require base flows to exceed or match losses through evaporation and/or infiltration and they must be designed with the outlet positioned and/or operated in such a way as to maintain a permanent pool. The applications for wetponds are similar to those of extended detention (EDB) basins and include peak flow attenuation (with EDB), volume reduction, and pollutant removal. It is acceptable for wetponds to dry out for part of the year.

FS-J2 **Wetpond Vegetation**

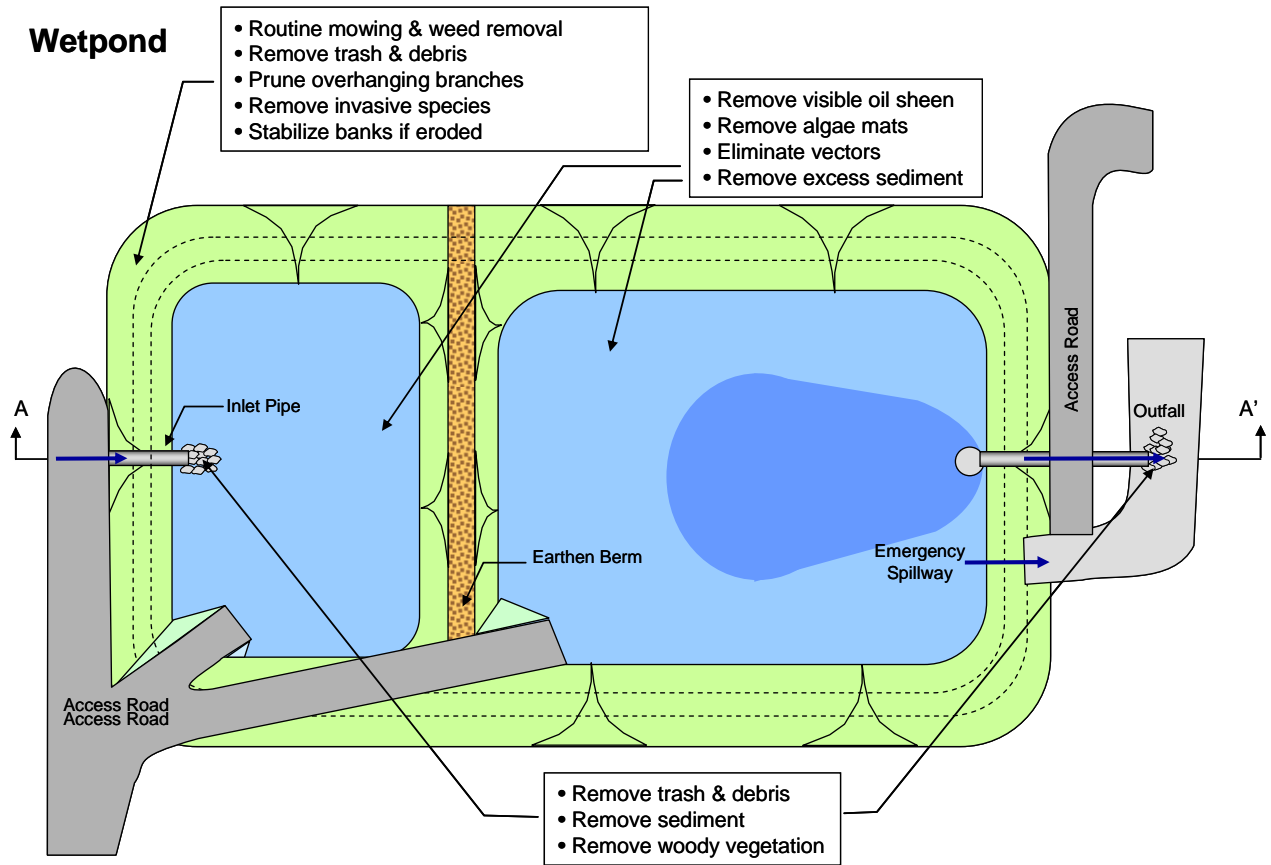
- A. A stabilization/revegetation plan should be prepared for aquatic, temporarily submerged, areas.
- B. If the second cell of the wetpond is 3 feet or shallower, the bottom area shall be planted with emergent wetland vegetation
- C. Emergent aquatic vegetation shall be planted to cover 25-75% of the area of the permanent pool.
- D. Outside of the pond, native, or non-invasive non-native, vegetation adapted for site conditions shall be used in non-irrigated sites.

FS-J3 **Wetpond Maintenance Access** - Maintenance access road(s) shall be provided to the control structure and other drainage structures associated with the basin.

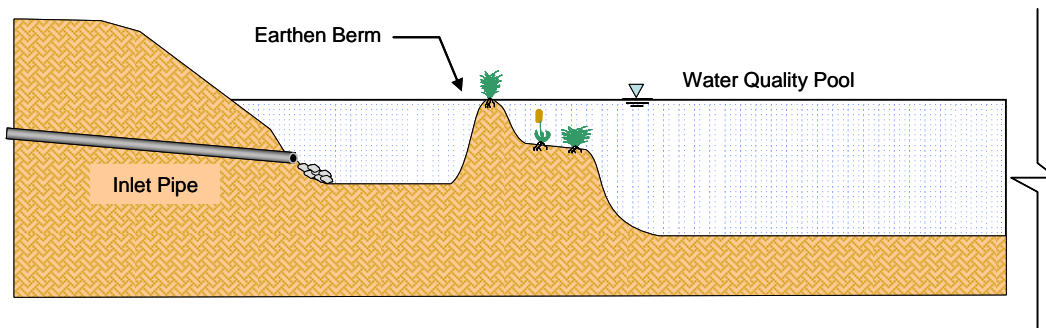
- A. The access ramp should extend to the basin bottom to avoid damage to vegetation planted on the basin slope.
- B. Access roads may terminate with a maintained turn around areas of 40 feet by 40 feet.

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FS-J4 Design Requirements Specific to Lakes - Lakes designed to provide treatment may be used for stormwater quality management. A specific maintenance plan shall be formulated for each facility outlining the schedule and scope of maintenance operations, as well as the data handling and reporting requirements. Many of the wetpond design specifications are applicable to lakes, but specific design features are also required:

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- A. For example, a consistent water supply is required to maintain the wet pool in the lake year around and to flush the system at maximum turn-over of 30-days to reduce the potential for the build-up of salts and nutrients in the lake. Lakes should also have depths greater than 8 feet, and preferably up to 15 feet at the center, to reduce light penetration, maintain a lower average temperature, allow for temperature stratification, and minimize evaporation.
- B. Additional design elements specific to lakes to provide stormwater treatment and to maintain the water quality in the lake include wetland planters, biofilter beds, dry weather flow pretreatment, aeration, and stormwater retention. Submerged wetland planters may be constructed on shelves or floating rafts within the lake to assist in promoting overall water quality through filtering.
- C. Pretreatment filters also should be provided to treat all dry weather flows prior to entering the lake.
- D. Adequate capacity should be provided in the lake to contain a permanent pool, retain the water quality design storm, and provide storage of runoff for irrigation reuse.

FS-J5 Wetpond General Requirements - Maintenance is of primary importance if wetponds are to continue to function as originally designed. A specific maintenance plan shall be formulated for each facility outlining the schedule and scope of maintenance operations, as well as the data handling and reporting requirements. The following are general maintenance requirements:

- A. The wetpond should be inspected at a minimum annually and after major storm events (>0.75 in/24 hrs) if spot checks of some facilities indicated widespread damage/maintenance needs..
- B. Trash and debris should be removed as needed, but at least annually prior to the beginning of the wet season.
- C. Site vegetation should be maintained as frequently as, and as follows:
 - 1. Large shrubs, or trees that limit access or interfere with basin operation, should be pruned or removed.
 - 2. Slope areas that have become bare should be revegetated and eroded areas should be regraded prior to being revegetated.
 - 3. Invasive vegetation must be removed and replaced with noninvasive species. Invasive species should never contribute more than 25% of the vegetated area (5% if located in CDFG jurisdiction).
- D. Sediment buildup exceeding 6 inches over the design sediment storage capacity in the first cell should be removed. Sediment from the second pond cell should be removed when 6 inches of sediment accumulates.
- E. Following sediment removal activities, replanting and/or reseedling of vegetation may be required for reestablishment.

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2.2.6.5 Stormwater Wetland Basins

FS-K1 **Description** - A stormwater wetland basin is a treatment system consisting of a sediment forebay and a permanent micro-pool with aquatic vegetation covering a large portion of the basin. Stormwater wetlands typically include components such as an inlet with energy dissipation, a sediment forebay for settling out coarse solids and to facilitate maintenance, a base with shallow sections (1 to 2 feet deep) planted with emergent vegetation, deeper areas or micro pools (3 to 5 feet deep) , and a water quality outlet structure. The aquatic vegetation and the associated biological unit processes are a fundamental part of stormwater wetland basins.

- A. Stormwater wetlands are a treatment BMP designed to capture and treat pollutants to protect receiving waters, including natural wetlands and other ecologically sensitive habitat. The accumulation of pollutants in sediment and vegetation of stormwater wetlands may impact the health of aquatic biota. As such, periodic sediment and vegetation removal within stormwater wetlands may be required. These maintenance activities may further interrupt the use of stormwater wetlands by wildlife.
- B. The applications for stormwater wetlands are similar to those of wetponds and include peak flow attenuation, volume reduction, and pollutant removal. The pollutant removal processes that occur in wetlands include sedimentation, filtration, plant uptake and storage, and microbially-mediated transformations.

FS-K2 **Wetland Basin Vegetation** - The wetland cell shall be planted with emergent wetland plants following the recommendations of a wetlands specialist.

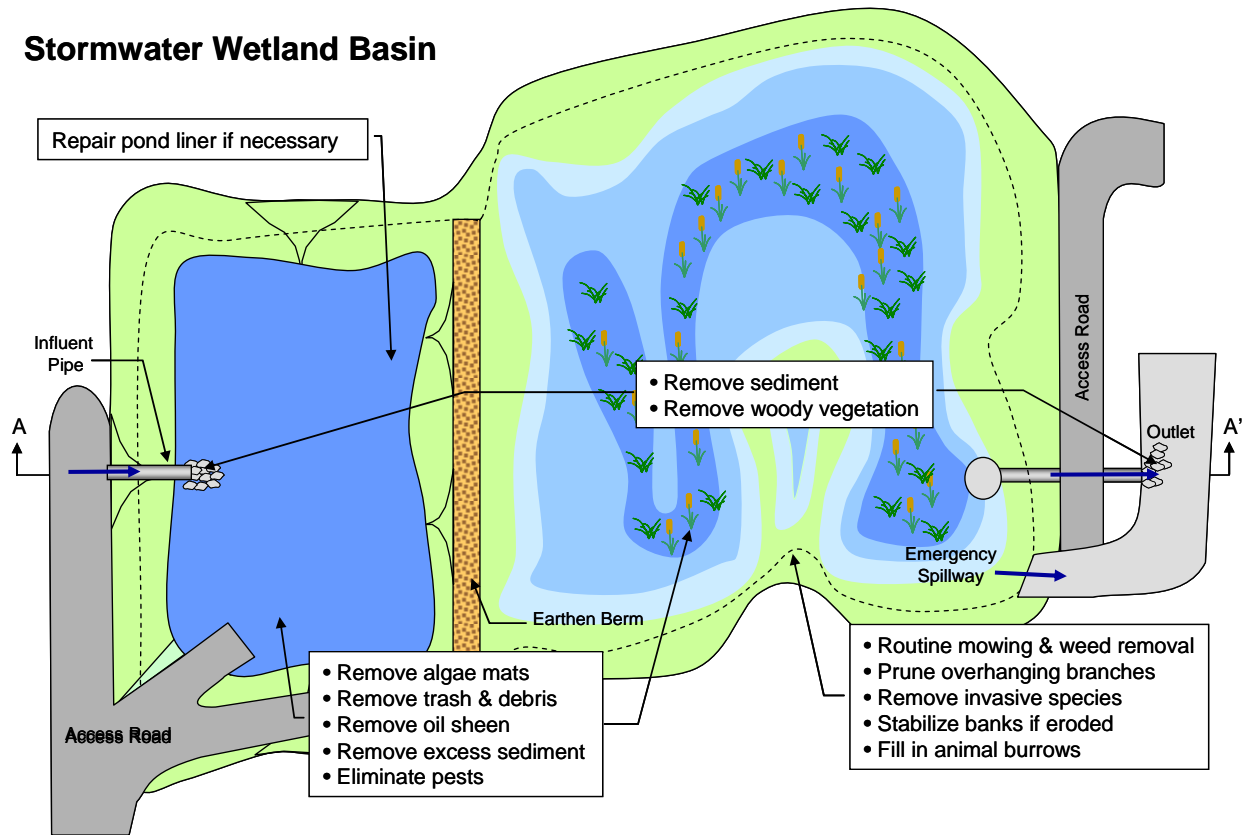
FS-K3 **Wetland Basin Maintenance Access** - Maintenance access road(s) shall be provided to the control structure and other drainage structures associated with the basin.

- A. An access ramp may extend to the basin bottom to avoid damage to vegetation planted on the basin slope.
- B. Access roads may terminate with a maintained turn around areas of 40 feet by 40 feet.

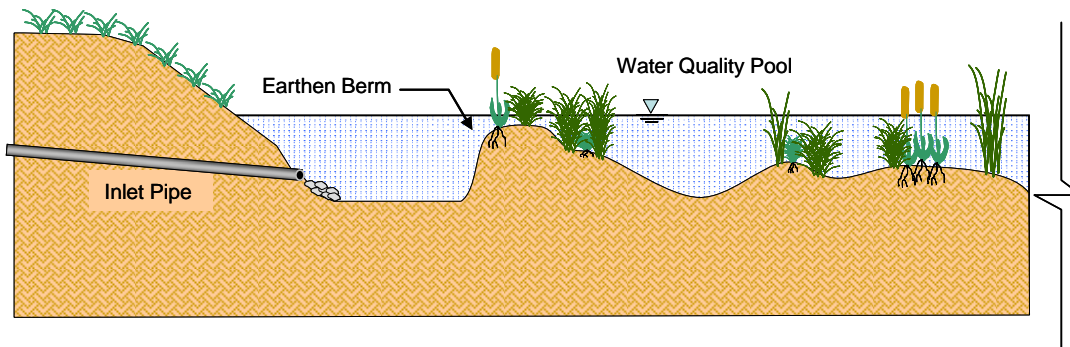
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Stormwater Wetland Basin



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FS-K4 Wetland Basin General Requirements - A specific maintenance plan shall be formulated for each facility outlining the schedule and scope of maintenance operations, as well as the data handling and reporting requirements. The following are general maintenance requirements:

- A. The stormwater wetland basin should be inspected annually and after major storm events (>0.75 in/24 hrs) if spot checks of some basins indicated widespread damage/maintenance needs.

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- B. Trash and debris should be removed as needed, but at least annually prior to the beginning of the wet season.
- C. Site vegetation should be maintained as frequently as necessary to prevent clogging of outlets, creation of dead volumes, and barriers to mosquito fish to access pooled areas, and as follows:
- D. Vegetation, large shrubs, or trees that limit access or interfere with basin operation should be pruned or removed. Slope areas that have become bare should be revegetated and eroded areas should be regraded prior to being revegetated. Invasive vegetation must be removed. Invasive species should never contribute more than 25% of the vegetated area (5% if located in CDFG jurisdiction). Dead vegetation should be removed if it exceeds 10% of area coverage. This does not include seasonal die-back where roots would grow back later in colder areas.
- E. Sediment buildup exceeding 6 inches over the storage capacity in the first cell should be removed.

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2.2.7 *Restored Tributaries*

FS-L1 Description – The main Tributary drainages (Chiquito, San Martinez Grande, Potrero, Long, and Lion) are intended to have some measure of remaintenance during the development of the NRSP. In some cases the entire drainage will be replaced both horizontally and vertically, while in others, only portions of the drainage will be realigned with minor horizontal and vertical modification by installing grade control structures. The resulting corridors are intended to be functioning native riparian and scrub habitats with stable banks and beds. Subsequent to the establishment of native vegetation in the restored channels/creeks, ongoing maintenance will be minimal. A Geomorphology Monitoring and Management Plan (Plan) will be prepared as part of the Project to ensure that the re-engineered drainages along the major tributaries (Long, Lion, Potrero, Chiquito, and San Martinez Grande Canyons) comply with the mitigation objectives and the design goals outlined in the basis of design. Specifically, the Plan shall detail the measures to be implemented to ensure the integrity of the structural elements and maintenance of the intended state of ‘constrained dynamic equilibrium’ (i.e., the channels are expected to somewhat change their width, depth and location on the floodplain periodically in response to changing rainfall and vegetation dynamics, but that the channel is expected to pass through all flow structures [e.g., drop structures or step-pools] and that between structures the channel is expected to stay within a predefined corridor and not encroach on infrastructure or fill slopes).

FS-L2 Geomorphology Monitoring and Management Plan (Plan) – The Plan shall specify the following: (1) a framework to collect baseline data to characterize conditions immediately after maintenance; (2) a post-development monitoring program; (3) a framework to develop threshold parameters and performance standards that activate adaptive management measures across a series of potential future scenarios, including encroachment on infrastructures or excessive infilling of step-pool structures, etc.; and, (4) contingency plans and appropriate remedial measures in the event that management efforts are not successful. The Plan shall be subject to the final approval by the U.S. Army Corps of Engineers, CDFG, and LA DPW prior to maintenance. Specific elements of the plan are further described in measures below.

FS-L3 Creek Corridor Landscape Maintenance – the following are anticipated activities:

- A. Removal of dead/dying vegetation near trails
- B. Trim vegetation impeding on trails or other common areas
- C. Fire Break/Weed Abatement Zone Mowing
- D. Trail Maintenance (including equestrian trail markers)

FS-L4 Culverts/Low Bridges - The accumulation of course-grained sediment within the stilling basins of grade control structures or culverts can reduce the structures ability to provide adequate energy dissipation as well as reduce flow

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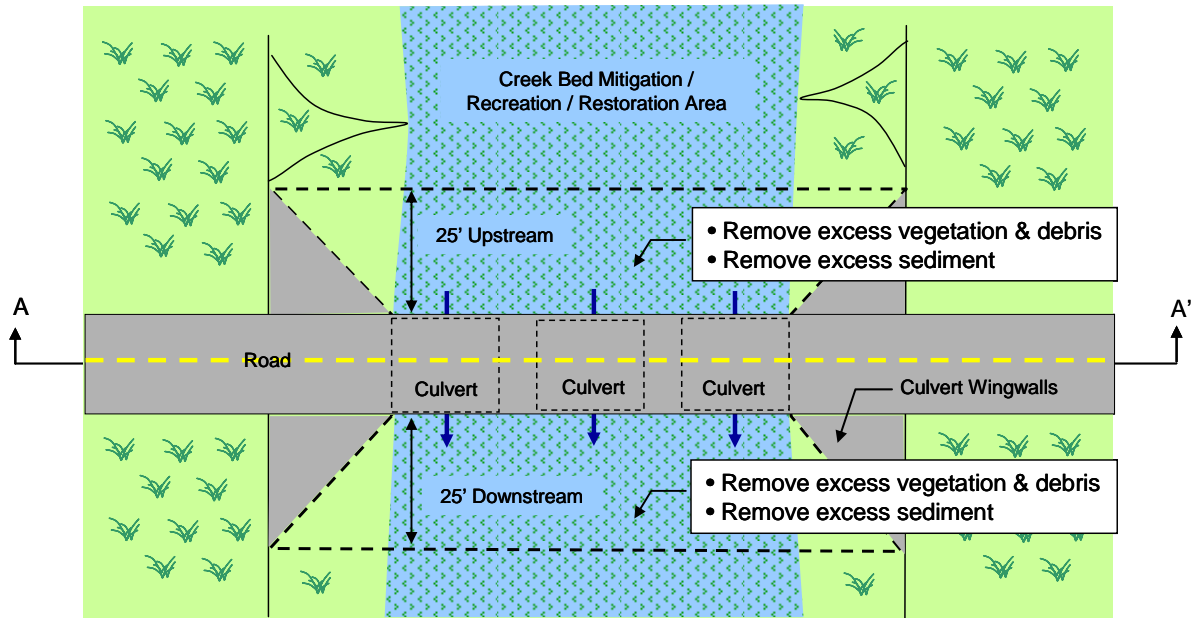
capacity. Excessive vegetative growth may block a culvert resulting in flooding or damage to the structure.

- A. Visual inspections are recommended quarterly and after large storm events (> than the 10 year event).
- B. Vegetation and/or debris will be removed on an as-needed basis, as determined by Operator, from the culverts and bridges listed below:
 - 1. Chiquito Canyon Creek Crossings : 3 locations, 25 feet upstream & 25 feet downstream, 50-foot-wide crossings
 - 2. San Martinez Grande Canyon Creek Crossings: 2 locations, 25 feet upstream, 25 feet downstream, 50-foot-wide crossings
 - 3. Potrero Canyon Creek Crossings: 5 locations, 25 feet upstream, 25 feet downstream, 50-foot-wide crossings
 - 4. Ayers Canyon Creek Crossing: 1 location, 25 feet upstream, 25 feet downstream, 50-foot-wide crossing
 - 5. Long Canyon Creek Crossings: 2 locations, 25 feet upstream, 25 feet downstream, 50-foot-wide crossings
 - 6. Magic Mountain Pkwy Bridge over Long Canyon Creek: No clearing required
 - 7. Lion Canyon Creek Crossing: 1 location, 25 feet upstream, 50-foot-wide crossing
 - 8. Commerce Center Drive over Middle Canyon Drainage: 2 locations, 25 feet upstream, 25 feet downstream, 50-foot-wide crossings
- C. Vegetation and debris may be removed by heavy equipment. Equipment shall be operated within areas marked with temporary fencing or staking.

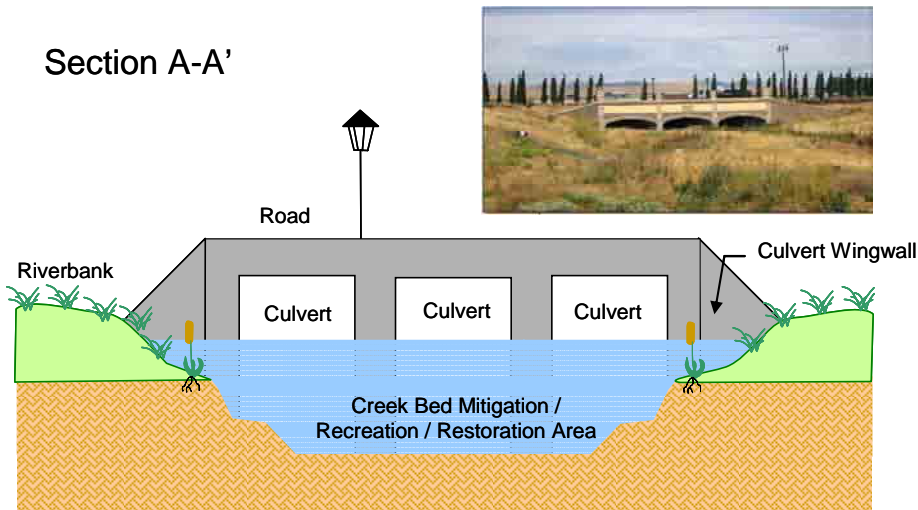
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Culvert



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FS-L5 Grade Control Structures – are buried vertical structures intended to prevent excessive channel bed erosion and must function pursuant to the intended design. Buried rock, concrete, plastic liners, or other materials may be used to create the vertical boundary. The structure typically extends beyond the wetted bank of the creek into upland areas.

- A. Visual inspections are recommended quarterly and after large storm events (> than the 10 year event).

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- B. Excessive bank erosion attributed to a point stabilizer will require that the structure be exposed and repaired, replaced or augmented as necessary to restore proper function.
- C. As these structures generally do not require maintenance and the areas where they will be located will be revegetated with native scrub and riparian habitats, in the event access is required for maintenance, it will be overland, with travel thru native habitats of up to 1,000 feet. Access points will be at the direction of a biologist and will avoid established native vegetation to the extent practicable.

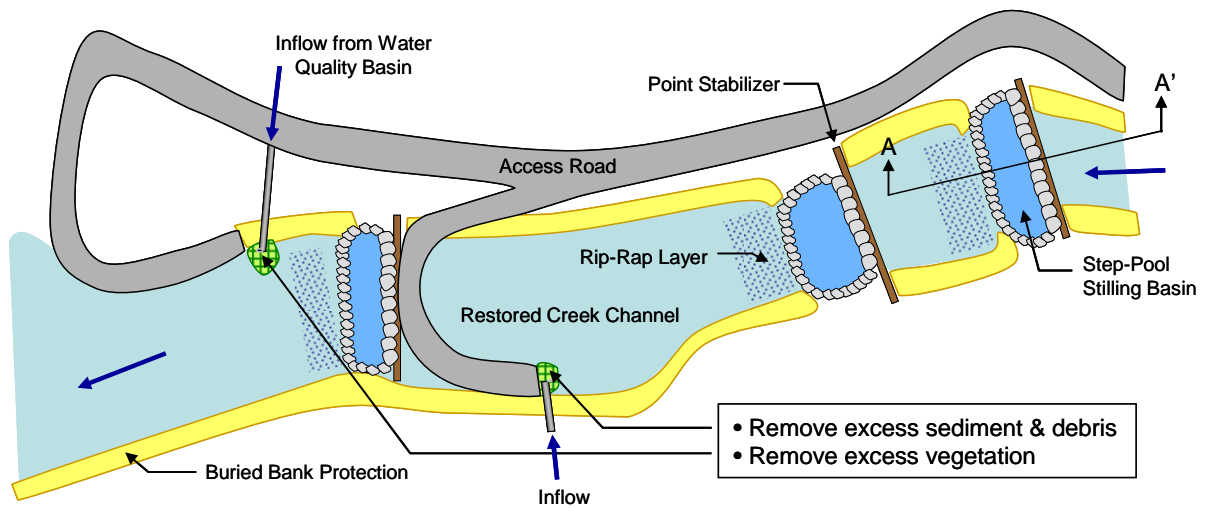
FS-L6 Drop Structures - These structures generally include the following components: buried point stabilizer, upstream flow spreader (either hard structure or vegetated strip), rigid armored crest (top), rigid or flexible armored chute, and an energy dissipating splash pool. Materials used to construct these structures may vary and include riprap, soil cement, and concrete. The height from crest to pool may be from 5 feet to 40 feet in vertical elevation change.

- A. Visual inspections are recommended after large storm events (> than the 10 year event).
- B. The structures are intended to be designed to be self clearing and cleaning, such that vegetation growth should not impede the function of the drop or pool and that sediment buildup is limited to the pool area where it will likely be mobilized in the next storm event.
 - 1. In the event vegetative growth threatens the integrity of the crest, chute or splash pool, such vegetation may be hand cut and removed.
 - 2. Sediment is to be removed when accumulation impedes function or causes nuisance conditions.
 - 3. The accumulation of coarse-grained sediment within the stilling basins of grade control structures or culverts can reduce the structures ability to provide adequate energy dissipation.
- C. These features will likely be within reasonable distance of a service road, therefore access will be limited to short distance travel over open scrub habitat, with temporary access impacts of 200 feet × 12 feet wide.

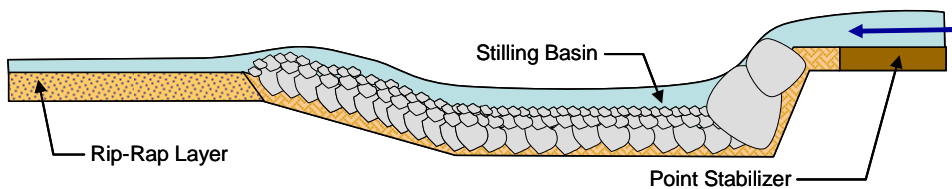
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Step-Pool Drop Structures



Section A-A'



FS-L7 Clearing of Creek Channel and Banks - General vegetation clearing will not be required within the banks of the Tributaries.

- A. Invasive species may require control and methods described in *General* conditions would apply.
- B. Clearing of excess sedimentation to enable proper flow characteristics, or to abate nuisance ponding conditions, may be required. In these instances the grade control structures, point stabilizers, and activities in the watershed should be evaluated for the causes of excess sedimentation and measures implemented to correct the problem.

FS-L8 As-built Status Report and Flood Event Inspections

- A. Immediately after construction the following activities shall be carried out:
 1. An as-built survey shall be conducted in accordance with Geomorphology Mitigation Measure GRR-7 from the Newhall Ranch RMDP-SCP EIS/EIR (survey shall include a full longitudinal profile of the channel thalweg (deepest point across the low flow channel), in

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addition to breaks of slope (top and bottom of low flow channel bank) and all in-channel structures).

2. Also in accordance with GRR-7, channel floodplain and valley toe shall be mapped into three classes of channel migration zone: “green zones” where channel migration is permissible, “yellow zones” which should trigger site inspections by a qualified engineer or geomorphologist leading to possible stabilization actions, and “red zones” which should trigger immediate repair and stabilization efforts.
- B. In years 1, 3, 5, 10, and 20 following construction and after a flow event exceeding the 10-year recurrence interval, the following activities shall be carried out:
1. A re-survey of the channel longitudinal profile and cross-sections using GPS (sub-meter accuracy or better). The longitudinal profile shall include a point on the thalweg every 50 feet where there are no visible steps or gradient changes in the channel profile, with additional points at any gradient changes. Where there are visible steps greater than 1 foot in height, these shall be captured at least with a survey point at the top and bottom of each step, and labeled as “knickpoints.” Top and base of both low flow channel banks shall also be surveyed every 50 feet to create a 5 point cross section (top of left bank, base of left bank, thalweg, base of right bank, top of right bank).
 2. The longitudinal profile shall be surveyed in more detail through in-channel structures such as step-pools, with particular attention to the scour pool geometry.
 3. A visual inspection of each step-pool structure shall be performed. The inspection shall look for evidence of soil piping or washing out between rocks, movement of rock out of position (e.g., into the scour pool), presence of visible geotextile or cut-off wall materials, evidence for outflanking of the structure, exposure of the base of the toe rock.
 4. The longitudinal profile shall be compared to the as-built profile and the as-built step-pool structures, so that scour relative to the depth of the rock armor can be noted.
 5. The low flow channel configuration shall be compared with the channel migration zones.
- C. After all flood events exceeding the 10-year recurrence interval flow, then a qualified geomorphologist or civil engineer shall conduct an inspection of the channel to evaluate for signs of erosion, “knickpoints,” flanking of structures, and piping or erosion around the project structures. If the results of the inspection indicate evidence of channel instability, then a more detailed site investigation shall be carried out to determine whether corrective action is required.

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FS-L9 **Flood Event Remedial Action Response:** The monitoring data described above will be used to determine whether remedial actions or more detailed studies are required. The criteria used to trigger more detailed investigations or maintenance/remedial actions will include (but will not be limited to) the following:

- A. If the low-flow channel migrates into the “yellow zone,” then a qualified geomorphologist or civil engineer shall conduct a more detailed investigation to determine the probability of further migration into a “red zone.” If channel migration towards a “red zone” is occurring at a rate less than 3 feet per year, then this would trigger more frequent site inspections. These inspections shall include annual inspections and inspections after every large flow event (5-year recurrence interval flow or greater) until the channel migration ceases or the channel migrates away from the “red zone.” If the rate of migration towards a “red zone” exceeds 3 feet per year or is within 10-feet of a “red zone,” then remedial actions will be implemented to stabilize the channel and restore channel functionality to comply with the basis of design criteria.
- B. If channel erosion exposes the toe protection of the step-pools, then a qualified geomorphologist or civil engineer shall conduct a more detailed investigation to and develop a remedial plan to stabilize the channel and structure (e.g. extend toe protection deeper, or use grade control downstream to restore the channel bed elevation at the step-pool).
- C. If channel erosion results in a decrease in the channel elevation of 1-foot or greater over a length of more than 50 feet or forms “knickpoints,” then a qualified geomorphologist or civil engineer shall conduct a more detailed investigation to determine whether the erosion/channel incision is likely to migrate and threaten the stability of project structures. If the results of the investigation indicate that the stability of the structures is in jeopardy, then a remedial plan will be developed to stabilize the channel and structure (e.g., keying in additional boulder ramps to the channel bed).
- D. If channel aggradation occurs such that step-pool structures are buried by sediment and/or the low-flow channel is no longer well-defined, then a qualified geomorphologist or civil engineer shall conduct a more detailed investigation to determine whether the aggradational trend is short-term or long-term. For the purposes of this monitoring program, “short term” means that the structure was not buried in the previous monitoring survey and “long term” means that the structure was buried during the previous monitoring survey. If aggradation appears to be short-term, then a pilot channel shall be cut through the original step-pool alignment to ensure that subsequent erosive flows do not flank the step-pools and jeopardize the channel stability. The pilot channel shall have the same dimensions as the original design channel. If aggradation appears to be long-term and the aggradation does not threaten the stability of the channel, then the channel shall be allowed to form itself (no sediment removal shall be carried out). However, if the aggradation appears to be long-term and potentially threatens the stability of the channel, then a remedial plan will be developed to stabilize the channel.

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- E. Remedial plans described above will require review and approval by CDFG and Corps prior to implementing the remedial actions.

FS-L10 **Control of Undesirable Geomorphic Response:** In addition to the measures identified above, potential remedial techniques to prevent, mitigate, abate, or control undesirable geomorphic response may be required to ensure proper function of flood control facilities. These measures will include (but will not be limited to) the following:

- A. Repair, maintenance or replacement of creek structures and development improvements.
- B. Stabilization (either partial or total) of eroded areas or failures of the creek slopes by removal and replacement with appropriate materials.
- C. Maintenance of erosion control measures that, where feasible, will consist of bio-engineering techniques.
- D. Placement of subsurface drainage devices (e.g., underdrains, or horizontal drilled drains).
- E. Slope correction (e.g., gradient change, slope trimming or contouring).
- F. Maintenance of additional surface ditches and/or ponds, sediment traps, or backfill of eroded channels. Concrete V-ditches may be added in some cases to function as low flow or nuisance water management systems to alleviate channel bed soil saturation issues or to minimize vegetative growth where growth impairs the proper function of a facility.

FS-L11 **Catastrophic Failures** - events related to full or partial failure of a structure will require, in some instances, immediate response and repair, sometimes during storm flow conditions.

- A. Emergency Work shall follow the notification procedures of the Agency permits.
- B. Extensive damage may require remaintenance or repair to creek bank stabilization (soil cement, gunite, grouted and ungrouted riprap, and other erosion control systems).
- C. Geotechnical Instrument Installation and Monitoring may be required to investigate and control unstable subsurface geologic conditions.
- D. If a Geological Hazard Abatement District (GHAD) is created, it will have a site specific Monitoring Program, including specific activities to be conducted to ensure safe geologic conditions in the project areas.
- E. Major landslides may require filling, regrading, stabilization and debris removal from the Tributaries and other stormwater control system features.
- F. Open Space Maintenance may be required after a damaging flood event or fire event to protect property and human health.

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- G. Revegetation efforts may be implemented for public safety, restoration, or aesthetic reasons within a damaged project area.

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3.0 Associated Documents

This manual was developed based on several related documents. Some sections have been included in their entirety while others have been paraphrased, amended or corrected to be specific to the RMDP features expected within the Newhall Ranch Specific Plan development. These documents include:

- Valencia Company Natural River Management Plan (FEIR/FEIS, NRMP Permits, 1998-1999)
- DRAFT County of Los Angeles Department of Public Works Stormwater Best Management Practice Design and Maintenance Manual (January 2007)
- Newhall Ranch Resource Management & Development Plan (RMDP) (October 2008)
- Newhall Ranch Sub-Regional Stormwater Management Plan (SWMP) (January 2008)

APPENDIX B

Resource Management and Development Plan – Mitigation Matrix

**APPENDIX B
Mitigation Matrix**

River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
X	X	X	X		Riparian Revegetation	BIO-12	An annual mitigation status report shall be submitted to the Corps and CDFG by April 1st of each year until satisfaction of success criteria identified in BIO-6. 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 BIO 11), 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.
X	X	X	X		Riparian Revegetation	BIO-13	The mitigation program shall incorporate applicable principles in the interagency Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks (FR 60 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.
X	X	X	X		Riparian Revegetation	BIO-14	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.
X	X	X	X		Riparian Revegetation	BIO-15	All native riparian trees with a three inch diameter at breast height (dbh) or greater in temporary construction areas shall be replaced using one or five gallon container plants, containered trees, or pole cuttings in the temporary construction areas in the winter following the construction disturbance. The mitigation ratios for temporary impacts to vegetation communities are described in BIO-2. The growth and survival of the replacement trees shall meet the performance standards specified in BIO 6. 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 BIO 6, BIO-7, BIO 11, and BIO 12.
X	X	X	X		Riparian Revegetation	BIO-16	Vegetation communities temporarily impacted by the proposed Project shall be revegetated as described in BIO-2. 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 six- 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 temporary mitigation areas. The applicant shall restore the temporary construction area per the success criteria and ratios described in BIO-1, BIO-2, and BIO-6. 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 (BIO-11 and BIO-12).
	X				Designation and Conservation Easement	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.

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Mitigation Matrix**

River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
	x				Designation and Conservation Easement	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.
	x				Long-term Management	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.
	x				Designation and Conservation Easement	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.
	x				Designation and Conservation Easement	4.6-41	The High Country SMA shall be offered for dedication in fee to a <i>joint powers authority</i> consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). The <i>joint powers authority</i> will have overall responsibility for recreation within and conservation of the High Country.
	x				Designation and Conservation Easement	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 <i>joint powers authority</i> for the purposes of recreation, maintenance, construction, conservation and related activities within the <i>High Country Special Management Area</i> .
			x		Designation and Conservation Easement	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.
	x				Management Requirements	4.6-29	Access to the High Country SMA will be limited to daytime use of the designated trail system.
	x				Management Requirements	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.
	x				Management Requirements	4.6-31	No hunting, fishing, or motor or trail bike riding shall be permitted.
	x				Management Requirements	4.6-32	The trail system shall be designed and constructed to minimize impacts on native habitats.
	x				Management Requirements	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.
	x				Management Requirements	BIO-69	The 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 that people and their animals stay on existing trails at all times. 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.
	x				Riparian Revegetation	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. 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).

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Mitigation Matrix**

River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
	x				Riparian Revegetation	4.6-26a (cont.)	Mitigation banking may be established as provided below. In addition, Salt Creek Canyon is a high priority area for riparian mitigation. 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.
x	x	x	x		Riparian Revegetation	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.
	x	x	x		Restoration	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.
	x				Long-term Management	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.
			x		Designation and Conservation Easement	BIO-62	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.
x	x	x	x		Coastal Scrub Preservation	BIO-20	Approximately 1,900 acres of coastal scrub shall be preserved on the Project site. The preservation of this vegetation type shall occur on site within the High Country SMA, the Salt Creek area, and the River Corridor SMA within the Specific Plan site. Irrevocable offers of dedication will be provided to CDFG for identified impact offsets in accordance with the Plan (BIO-1) using a "rough step" land dedication approach. Some of this habitat is recovering from wildfire and the expectation is that it will recover without active intervention. The functional values of any burned dedicated land areas shall be evaluated annually until such time that conditions are commensurate with the quality of the impacted habitat being mitigated. In the event that the functional value of this burned habitat has not recovered within five years of the dedication due to invasive species, to fire ecology, erosion, drought, or unforeseen events, then adaptive management pursuant to BIO-21 will be implemented for coastal scrub restoration.
x	x	x			Coastal Scrub Restoration	BIO-21	Supplemental restoration of coastal scrub shall be conducted as an adaptive management measure pursuant to BIO-20. 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 BIO-20, the applicant shall develop a Coastal Scrub Restoration Plan, subject to the approval of the 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 2 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. Annual monitoring reports will be prepared and submitted to CDFG and will be made available to the public to guide future mitigation planning. 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 vegetation survival or establishment in quantitative terms.

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Mitigation Matrix**

River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
x	x	x	x	x	Edge Effects	BIO-72	Plant palettes proposed for use on landscaped slopes, street medians, park sites, and other public landscaped and FMZ areas within 100 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, High Country SMA, Salt Creek area, and natural portions of the Open Areas). Container plants to be installed within public areas within 100 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 100 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 SCP. The current Cal IPC list can be obtained from the Cal IPC website (http://www.calipc.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).
	x				Mitigation Banking	4.6-28	Mitigation banking activities for riparian habitats in the High Country SMA 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.
			x		Mitigation Banking	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. (1) River Corridor SMA Mitigation Requirements, including: Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16; (2) High Country SMA Mitigation Requirements, including: Mitigation Measures 4.6-27 and 4.6-29 through 4.6-42; and (3) Mitigation Banking: Mitigation Measure 4.6-16.
x					Oak Resources	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.
x	x	x	x		Oak Resources	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.
	x		x		Oak Tree Replacement	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.
x	x	x	x		Oak Tree Replacement	BIO-22	a. Newhall shall prepare an Oak Resource Management Plan, to be submitted for approval to CDFG and County of Los Angeles, and implemented upon approval. The Plan shall identify areas suitable for oak woodland enhancement and creation. The Plan shall distinguish between oaks to be planted in compliance with CLAOTO (BIO-22b) and the additional measures required by this EIR/EIS (BIO-2 for woodlands in jurisdictional streambeds; and BIO-22c and 22d for upland areas). The Oak Resource Management Plan shall include measures to create or enhance woodlands as follows: (1) locations and acreages of mitigation sites where woodland creation or enhancement will;
							(2) a description of proposed cover and number of native trees, shrubs and grasses per acre to be established. This description shall be based on comparable intact woodlands in the area of impact or elsewhere within the RMDP planning area, consistent with conditions of the proposed mitigation site; (3) site preparation measures to include (as appropriate) topsoil treatment, soil decompaction, erosion control, weed grow/kill cycle, or as otherwise approved by the agencies; (4) methods for the removal of non native plants (e.g., mowing, weeding, raking, herbicide application, or burning);
							(5) a plant palette listing all species, including sizes, planting densities, or seeding rates, to be based on target vegetation; (6) the source of all plant propagules (seed, potted nursery stock, etc) and the quantity and species of seed or potted stock of all plants to be introduced or planted into the mitigation areas; (7) temporary irrigation, protection from herbivores, fertilizer, weeding, etc; (8) 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 5 years total and no less than 2 years after removal of irrigation (if any);

**APPENDIX B
Mitigation Matrix**

River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
x	x	x	x		Oak Tree Replacement	BIO-22 (Cont)	<p>(9) where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the mitigation areas shall be implemented as needed; (10) tree protection standards to be implemented for individual trees or woodlands adjacent to development activity; (11) success criteria as stated in BIO-22b and BIO-22d; and (12) contingency measures, such as replanting, erosion control, irrigation system repair, or understory re-seeding, to be implemented if habitat improvement / restoration efforts do not meet the success criteria stated in the plan.</p> <p>b. To meet the minimum mitigation criteria set forth in CLAOTO, Newhall will replace impacted oaks (measuring 8- inches in diameter, or greater, or with a combined diameter of 12- inches for multi-stem oaks) at a ratio of 2:1. Additionally, oaks meeting the criteria for classification as a Heritage Tree (defined by CLAOTO as “any oak tree measuring 36 inches or more in diameter”) will be replaced at a ratio of 10:1.</p>
							<p>Whether they are planted in dedicated open space areas or developed areas, replacement oak trees planted in conformance with CLAOTO shall adhere to the following standards:</p> <ol style="list-style-type: none"> 1. Replacement oak trees shall be exclusively indigenous species and shall be at least a 15-gallon size specimen and measure at least 1 inch in diameter 1 foot above the base, unless otherwise approved by the County Forester. 2. Replacement trees shall be properly cared for and maintained for a period of two years and replaced by Newhall if mortality occurs within that period. 3. Replacement planting shall be conducted in phases as impacts occur. Alternatively, Newhall may choose to plant replacement trees in open space areas prior to realization of Project-related impacts (pre-mitigation). Any pre-mitigation shall adhere to the standards outlined herein.
							<p>4. Following completion of the two-year maintenance period the County Forester shall provide final authorization that CLAOTO standards have been met.</p> <p>c. In addition to the CLAOTO requirements (BIO-22b, above), this EIS/EIR requires replacement of oak trees at the ratios in the table below for trees lost or impacted in uplands. These trees are in addition to the CLAOTO requirement described above. These additional trees may also be incorporated into woodland habitat enhancement or creation, as described above.</p> <p>Additional replacement ratios are provided in Table 4.5-70.</p> <p>Table 4.5-70 Additional BIO-22c Oak Tree Replacement Ratios</p> <p>Trunk Diameter* Mitigation Ratio</p> <p>8 – 35 0.5:1 36 + 2.5:1</p>
							<p>d. Newhall will mitigate lost oak woodlands occurring on upland sites (i.e., outside CDFG / Corps jurisdictional stream channels) by creating or enhancing oak woodlands in the Salt Creek and High Country areas. At minimum, Newhall Land will mitigate woodland habitat at a 1:1 ratio through creation of new oak woodlands. As an alternative, Newhall may choose to enhance, improve and manage existing degraded woodland areas at a minimum 2:1 ratio for lost woodland acreage.</p>
							<p>For woodland enhancement or replacement, dominant species (coast live oak or valley oak) and planting densities will be based on mitigation site suitability. All plant propagules, including acorns or tree cuttings and all seed or potted nursery stock of oaks or other species shall be collected within a five mile radius and within 1000 feet elevation of the restoration site.</p> <p>The woodland creation or enhancement sites shall be monitored for oak tree survival and vigor and other habitat values including species diversity and wildlife use. The replacement or enhancement sites will be considered “complete” upon meeting all of the following success criteria, or as otherwise approved by CDFG. Any replacement oak trees planted in woodlands for conformance with CLAOTO will also be subject to CLAOTO performance criteria (BIO-22b).</p>
							<ol style="list-style-type: none"> 1. Regardless of the date of initial woodland creation or enhancement, each site must have been without active manipulation by irrigation, planting, or re-seeding for a minimum of three years prior to evaluation for successful completion. 2. The percent cover and species richness of restored or enhanced native vegetation shall be evaluated based on target vegetation described in the woodland creation or enhancement plan. 3. Densities (numbers / acre) of surviving, healthy oak shall be within 5% of the plan target density. Cover and species richness of other native shrubs shall reach 50% of the cover and species richness described for the “target” woodland. Optimal woodland densities and acorn planting quantities, by oak woodland type, are presented in Table 4.5-71.

**APPENDIX B
Mitigation Matrix**

River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
X	X	X	X		Oak Tree Replacement	BIO-22 (Cont)	Table 4.5-71 Optimal Woodland Densities and Acorn Planting Quantities, by Oak Woodland Type Woodland Type Average Existing Woodland Density (trees per acre) Target Density for Newhall (trees per acre) Coast live oak woodland 22 50 Mixed oak woodland 19 40 Valley oak woodland 16 25
							4. Non-native grass cover shall not exceed the "target" woodland non-native grass cover, and other non-native species shall not exceed 10% cover at any time. Any species listed on the California State Agricultural list, or Cal-IPC list of noxious weeds will not be present on the revegetation site at the time that project success is determined.
X	X	X	X		Southern California Black Walnut and Mainland Cherry	BIO-88	Any southern California black walnut and mainland cherry trees or shrubs outside riparian areas greater than one inch dbh shall be replaced in the ratio of at least two to one. 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 one inch in diameter one foot above the base.
X	X	X	X		Riparian Revegetation	BIO-1	Mitigation Measures SP 4.6 1 through SP 4.6 16 specify requirements for riparian mitigation conducted in the High Country SMA, Salt Creek area, and Open Area. The RMDP includes requirements 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 Newhall Land that provides an outline of mitigation to offset impacts described in the RMDP. The CMIP demonstrates the feasibility of creating the required mitigation acreage from RMDP project impacts (see BIO 2). Detailed wetlands 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 of 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.
							Individual project 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 BIO 2 and BIO 10. 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. BIO 4 describes that the functions and values will be assessed for the riparian areas that will be removed, and BIO 2 and BIO 10 describe the replacement ratios for the habitats that will be impacted.
X	X	X	X		Riparian Revegetation	BIO-10	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 EIR, 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 or annual mitigation status report submittal. Exotic plant species control will be credited at an acreage equivalent to the percentage of exotic vegetation at the restoration site. By example: a 10-acre site occupied by 10% exotics species will be credited for one acre of mitigation. The exotic weed control location will be documented on the annual mitigation status report and mitigation accounting form. If "in lieu fees" are paid, it will be documented on the annual mitigation status report and mitigation accounting form, along with a reporting of the status of exotic vegetation treatment.
X	X	X	X		Riparian Revegetation	BIO-11	To provide an accurate and reliable accounting system for mitigation, the applicant utilizing the RMDP shall file a mitigation accounting form annually with the Corps and CDFG by April 1. This form shall document the amount of vegetation planted during the past year, any "in lieu fees" paid for exotic invasive plant species control, the status of all mitigation credits to date, and any credits subtracted by projects implemented during the past year. The applicant, utilizing the RMDP, shall keep detailed records and provide a mitigation accounting form to the Corps and CDFG annually for review for the life of the permit, or until all credits have been used up for individual projects, and success criteria have been met. The Corps and CDFG shall provide concurrence within 60 days, including written verification for all restoration and weed removal sites that meet the specified performance criteria. Adequate proof of delivery of applicable reports would be required as well as subsequent notice to the Agencies requesting surety release.

APPENDIX B Mitigation Matrix

River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure																																																																																													
X	X	X	X		Riparian Revegetation	BIO-2	<p>The permanent removal of CDFG jurisdictional riparian habitats, in the river and tributaries shall be replaced by creating riparian habitats of similar functions and values (see BIO 4) on the Project site, or as allowed under BIO 10. Riparian habitat meeting success criteria (see BIO-6) two years in advance of the removal of riparian habitat at the construction site shall be in kind and at a 1:1 replacement ratio (except as indicated below) If replacement riparian habitat cannot meet the success criteria two years in advance of the Project, the ratios listed below in Table 4.5-68 will apply.</p> <div style="text-align: center;"> <p>Table 4.5-68 CDFG Jurisdictional Permanent Impacts Mitigation Ratios</p> <p>Ratios Listed by Vegetation Types & Quality</p> <table border="1"> <thead> <tr> <th rowspan="2">Vegetation Community</th> <th rowspan="2">Veg Code / ID</th> <th>HIGH Reach</th> <th>MEDIUM Reach</th> <th>LOW Reach</th> </tr> <tr> <th>Value* (Mit. Ratio)</th> <th>Value** (Mit. Ratio)</th> <th>Value** (Mit. Ratio)</th> </tr> </thead> <tbody> <tr> <td>Southern Cottonwood-Willow Riparian Forrest</td> <td>SCWRF</td> <td>4:1</td> <td>3:1</td> <td>2:1</td> </tr> <tr> <td>Southern Willow Scrub</td> <td>SWS</td> <td>3:1</td> <td>2.5:1</td> <td>2:1</td> </tr> <tr> <td>Oak Woodland (Coast Live, Valley)</td> <td>CLOW / VOW</td> <td>3:1</td> <td>2.5:1</td> <td>2:1</td> </tr> <tr> <td>Big Sagebrush Scrub</td> <td>BSS</td> <td>2.5:1</td> <td>2:1</td> <td>1.5:1</td> </tr> <tr> <td>Mexican Elderberry Scrub</td> <td>MES</td> <td>2.5:1</td> <td>2:1</td> <td>1.5:1</td> </tr> <tr> <td>Cismontane Alkaline Marsh</td> <td>CAM</td> <td>2.5:1</td> <td>2:1</td> <td>1.5:1</td> </tr> <tr> <td>Coastal and Valley Fresh Water Marsh</td> <td>CFWM</td> <td>2:1</td> <td>1.5:1</td> <td>1:1</td> </tr> <tr> <td>Mulefat Scrub</td> <td>MFS</td> <td>2:1</td> <td>1.5:1</td> <td>1.25:1</td> </tr> <tr> <td>Arrowweed Scrub</td> <td>AWS</td> <td>2:1</td> <td>1.5:1</td> <td>1:1</td> </tr> <tr> <td>California Sagebrush scrub, and CSB dominated habitats</td> <td>CSB, CSB-A, -BS, -CB, -CHP, and -PS</td> <td>2:1</td> <td>1.5:1</td> <td>1:1</td> </tr> <tr> <td>Herbaceous Wetland</td> <td>HW</td> <td>1.5:1</td> <td>1.25:1</td> <td>1:1</td> </tr> <tr> <td>River Wash, emergent veg.</td> <td>RW</td> <td>1.5:1</td> <td>1.25:1</td> <td>1:1</td> </tr> <tr> <td>Chaparral, Chamise Chaparral</td> <td>CHP, CC</td> <td>1.5:1</td> <td>1.25:1</td> <td>1:1</td> </tr> <tr> <td>Coyote Brush Scrub</td> <td>CYS</td> <td>1.5:1</td> <td>1.25:1</td> <td>1:1</td> </tr> <tr> <td>Eriodictyon Scrub</td> <td>EDS</td> <td>1.5:1</td> <td>1.25:1</td> <td>1:1</td> </tr> <tr> <td>California Grass Lands</td> <td>CGL</td> <td>1:1</td> <td>1:1</td> <td>1:1</td> </tr> <tr> <td>Agricultural / Disturbed / Developed</td> <td>AGR / DL / DEV</td> <td>1:1</td> <td>1:1</td> <td>1:1</td> </tr> </tbody> </table> <p>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 the Newhall Ranch RMDP 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 the Newhall Ranch RMDP EIS-EIR *** 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 the Newhall Ranch RMDP EIS-EIR Ratios for Permanent Impacts to all classifications: Mitigation established prior to disturbance: 1:1 ratio, mitigation initiated <2 years after disturbance shall follow ratios in table above; mitigation initiated 2 to 5 years after disturbance shall add 0.5 to each value in the table above; and over 5 years, 1.0 is added to each value in the table above. (For example, initiation of mitigation of mulefat scrub 3 years after disturbance for a high habitat impact would be a ratio of 2.5:1, instead of 2:1 if initiated within 2 years of disturbance or 3:1 if initiated more than 5 years after disturbance.) Ratios for Temporary Impacts to all classifications: Disturbance period < 2 yrs, 1:1, 2 to 5 yrs, 1.5:1, over 5 yrs., 2:1, except for removal of Southern Cottonwood and Oak Woodlands, which shall be mitigated at 2:1 for High, 1.5:1 for Medium and 1:1 for Low for all periods (except for pre-mitigated, which is 1:1). Exotic/Invasive Species Removal, followed by restoration/revegetation, may be used to offset impacts above. Mitigation shall be credited at an acreage equivalent to the percentage of exotic vegetation at the restoration site. This means, for example, if a ten acre area is occupied by 10% exotic species, restoration will be credited for 1 acre of impact. As appropriate and authorized by CDFG, reduced percentage credits may be applied for invasive removal with passive restoration (weeding and documentation of natural recruitment only).</p> </div>	Vegetation Community	Veg Code / ID	HIGH Reach	MEDIUM Reach	LOW Reach	Value* (Mit. Ratio)	Value** (Mit. Ratio)	Value** (Mit. Ratio)	Southern Cottonwood-Willow Riparian Forrest	SCWRF	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
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X	X	X	X		Riparian Revegetation	BIO-3	<p>Creation of new vegetation communities and restoration of impacted vegetation communities shall occur at suitable sites in or adjacent to the watercourses or in areas where bank stabilization would occur. The highest priority vegetation community restoration sites are to be new riverbed and tributary areas created, or disturbed sites impacted, during the excavation of uplands for bank protection/stabilization activities. 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.</p>																																																																																													
							<p>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 (BIO 12). 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 as part of the annual mitigation status report and mitigation accounting form agency review. Each revegetation 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.</p>																																																																																													

**APPENDIX B
Mitigation Matrix**

River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure																																
X	X	X	X		Riparian Revegetation	BIO-4	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 4.5-69 for example recommended plant species for the River Corridor SMA 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.																																
							<p>Table 4.5-69 Potential Plant Species for Vegetation Community Restoration in the River Corridor SMA and Tributaries</p> <table border="1"> <tr><td colspan="2">Trees</td></tr> <tr><td>Red willow</td><td><i>Salix laevigata</i></td></tr> <tr><td>Arroyo willow</td><td><i>Salix lasiolepis</i></td></tr> <tr><td>Fremont cottonwood</td><td><i>Populus fremontii</i></td></tr> <tr><td>Black cottonwood</td><td><i>Populus balsamifera ssp. Trichocarpa</i></td></tr> <tr><td>Western sycamore</td><td><i>Platanus racemosa</i></td></tr> <tr><td colspan="2">Shrubs</td></tr> <tr><td>Mulefat</td><td><i>Baccharis salicifolia</i></td></tr> <tr><td>Sandbar willow</td><td><i>Salix exigua</i></td></tr> <tr><td>Arrow weed</td><td><i>Pluchea sericea</i></td></tr> <tr><td colspan="2">Herbs</td></tr> <tr><td>Mugwort</td><td><i>Artemisia douglasiana</i></td></tr> <tr><td>Western ragweed</td><td><i>Ambrosia psilostachya</i></td></tr> <tr><td>Cattail</td><td><i>Typha latifolia</i></td></tr> <tr><td>Bulrush</td><td><i>Scirpus americanus</i></td></tr> <tr><td>Prairie bulrush</td><td><i>Scirpus maritimus</i></td></tr> </table> <p><small>Note: This is a recommended list. Other species may be found suitable based on site conditions and state and federal permits.</small></p>	Trees		Red willow	<i>Salix laevigata</i>	Arroyo willow	<i>Salix lasiolepis</i>	Fremont cottonwood	<i>Populus fremontii</i>	Black cottonwood	<i>Populus balsamifera ssp. Trichocarpa</i>	Western sycamore	<i>Platanus racemosa</i>	Shrubs		Mulefat	<i>Baccharis salicifolia</i>	Sandbar willow	<i>Salix exigua</i>	Arrow weed	<i>Pluchea sericea</i>	Herbs		Mugwort	<i>Artemisia douglasiana</i>	Western ragweed	<i>Ambrosia psilostachya</i>	Cattail	<i>Typha latifolia</i>	Bulrush	<i>Scirpus americanus</i>	Prairie bulrush	<i>Scirpus maritimus</i>
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Prairie bulrush	<i>Scirpus maritimus</i>																																						
X	X	X	X		Riparian Revegetation	BIO-5	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.																																
X	X	X	X		Riparian Revegetation	BIO-6	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% 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% absolute cover through the term of the restoration. 5. Giant reed (<i>Arundo donax</i>), tamarisk (<i>Tamarix ramosissima</i>), perennial pepperweed (<i>Lepidium latifolium</i>), tree of heaven (<i>Ailanthus altissimus</i>), pampas grass (<i>Cortaderia selloana</i>) 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 jurisdictional waters of the United States. If the compensatory mitigation site cannot meet or exceed the baseline functional score of the impact area in jurisdictional waters of the United States, additional mitigation area would be required to compensate for the functional loss.																																
X	X	X	X		Riparian Revegetation	BIO-7	If at any time prior to Agency 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 in BIO-6. Should a second act of God occur prior to Agency approval of the restoration area, the applicant shall coordinate with the Agencies and develop an alternative restoration strategy(ies) to meet success requirements. This may include restoration elsewhere in the River corridor or tributaries.																																

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River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
X	X	X	X		Riparian Revegetation	BIO-8	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.
X	X	X	X		Riparian Revegetation	BIO-9	As an alternative to the creation/restoration of vegetation communities to compensate for permanent removal of riparian vegetation communities, in the Santa Clara River, the applicant may control invasive exotic plant species within the Upper Santa Clara River Sub Watershed for a portion of the Santa Clara River mitigation required under BIO-2. The applicant may perform this work or contribute "in lieu fees" to the Upper Santa Clara River Arundo/Tamarisk Removal Program to perform this work, if available. The weed control sites shall be selected in a coordinated, logical manner to ensure that giant reed and other invasive weeds are controlled to improve and expand wildlife and endangered species habitat; reduce flooding, erosion, and fire hazards; improve water quality; and potentially increase stream flow/water quantity in the RMDP watercourses. Removal areas shall be kept free of exotic plant species for five years after initial treatment. In areas where extensive exotic removal occurs, revegetation with native plants or natural recruitment shall be documented.
X	X	X	X		Special-status plant species restoration	BIO-40	The Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan (Dudek 2007I) 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 or High Country areas, spineflower preserves, or River Corridor) 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 and Salt Creek areas identified in the Draft Newhall Ranch Mitigation Feasibility Study (Dudek 2007A); (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 2 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% 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). Newhall 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 and Salt Creek area and two acres occur within the River Corridor SMA 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.

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River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
x			x		Special-status plant species restoration	BIO-76	For any individual project, or any phase of an individual project, to be located where undescribed everlasting plants may occur (i.e., the sites identified in this EIR/EIS and any new sites discovered by preconstruction surveys, per BIO-75, or other future field surveys), Newhall 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% absolute cover through the term of the restoration. c. Giant reed (<i>Arundo donax</i>), tamarisk (<i>Tamarix ramosissima</i>), perennial pepperweed (<i>Lepidium latifolium</i>), tree of heaven (<i>Ailanthus altissimus</i>), pampas grass (<i>Cortaderia selloana</i>) 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.
x			x		Management Requirements	BIO-77	A Middle Canyon Spring Habitat Management Plan will be developed that details the measures to be implemented to maintain the populations of the undescribed snail and sunflower species. The plan shall be subject to the approval of CDFG and implemented by Newhall Land prior to disturbance within 100 feet of flowing water in Middle Canyon Creek and/or 200 feet of Middle Canyon Spring. The plan shall include the following elements: (1) collection of data on existing site conditions; (2) construction monitoring program and a post development monitoring program; (3) threshold parameters that activate adaptive management measures across a series of potential future scenarios, including water quality and water quantity scenarios, including the potential use of infiltration wells, if these should become necessary to assure water quantity; (4) measures to exclude unauthorized entry into the spring; and (5) contingency measures in the event that management efforts are not successful. Plan elements are further described below: Pre-development data collection: Upon approval of the proposed Project, data collection for Middle Canyon Spring and its biotic community will be initiated. Site assessments will be completed by biologists, and as needed with surveyors, engineers, geologists, and hydrogeologists, to collect the following data, subject to limitations on disturbances: (1) inventory of plant species within and adjacent to the spring; (2) percent native and non-native plant cover and percent bare ground within and adjacent to the spring using relevé method, a visual estimation technique to classify and map large vegetation areas in a limited amount of time (see below); (3) structural description of vegetation communities within each relevé plot; (4) GPS mapping of all trees within core spring area and adjacent 100 feet; (5) GPS mapping of special-status sunflower; (6) census special-status sunflower stem numbers; (7) description of any disturbances to the spring area; (8) establish permanent photo points; (9) photo documentation of seasonal changes in the spring; (10) survey and mapping of hydrologic and topographic features in the area adjacent to the spring; (11) population data on the undescribed snail, including distribution, abundance, density, size classes and seasonal activity, and microhabitat descriptions; (12) invertebrates survey; (13) amphibian survey; (14) characterization of algal and microbial components; (15) survey of spring inlet and outlets for comparison to piezometer water elevations from monitoring points P-1MS, P-2MS and P-8B; (16) flow rates of spring outlets at a frequency to record diurnal fluctuations; (17) determine approximate evapotranspiration (ET) rates of the vegetation community; (18) collect piezometer water elevation data from P-1MS, P-2MS and P-8B at a frequency suitable to determine seasonal variations in ground water elevations; (19) continuously record surface water temperature and depth profile at a spring monitoring location and piezometers P-1MS and P-2MS; (20) Water quality/chemistry data in the spring and the three nearby piezometers (P-1MS, P-2MS, and P-8B) (dissolved oxygen [DO, spring only], salinity, pH and alkalinity, nitrates, sulfates, relevant cations and anions [bicarbonate, calcium, chloride, magnesium, nitrate as NO ₃ , potassium, sodium], total dissolved solids [TDS], turbidity [spring only], and suspended solids [spring only]); (21) sample soils along the margin of the spring and determine soil classification types; and (22) As available, compile a record of historical photographs and aerial photographs of the spring and adjacent areas. Vegetation data will be collected using a non-invasive monitoring method and analyzed in accordance with the California Native Plant Society (CNPS) Relevé Protocol (2004), which provides for a visual assessment of vegetation communities instead of the more intrusive point-intercept transect methods. This will ensure that collection of vegetation data will limit damage to the spring vegetation and limit the establishment of trails during monitoring visits.

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River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
X			X		Management Requirements	BIO-77 (cont.)	<p>Additionally for two years following approval of the proposed Project, the applicant, in consultation with CDFG, shall provide for the collection of seed from the undescribed sunflower species by a qualified research institution for long-term seed bank preservation or other conservation purposes. Further, to facilitate additional research of the species, applicant shall allow CDFG access to the spring complex for future conservation purposes.</p> <p>Prior to establishing the post-development long-term thresholds discussed below, hydrologic and biologic data will be evaluated, and any increase or decrease greater than 10% in monitoring parameters 2, 11 through 16, and 18 through 20, described above, will serve as an interim threshold and will trigger adaptive management measures, such as those described below. Should these thresholds be triggered, CDFG will be notified within 24 hours to determine what actions, if necessary, will be implemented. Biological data collection will contribute to the establishment of habitat criteria necessary for sustaining the undescribed snail and the undescribed sunflower.</p>
							<p>Construction monitoring program and data collection</p> <p>Data collection described above will continue during construction near the spring complex (Commerce Center Bridge and development of Middle Canyon (Mission Village planning area). Monitors will be on site daily when work is conducted within 100 feet of flowing water in Middle Canyon Creek and/or 200 feet of the spring complex, and weekly during mass grading of Middle Canyon, to observe and report on construction activities. Monitors will ensure that appropriate avoidance and minimization measures are implemented, such as the installation and maintenance of perimeter construction fencing and storm water controls, silt fences and sand bags. During any period where dewatering occurs within 100 feet of flowing water in Middle Canyon Creek and/or 200 feet of the spring complex, biological and hydrologic parameters will be monitored daily.</p>
							<p>No dewatering activities shall occur in the spring complex. Discharge of any dewatering waters, nuisance irrigation flows, water quality basin, subdrain, backdrain, or toe drain flows shall be directed away from the spring. Post-development data collection</p> <p>Biological and hydrologic monitoring will continue post-development. For the first 2 years after build-out of Middle Canyon (Mission Village), post-construction monitoring will be as frequent as during the pre-construction period. After the 2 year period, data collected and the frequency of monitoring may be adjusted, in consultation with CDFG. The post-development monitoring program will continue to collect data on trends and changes in the populations of the undescribed snail and sunflower, document any shift in spring habitat composition, or any changes in conditions that would potentially impact the spring system, as detailed above. Analysis and comparison of collected data will establish long-term thresholds. These thresholds will serve to trigger adaptive management measures during the post-development period.</p>
							<p>Adaptive Management</p> <p>As dictated by the thresholds discussed above, the following measures may be implemented after consultation with CDFG, in the event a threshold is exceeded. These actions may include, but are not limited to: (1) the addition of supplemental water via an existing deep Saugus well in Middle Canyon; (2) removal of infiltration water by diverting flow from upstream water quality features; (3) implement invasive species control; and (4) implement additional controls to prevent unauthorized access to the spring complex.</p>
							<p>Monitoring Report</p> <p>Annual monitoring reports will be prepared to summarize the status of the undescribed snail and sunflower and hydrology within Middle Canyon Spring. These reports will be used to evaluate the significance of impacts and the efficacy of mitigation measures. Reports will include results of biological surveys, flow data, groundwater modeling results, water quality data, mapping of the spring features and biota, photo-documentation from permanent photo points, analysis of field and lab data, conclusions based on ongoing monitoring efforts, and recommendations for future management actions. Annual monitoring reports will be submitted to CDFG and Corps.</p>
X			X		Management Requirements	BIO-74	<p>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.</p>
							<p>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.</p> <p>a. As described in BIO-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.</p>
	X	X			Designation and Conservation Easement	4.6-36	<p>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.</p>

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River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
X					Designation and Conservation Easement	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.
X					Designation and Conservation Easement	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 <i>conservation and public access easement</i> 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.
X					Designation and Conservation Easement	4.6-23	The River Corridor SMA <i>Conservation and Public Access Easement</i> 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.
X					Designation and Conservation Easement	4.6-24	The River Corridor SMA <i>Conservation and Public Access Easement</i> 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.
X					Designation and Conservation Easement	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.
X					Designation and Conservation Easement	4.6-26	Prior to the recordation of the River Corridor SMA <i>Conservation and Public Access Easement</i> 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 <i>joint powers authority</i> consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members).
X					Management Requirements	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.
X					Management Requirements	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).
X					Management Requirements	4.6-19	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.

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River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
X					Management Requirements	4.6-19 (cont.)	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.
X					Management Requirements	BIO-73	Permanent fencing shall be installed along all River Corridor SMA 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.
X	X	X	X	X	Management Requirements	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.
X	X	X	X	X	Management Requirements	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.
X	X	X	X	X	Management Requirements	4.6-51	In order to enhance the habitat value of plant communities which require fuel modification, fire retardant plant species containing habitat value may be planted within the fuel modification zone. Typical plant species suitable for fuel modification zones are indicated in Specific Plan Table 2.6-5 of the Resource Management Plan. Fuel modification zones adjacent to SMAs and Open Areas containing habitat of high value such as oak woodland and savannas shall utilize a more restrictive plant list which shall be reviewed by the County Forester.
X	X	X	X	X	Management Requirements	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 nonsmoking areas; and (d) water availability pursuant to the County Fire Department requirements.
X					Restoration	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.
X					Riparian Revegetation	4.6-10	Contingency plans and appropriate remedial measures shall also be outlined in the revegetation plan.
X					Riparian Revegetation	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 (<i>Arundo donax</i>) and tamarisk (<i>Tamarix</i> sp.).
X					Riparian Revegetation	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.
X					Riparian Revegetation	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).
X					Riparian Revegetation	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.
X					Riparian Revegetation	4.6-15	Removal of non-native species such as giant cane (<i>Arundo donax</i>), salt cedar or tamarisk (<i>Tamarix</i> sp.), tree tobacco (<i>Nicotiana glauca</i>), castor bean (<i>Ricinus communis</i>), 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.
X					Restoration	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.

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River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
x					Riparian Revegetation	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.
x					Riparian Revegetation	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.
x					Riparian Revegetation	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.
x					Riparian Revegetation	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.
					Riparian Revegetation	4.6-6	The final revegetation plan 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.
x					Restoration	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.
x					Riparian Revegetation	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.
x					Riparian Revegetation	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.
x					Riparian Revegetation	4.6-9	Monitoring reports for the mitigation site shall be reviewed by the permitting state and/or federal agency.
		x			Management Requirements	BIO-19	The 1,518 acre Salt Creek area shall be offered for 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 Plan (BIO 1). 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 BIO-59. 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.
				x	Management and Further Assessments	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.

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				x	Management and Further Assessments	4.6-79 (cont.)	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.
				x	Edge Effects	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.
				x	Edge Effects	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).

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				x	Edge Effects	BIO-35	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, Newhall Land, and CDFG.
				x	Edge Effects	BIO-36	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 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 four feet above grade and include wood doweled split rail fencing, exterior grade heavy duty vinyl three railed fencing, three strand non barbed wire, or similar. Fencing installed adjacent to native vegetation communities and natural open space areas will allow for the passage of animals.
				x	Edge Effects	BIO-37	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 Mitigation Measure SP 4.6 68).
							Signs shall indicate that fuel modification and management work is not allowed within the spineflower preserve or buffer areas. Signage at any trailheads near spineflower preserves shall describe the spineflower preserve, its purpose, and the applicable restrictions regarding spineflower conservation. 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.
				x	Establishment and Oversight of Preserves	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.

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River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
				x	Establishment and Oversight of Preserves	4.6-66 (cont.)	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.
				x	Establishment and Oversight of Preserves	BIO-23	A final Spineflower Conservation Plan (SCP) shall be adopted and implemented after approval by CDFG, including the permanent dedication of preserves (see draft in Appendix 1.0). 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 the CDFG and contain appropriate funding and restrictions to help ensure that the spineflower preserve lands are protected in perpetuity.
				x	Establishment and Oversight of Preserves	BIO-24	The spineflower preserves shall be managed by Newhall Land and their preserve manager(s) and/or natural lands management organization(s) (NLMO). Newhall Land shall submit a statement of qualifications for their proposed preserve manager(s)/NLMO(s) for approval by CDFG. Newhall Land will fund in full all implementation of spineflower preserve management as described in the SCP and all mitigation measures listed in this document.
				x	Hydrology	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.
				x	Hydrology	BIO-38	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: <ul style="list-style-type: none"> • Storm drains must not impact spineflower either directly or indirectly; • Storm drains may only daylight at the bottom of slopes within spineflower preserve areas; and • Under no circumstances shall storm drains daylight onto steeply sloped areas or other areas that would cause erosion.
				x	Hydrology (Long-term Management)	BIO-39	Any surface water entering a spineflower preserve area from development areas is required to pass through BMP measures, which will be described in the SWPPP. Storm drain outlets must contain 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 Mitigation Measure SP 4.6 69). Storm drains and permanent structural BMPs shall be designed by a licensed civil engineer. Requirements of BIO 29 and BIO 38, 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.
				x	Management and Further Assessments	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 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.

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				x	Management and Further Assessments	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.
				x	Management and Further Assessments	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.
				x	Management and Further Assessments	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.
				x	Management and Further Assessments	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).

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				x	Management and Further Assessments	4.6-77 (cont.)	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.
				x	Management and Further Assessments	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.

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River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
				X	Management and Further Assessments	4.6-78 (cont.)	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.
				X	Management and Further Assessments	BIO-26	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. 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 Newhall 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% maximum threshold (see BIO-25).
							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 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.
				X	Management and Further Assessments	BIO-34	Plant palettes proposed for use on landscaped slopes, street medians, park sites, and other public landscaped and FMZ areas within 100 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 website (http://www.cal ipc.org/ip/inventory/index.php).
				X	Management and Further Assessments	BIO-25	Disturbed portions (i.e., agricultural lands, disturbed lands, and developed lands) of the spineflower preserves, or buffers will be restored through revegetation with native plant communities. In summary, areas that have greater than 30% relative cover by weeds will be restored to have relative cover comparable to that of existing occupied spineflower habitat. 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.
X	X	X	X		Riparian Revegetation/Coastal Scrub Preservation	BIO-55	a. As a supplement to BIO-1 through BIO-16, 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, mule fat 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 the CDFG or USFWS.
							Temporary habitat loss of foraging/nesting in habitat 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 BIO-1 through BIO-16. 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 BIO-2, which ever 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.
X	X	X	X	X	Edge Effects	4.6-56	All lighting along the perimeter of natural areas shall be downcast luminaries with light patterns directed away from natural areas.

**APPENDIX B
Mitigation Matrix**

River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
X	X	X	X		Management Requirements	BIO-63	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, and 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, 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 JPA managing the River Corridor SMA, High Country SMA, 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.
X	X	X	X		Management Requirements	BIO-80	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. After five years, bi-annual monitoring shall occur up to 50 years to determine if additional control is necessary. Monitoring will be conducted within sentinel locations along the River Corridor SMA 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.
				X	Edge Effects	BIO-85	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 preserves, including the buffers; (2) ensuring that landscape container plants installed within 200 feet of spineflower preserves are ant free prior to installation; (3) maintaining natural hydrological conditions in the spineflower preserves, including the buffers, through project design features; and (4) using drought resistant plants in FMZs and minimizing irrigation to the extent feasible.
X	X	X	X	X	Management Requirements	BIO-87	Following the completion and occupancy of 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 50 year period.
X					Invertebrates	BIO-77	A Middle Canyon Spring Habitat Management Plan will be developed that details the measures to be implemented to maintain the populations of the undescribed snail and sunflower species. The plan shall be subject to the approval of CDFG and implemented by Newhall Land prior to disturbance within 100 feet of flowing water in Middle Canyon Creek and/or 200 feet of Middle Canyon Spring. The plan shall include the following elements: (1) collection of data on existing site conditions; (2) construction monitoring program and a post development monitoring program; (3) threshold parameters that activate adaptive management measures across a series of potential future scenarios, including water quality and water quantity scenarios, including the potential use of infiltration wells, if these should become necessary to assure water quantity; (4) measures to exclude unauthorized entry into the spring; and (5) contingency measures in the event that management efforts are not successful. Plan elements are further described below:
							Pre-development data collection: Upon approval of the proposed Project, data collection for Middle Canyon Spring and its biotic community will be initiated. Site assessments will be completed by biologists, and as needed with surveyors, engineers, geologists, and hydrogeologists, to collect the following data, subject to limitations on disturbances: (1) inventory of plant species within and adjacent to the spring; (2) percent native and non-native plant cover and percent bare ground within and adjacent to the spring using relevé method, a visual estimation technique to classify and map large vegetation areas in a limited amount of time (see below); (3) structural description of vegetation communities within each relevé plot; (4) GPS mapping of all trees within core spring area and adjacent 100 feet; (5) GPS mapping of special-status sunflower;
							(6) census special-status sunflower stem numbers; (7) description of any disturbances to the spring area; (8) establish permanent photo points; (9) photo documentation of seasonal changes in the spring; (10) survey and mapping of hydrologic and topographic features in the area adjacent to the spring; (11) population data on the undescribed snail, including distribution, abundance, density, size classes and seasonal activity, and microhabitat descriptions; (12) invertebrates survey; (13) amphibian survey; (14) characterization of algal and microbial components; (15) survey of spring inlet and outlets for comparison to piezometer water elevations from monitoring points P-1MS, P-2MS and P-8B; (16) flow rates of spring outlets at a frequency to record diurnal fluctuations; (17) determine approximate evapotranspiration (ET) rates of the vegetation community;

**APPENDIX B
Mitigation Matrix**

River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
x					Invertebrates	BIO-77 (cont.)	(18) collect piezometer water elevation data from P-1MS, P-2MS and P-8B at a frequency suitable to determine seasonal variations in ground water elevations; (19) continuously record surface water temperature and depth profile at a spring monitoring location and piezometers P-1MS and P-2MS; (20) Water quality/chemistry data in the spring and the three nearby piezometers (P-1MS, P-2MS, and P-8B) (dissolved oxygen [DO, spring only], salinity, pH and alkalinity, nitrates, sulfates, relevant cations and anions [bicarbonate, calcium, chloride, magnesium, nitrate as NO ₃ , potassium, sodium], total dissolved solids [TDS], turbidity [spring only], and suspended solids [spring only]); (21) sample soils along the margin of the spring and determine soil classification types; and
							(22) As available, compile a record of historical photographs and aerial photographs of the spring and adjacent areas. Vegetation data will be collected using a non-invasive monitoring method and analyzed in accordance with the California Native Plant Society (CNPS) Relevé Protocol (2004), which provides for a visual assessment of vegetation communities instead of the more intrusive point-intercept transect methods. This will ensure that collection of vegetation data will limit damage to the spring vegetation and limit the establishment of trails during monitoring visits. Additionally for two years following approval of the proposed Project, the applicant, in consultation with CDFG, shall provide for the collection of seed from the undescribed sunflower species by a qualified research institution for long-term seed bank preservation or other conservation purposes. Further, to facilitate additional research of the species, applicant shall allow CDFG access to the spring complex for future conservation purposes.
							Prior to establishing the post-development long-term thresholds discussed below, hydrologic and biologic data will be evaluated, and any increase or decrease greater than 10% in monitoring parameters 2, 11 through 16, and 18 through 20, described above, will serve as an interim threshold and will trigger adaptive management measures, such as those described below. Should these thresholds be triggered, CDFG will be notified within 24 hours to determine what actions, if necessary, will be implemented. Biological data collection will contribute to the establishment of habitat criteria necessary for sustaining the undescribed snail and the undescribed sunflower.
							Construction monitoring program and data collection Data collection described above will continue during construction near the spring complex (Commerce Center Bridge and development of Middle Canyon (Mission Village planning area). Monitors will be on site daily when work is conducted within 100 feet of flowing water in Middle Canyon Creek and/or 200 feet of the spring complex, and weekly during mass grading of Middle Canyon, to observe and report on construction activities. Monitors will ensure that appropriate avoidance and minimization measures are implemented, such as the installation and maintenance of perimeter construction fencing and storm water controls, silt fences and sand bags.
							During any period where dewatering occurs within 100 feet of flowing water in Middle Canyon Creek and/or 200 feet of the spring complex, biological and hydrologic parameters will be monitored daily. No dewatering activities shall occur in the spring complex. Discharge of any dewatering waters, nuisance irrigation flows, water quality basin, subdrain, backdrain, or toe drain flows shall be directed away from the spring.
							Post-development data collection Biological and hydrologic monitoring will continue post-development. For the first 2 years after build-out of Middle Canyon (Mission Village), post-construction monitoring will be as frequent as during the pre-construction period. After the 2 year period, data collected and the frequency of monitoring may be adjusted, in consultation with CDFG. The post-development monitoring program will continue to collect data on trends and changes in the populations of the undescribed snail and sunflower, document any shift in spring habitat composition, or any changes in conditions that would potentially impact the spring system, as detailed above. Analysis and comparison of collected data will establish long-term thresholds. These thresholds will serve to trigger adaptive management measures during the post-development period.
							Adaptive Management As dictated by the thresholds discussed above, the following measures may be implemented after consultation with CDFG, in the event a threshold is exceeded. These actions may include, but are not limited to: (1) the addition of supplemental water via an existing deep Saugus well in Middle Canyon; (2) removal of infiltration water by diverting flow from upstream water quality features; (3) implement invasive species control; and (4) implement additional controls to prevent unauthorized access to the spring complex.
							Monitoring Report Annual monitoring reports will be prepared to summarize the status of the undescribed snail and sunflower and hydrology within Middle Canyon Spring. These reports will be used to evaluate the significance of impacts and the efficacy of mitigation measures. Reports will include results of biological surveys, flow data, groundwater modeling results, water quality data, mapping of the spring features and biota, photo-documentation from permanent photo points, analysis of field and lab data, conclusions based on ongoing monitoring efforts, and recommendations for future management actions. Annual monitoring reports will be submitted to CDFG and Corps.

**APPENDIX B
Mitigation Matrix**

River Corridor	High Country	Salt Creek	Open Area	Spineflower Preserves	Topic	Number	Measure
			x		Special-status butterfly species restoration	BIO-79	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.
x			x		Management Requirements	BIO-64	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. Preparation of the CC&Rs for each tract map shall include language that prohibits the use of anticoagulant rodenticides in the Project site.
x	x	x	x		Management Requirements	BIO-78	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 5 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 1st and concluding on/about November 1st (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 the CDFG and USFWS protocol. In the event that trapping is terminated after the first few years, subsequent phases of the RMDP development will require initiation of trapping surveys, to determine whether re-establishment of the trapping program is necessary.
	x	x			Management Requirements	BIO-81	The installation of new, or relocation of existing, utility poles and phone and cell towers shall be coordinated with the CDFG where located in the High Country SMA and Salt Creek area. The applicant SCE shall install utility poles, phone, and cell towers in conformance with APLIC standards for collision-reducing techniques as outlined in "Mitigating Bird Collisions with Power Lines: The State of the Art in 2006 (APLIC, 2006).
			x		Special-status butterfly species restoration	BIO-66	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 BIO-6 and BIO-7.
x	x	x	x		Management Requirements	BIO-68	Any special status species bat day roost sites found by a qualified biologist during pre construction surveys conducted per BIO 61, 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.
			x		Management Requirements	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.

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APPENDIX C

*Resource Management and Development Plan –
Species Preserve Report*

Newhall Special Status Species Preserve Report

Plants

Island mountain mahogany

(Cercocarpus betuloides var. blancheae)

Status **Habitat Description**
 Federal: Island mountain-mahogany is found primarily on dry rocky slopes and washes at elevations between 30 and 600 meters AMSL . It is typically found in chaparral and closed-cone coniferous forests.
 State:

CNPS: 4.3

Other Status: Blooming Period: Febuary-May

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
1,367.1	3.9	124.6	1,495.7	Burned California Sagebrush/Undifferentiated Chaparral Burned Chamise Chaparral Burned Undifferentiated Chaparral California Sagebrush Scrub/Undifferentiated Chaparral Chamise - Hoaryleaf Ceanothus Chaparral Chamise Chaparral Disturbed California Sagebrush Scrub /Chaparral Hoaryleaf Ceanothus Chaparral Scrub Oak Chaparral Undifferentiated Chaparral Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral

Plants

Mainland cherry

(Prunus ilicifolia ssp. ilicifolia)

Status **Habitat Description**

Federal: This species is found within foothill woodland, chaparral, and coastal scrub communities below 1,600 meters AMSL.

State:

CNPS:

Other Status: Protected under CLAOTO & CEQA

Blooming Period: March-May

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
41.5	197.8	7.4	246.6	Big Sagebrush Scrub River Wash

Plants

Oak-leaved nemophila

(Nemophila parviflora var. quercifolia)

Status	Habitat Description
Federal:	Oak-leaved nemophila is an understory plant occurring at elevations between 700 to 2,200 meters AMSL.
State:	It is found primarily in forests on slopes, and in ravines. The annual herb inhabits cismontane woodlands and lower montane coniferous forests.
CNPS: 4.3	
Other Status:	Blooming Period: May-June

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
866.6	14.7	379.9	1,261.3

Newhall Habitats Associated with this Species

- Coast Live Oak Woodland
- Mixed Oak Woodland
- Mixed Oak/Grass
- Southern Coast Live Oak Riparian Forest
- Valley Oak Woodland
- Valley Oak/Grass

Plants

Parish's big sagebrush

(Artemisia tridentata ssp. parishii)

Status

Habitat Description

Federal: Parish's big sagebrush co-occurs with the more common big sagebrush (*Artemisia tridentata* ssp. tridentata) subspecies.

State:

CNPS:

Other Status: LA county special-status

Blooming Period:

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
8.5	1.3	0.0	9.8	Big Sagebrush Scrub

Plants

Peirson's morning-glory

(*Calystegia peirsonii*)

Status	Habitat Description
Federal:	This species occurs rocky slopes at elevations between 30 and 1,500 meters AMSL. It is typically found in chaparral, coastal scrub, chenopod scrub, cismontane woodland, lower montane coniferous forest, and grasslands.
State:	
CNPS: 4.2	
Other Status:	Blooming Period: April-June

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
3,133.2	60.8	941.7	4,135.7

Newhall Habitats Associated with this Species

- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Purple Needlegrass
- Undifferentiated Chaparral
- Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral

Plants

Southwestern spinyrush

(Juncus acutus ssp. leopoldii)

Status

Habitat Description

Federal: Southwestern spinyrush generally occurs at elevations lower than 900 meters AMSL and is found primarily on coastal dunes with mesic soils, meadows and alkaline seeps, and marshes and coastal salt swamps

State:

CNPS: 4.2

Other Status: Blooming Period: May-June

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
1.4	181.1	0.0	182.5

**Newhall Habitats Associated
with this Species**

- Bulrush-Cattail Wetland
- Coastal And Valley Freshwater Marsh
- Herbaceous Wetlands

Wildlife - Amphibians

Arroyo toad

(Bufo californicus)

Status

Federal: FE

State: CSC

Habitat Description

Restricted to rivers with shallow, gravelly 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. Habitat not quantified.

**Newhall Habitats Associated
with this Species**

Wildlife - Amphibians

California red-legged frog

(Rana aurora draytonii)

Status	Habitat Description
Federal: FT	Water sources such as ponds, lakes, reservoirs, streams, and adjacent riparian woodlands.
State: CSC	

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
40.0	512.6	10.5	563.0	Alluvial Scrub Bulrush-Cattail Wetland Coastal And Valley Freshwater Marsh Disturbed Southern Cottonwood/Willow Riparian Forest Disturbed Southern Willow Scrub Open Water River Wash Southern Coast Live Oak Riparian Forest Southern Cottonwood/Willow Riparian Forest Southern Willow Scrub Southern Willow Scrub - CDFG Only Tamarisk Scrub Tamarisk Scrub-CDFG Only

Wildlife - Amphibians

Western spadefoot toad

(Spea hammondi)

Status	Habitat Description
Federal: --	Open areas in lowland grasslands, chaparral and pine-oak woodlands; requires temporary rain pools that last approximately three weeks. Habitat not quantified.
State: CSC	

**Newhall Habitats Associated
with this Species**

Wildlife - Birds

Allen's hummingbird (nesting)

(Selasphorus sasin)

Status	Habitat Description
Federal: USBC/BC State: ***	Breeds in coastal scrub, valley foothill hardwood, and valley foothill riparian habitats. Migrates in woodland and scrub habitats.

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,186.6	380.3	1,011.6	3,578.5

Newhall Habitats Associated with this Species

- Big Sagebrush Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Coast Live Oak Woodland
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Mixed Oak Woodland
- Mixed Oak/Grass
- Riparian Scrub
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood/Willow Riparian Forest
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only
- Valley Oak Woodland
- Valley Oak/Grass

Wildlife - Birds

American peregrine falcon

(Falco peregrinus anatum)

Status	Habitat Description
Federal: BCC, Deli State: CE, CFP	Nests near wetlands, lakes, rivers, or other water bodies, on cliffs, banks, dunes, and other human-made structures.

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
528.1	384.4	286.9	1,199.4

Newhall Habitats Associated with this Species

Agriculture	Foraging
Bulrush-Cattail Wetland	Foraging
California Annual Grassland	Foraging
Cismontane Alkali Marsh	Foraging
Cismontane Alkali Marsh-CDFG Only	Foraging
Disturbed Southern Cottonwood/Willow Riparian Forest	Nesting/Breeding
Open Water	Foraging
Purple Needlegrass	Foraging
Southern Coast Live Oak Riparian Forest	Nesting/Breeding
Southern Cottonwood/Willow Riparian Forest	Nesting/Breeding

Foraging

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
527.3	82.6	286.9	896.8

Nesting

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
0.8	301.8	0.0	302.6

Wildlife - Birds

Bell's sage sparrow

(Amphispiza belli belli)

Status	Habitat Description
Federal: BCC	Coastal scrub and chaparral.
State: CSC	

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
1,361.9	1.4	124.6	1,487.9

**Newhall Habitats Associated
with this Species**

- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Hoaryleaf Ceanothus Chaparral
- Scrub Oak Chaparral
- Undifferentiated Chaparral
- Undifferentiated Chaparral/Hoaryleaf Ceanothus
Chaparral

Wildlife - Birds

Black-chinned sparrow

(*Spizella atrogularis*)

Status	Habitat Description
Federal:	The black-chinned sparrow occupies arid brushlands and chaparral. The species may use open chaparral (Garrett and Dunn 1981), but usually favors moderately dense but not overgrown chaparral of mixed species (Tenney 1997, Shuford 1993). Brush is usually too dense to easily walk through (NatureServe Explorer 2007). Vegetation is typically 1 to 2 m (3.3 to 6.6 ft) tall and often broken by rocky outcrops and scattered large shrubs or trees. In California, the black-chinned sparrow occurs in mixed chaparral, chamise-redshank chaparral, sagebrush (<i>Artemisia californica</i>), and in the understory of sparse pinyon-juniper, juniper (<i>Juniperus</i> sp.), and other conifer habitats. In San Diego and Los Angeles Counties, the black-chinned sparrow prefers chamise (<i>Adenostoma fasciculatum</i>) mixed with manzanita (<i>Arctostaphylos</i> spp.), our Lord's candle (<i>Yucca whipplei</i>), scrub oak (<i>Quercus berberidifolia</i>), and ceanothus (<i>Ceanothus</i> spp.). Slopes are usually south-facing and vary from gentle to steep (NatureServe Explorer 2007, Tenney 1997). The species is found from sea level to nearly 2,700 m (8,860 ft) in elevation (NatureServe Explorer 2007).
State:	

Preserve Acres for Species			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek	Acres	
2,679.0	53.7	753.8	3,486.5	Big Sagebrush Scrub Brittlebush Drought Deciduous Scrub Burned California Sagebrush Scrub Burned California Sagebrush/Undifferentiated Chaparral Burned Chamise Chaparral Burned Undifferentiated Chaparral California Buckwheat - Big Sagebrush Scrub California Sagebrush - Deerweed California Sagebrush Scrub California Sagebrush Scrub - Artemisia California Sagebrush Scrub - Black Sage California Sagebrush Scrub - California Buckwheat California Sagebrush Scrub - Encelia farinosa California Sagebrush Scrub - Purple Sage California Sagebrush Scrub/Undifferentiated Chaparral Chamise - Hoaryleaf Ceanothus Chaparral Chamise Chaparral Coyote Brush Scrub Disturbed California Sagebrush Scrub Disturbed California Sagebrush Scrub - Purple Sage Disturbed California Sagebrush Scrub /Chaparral Eriodictyon Scrub Scrub Oak Chaparral Undifferentiated Chaparral Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral

Wildlife - Birds

Black-crowned night heron (rookery)

(Nycticorax nycticorax)

Status **Habitat Description**
 Federal: -- Riparian; nests in dense-foliaged trees and dense emergent wetlands.
 State: ***

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
20.2	327.0	22.6	369.9

**Newhall Habitats Associated
with this Species**

Bulrush-Cattail Wetland	Both
Coastal And Valley Freshwater Marsh	Both
Mulefat Scrub	Both
Mulefat-CDFG Only	Both
Riparian Scrub	Nesting/Breeding
Southern Coast Live Oak Riparian Forest	Nesting/Breeding
Southern Cottonwood/Willow Riparian Forest	Nesting/Breeding
Southern Willow Scrub	Nesting/Breeding
Southern Willow Scrub - CDFG Only	Nesting/Breeding

Foraging

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
15.2	13.2	20.1	48.5

Nesting

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
20.2	327.0	22.6	369.9

Wildlife - Birds

California condor

(Gymnogyps californianus)

Status

Federal: FE, BCC

State: CE

Habitat Description

Forages over wide areas of open rangelands, roosts on cliffs and in large trees and snags.

Note: Habitat for this species were not modeled using the Access databae.

**Newhall Habitats Associated
with this Species**

Wildlife - Birds

California horned lark

(Eremophila alpestris actia)

Status	Habitat Description
Federal: --	Grasslands, disturbed areas, agriculture fields, and beach areas.
State: CSC	

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
571.3	99.5	324.3	995.1	Agriculture California Annual Grassland Disturbed Land Purple Needlegrass

Wildlife - Birds

Chipping sparrow (nesting)

(Spizella passerine)

Status **Habitat Description**
Federal: Open woodlands with sparse or low shrubs.
State: ***

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
870.8	26.2	382.4	1,279.4

**Newhall Habitats Associated
with this Species**

- Coast Live Oak Woodland
- Disturbed Riparian Scrub
- Disturbed Southern Willow Scrub
- Mixed Oak Woodland
- Mixed Oak/Grass
- Riparian Scrub
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only
- Valley Oak Woodland
- Valley Oak/Grass

Wildlife - Birds

Coastal California gnatcatcher

(Polioptila californica californica)

Status

Federal: FT, USBC
 State: CSC

Habitat Description

Various sage scrub communities, often dominated by California sage and buckwheat; generally avoids nesting in areas with a slope of greater than 40 percent, and typically less than 820 feet in elevation.

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
1,306.5	51.0	629.2	1,986.6

**Newhall Habitats Associated
with this Species**

- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral

Wildlife - Birds

Cooper's hawk

(*Accipiter cooperii*)

Status **Habitat Description**
 Federal: -- Dense stands of live oak, riparian woodlands, or other woodland habitats near water.
 State: CSC

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,198.7	380.3	1,033.3	3,612.3

Foraging

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,198.7	380.3	1,033.3	3,612.3

Nesting

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
878.4	327.9	402.8	1,609.2

Newhall Habitats Associated with this Species

Big Sagebrush Scrub	Foraging
Brittlebush Drought Deciduous Scrub	Foraging
Burned California Sagebrush Scrub	Foraging
Burned California Sagebrush/Undifferentiated Chaparral	Foraging
California Buckwheat - Big Sagebrush Scrub	Foraging
California Sagebrush - Deerweed	Foraging
California Sagebrush Scrub	Foraging
California Sagebrush Scrub - Artemisia	Foraging
California Sagebrush Scrub - Black Sage	Foraging
California Sagebrush Scrub - California Buckwheat	Foraging
California Sagebrush Scrub - Encelia farinosa	Foraging
California Sagebrush Scrub - Purple Sage	Foraging
California Sagebrush Scrub/Undifferentiated Chaparral	Foraging
California Walnut Woodland	Both
Coast Live Oak Woodland	Both
Coyote Brush Scrub	Foraging
Disturbed California Sagebrush Scrub	Foraging
Disturbed California Sagebrush Scrub - Purple Sage	Foraging
Disturbed California Sagebrush Scrub /Chaparral	Foraging
Disturbed Mexican Elderberry Scrub	Foraging
Disturbed Southern Cottonwood/Willow Riparian Forest	Both
Disturbed Southern Willow Scrub	Both
Eriodictyon Scrub	Foraging
Mexican Elderberry	Foraging
Mexican Elderberry Woodland	Foraging
Mexican Elderberry-CDFG Only	Foraging
Mixed Oak Woodland	Both
Southern Coast Live Oak Riparian Forest	Both
Southern Cottonwood/Willow Riparian Forest	Both
Southern Willow Scrub	Both
Southern Willow Scrub - CDFG Only	Both
Valley Oak Woodland	Both
Valley Oak/Grass	Both

Wildlife - Birds

Costa's hummingbird (nesting)

(Calypte costae)

Status	Habitat Description
Federal: USBC State: ***	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.

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,701.5	380.8	778.2	3,860.5

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Eriodictyon Scrub
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry-CDFG Only
- Mulefat Scrub
- Mulefat-CDFG Only
- Riparian Scrub
- Scrub Oak Chaparral
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood/Willow Riparian Forest
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only
- Undifferentiated Chaparral
- Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral

Wildlife - Birds

Ferruginous Hawk

(Buteo regalis)

Status	Habitat Description
Federal: BCC	Forages in open grasslands, agriculture, sagebrush flats, and desert scrub.
State: WL	

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
1,881.6	160.2	954.5	2,996.3

**Newhall Habitats Associated
with this Species**

- Agriculture
- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed Land
- Purple Needlegrass

Wildlife - Birds

Golden eagle

(*Aquila chrysaetos*)

Status	Habitat Description
Federal: BCC	Nests on cliff-walled canyons and large trees in open areas. Forage in open shrublands, agriculture, and grassland.
State: CSC, CFP	

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,617.1	142.8	1,308.4	4,068.4

Foraging

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,617.1	142.8	1,308.4	4,068.4

Nesting

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
819.6	14.1	356.0	1,189.6

Newhall Habitats Associated with this Species

Agriculture	Foraging
Alluvial Scrub	Foraging
Arrow Weed Scrub	Foraging
Big Sagebrush Scrub	Foraging
Brittlebush Drought Deciduous Scrub	Foraging
Burned California Sagebrush Scrub	Foraging
California Annual Grassland	Foraging
California Buckwheat - Big Sagebrush Scrub	Foraging
California Sagebrush - Deerweed	Foraging
California Sagebrush Scrub	Foraging
California Sagebrush Scrub - Artemisia	Foraging
California Sagebrush Scrub - California Buckwheat	Foraging
California Sagebrush Scrub - Encelia farinosa	Foraging
Coast Live Oak Woodland	Both
Disturbed California Sagebrush Scrub	Foraging
Disturbed California Sagebrush Scrub - Purple Sage	Foraging
Disturbed California Sagebrush Scrub /Chaparral	Foraging
Disturbed Land	Foraging
Eriodictyon Scrub	Foraging
Mixed Oak Woodland	Both
Mixed Oak/Grass	Both
Purple Needlegrass	Foraging
Valley Oak/Grass	Both

Wildlife - Birds

Grasshopper sparrow

(Ammodramus savannarum)

Status	Habitat Description
Federal: -- State: ***	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.

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
462.9	8.5	187.9	659.2	California Annual Grassland Purple Needlegrass

Wildlife - Birds

Hermit warbler

(Dendroica occidentalis)

Status	Habitat Description
Federal: --	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
State: ***	hardwood in winter.

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
873.4	14.7	400.3	1,288.4	California Walnut Woodland Coast Live Oak Woodland Mixed Oak Woodland Mixed Oak/Grass Southern Coast Live Oak Riparian Forest Valley Oak Woodland Valley Oak/Grass

Wildlife - Birds

Lawrence's goldfinch

(*Carduelis lawrencei*)

Status	Habitat Description
Federal: BCC, US State: ***	Valley foothill hardwood, valley foothill hardwood-conifer; and, in S. CA., desert riparian, palm oasis, pinyon-juniper and lower montane habitats.

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
3,248.2	381.7	1,022.8	4,652.7

Foraging

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
3,248.2	381.7	1,022.8	4,652.7

Nesting

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
571.6	327.9	269.0	1,168.5

Newhall Habitats Associated with this Species

Big Sagebrush Scrub	Foraging
Burned California Sagebrush Scrub	Foraging
Burned California Sagebrush/Undifferentiated Chaparral	Foraging
Burned Chamise Chaparral	Foraging
Burned Undifferentiated Chaparral	Foraging
California Buckwheat - Big Sagebrush Scrub	Foraging
California Sagebrush - Deerweed	Foraging
California Sagebrush Scrub	Foraging
California Sagebrush Scrub - Artemisia	Foraging
California Sagebrush Scrub - Black Sage	Foraging
California Sagebrush Scrub - California Buckwheat	Foraging
California Sagebrush Scrub - Encelia farinosa	Foraging
California Sagebrush Scrub - Purple Sage	Foraging
California Sagebrush Scrub/Undifferentiated Chaparral	Foraging
Chamise - Hoaryleaf Ceanothus Chaparral	Foraging
Chamise Chaparral	Foraging
Coast Live Oak Woodland	Both
Disturbed California Sagebrush Scrub	Foraging
Disturbed California Sagebrush Scrub - Purple Sage	Foraging
Disturbed California Sagebrush Scrub /Chaparral	Foraging
Disturbed Riparian Scrub	Both
Disturbed Southern Cottonwood/Willow Riparian Forest	Both
Disturbed Southern Willow Scrub	Both
Hoaryleaf Ceanothus Chaparral	Foraging
Mixed Oak Woodland	Both
Riparian Scrub	Both
Southern Coast Live Oak Riparian Forest	Both
Southern Cottonwood/Willow Riparian Forest	Both
Southern Willow Scrub	Both
Southern Willow Scrub - CDFG Only	Both
Undifferentiated Chaparral	Foraging
Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral	Foraging
Valley Oak Woodland	Both

Wildlife - Birds

Least Bell's vireo

(Vireo bellii pusillus)

Status

Federal: FE, BCC,
State: CE

Habitat Description

Riparian vegetation with extensive willows below 2,000 ft. Habitat not quantified.

**Newhall Habitats Associated
with this Species**

Wildlife - Birds

Loggerhead shrike

(*Lanius ludovicianus*)

Status	Habitat Description
Federal: BCC	Grasslands and open shrublands with scattered shrubs, trees, fences, or other perches.
State: CSC	

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,111.7	538.9	1,450.8	6,101.3

Newhall Habitats Associated with this Species

- Agriculture
- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Eriodictyon Scrub
- Herbaceous Wetlands
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland
- Mixed Oak/Grass
- Purple Needlegrass
- River Wash
- Scrub Oak Chaparral
- Undifferentiated Chaparral
- Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral
- Valley Oak Woodland
- Valley Oak/Grass

Wildlife - Birds

Long-eared owl

(Asio otus)

Status	Habitat Description
Federal: --	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.
State: CSC	

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
1,394.3	410.6	669.3	2,474.1

Newhall Habitats Associated with this Species

Agriculture	Foraging
California Annual Grassland	Foraging
Coast Live Oak Woodland	Nesting/Breeding
Disturbed Southern Cottonwood/Willow Riparian Forest	Nesting/Breeding
Mixed Oak Woodland	Nesting/Breeding
Mixed Oak/Grass	Both
Purple Needlegrass	Foraging
Southern Coast Live Oak Riparian Forest	Nesting/Breeding
Southern Cottonwood/Willow Riparian Forest	Nesting/Breeding
Southern Willow Scrub	Nesting/Breeding
Valley Oak Woodland	Nesting/Breeding
Valley Oak/Grass	Foraging

Foraging

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
822.7	82.6	400.3	1,305.6

Nesting

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
571.6	327.9	269.0	1,168.5

Wildlife - Birds

Merlin

(Falco columbarius)

Status **Habitat Description**
 Federal: -- Coastlines, wetlands, woodlands, agricultural fields, and grasslands.
 State: CSC

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
1,500.2	829.1	757.0	3,086.2	Agriculture Alluvial Scrub Arrow Weed Scrub California Annual Grassland California Walnut Woodland Coast Live Oak Woodland Disturbed Land Disturbed Mexican Elderberry Scrub Disturbed Mulefat Disturbed Riparian Scrub Disturbed Southern Cottonwood/Willow Riparian Forest Disturbed Southern Willow Scrub Herbaceous Wetlands Herbaceous Wetlands-CDFG Only Mexican Elderberry Mexican Elderberry Woodland Mexican Elderberry-CDFG Only Mixed Oak Woodland Mixed Oak/Grass Mulefat Scrub Mulefat-CDFG Only Purple Needlegrass Riparian Scrub River Wash Southern Coast Live Oak Riparian Forest Southern Cottonwood/Willow Riparian Forest Southern Willow Scrub Southern Willow Scrub - CDFG Only Valley Oak Woodland Valley Oak/Grass

Wildlife - Birds

Northern harrier

(*Circus cyaneus*)

Status **Habitat Description**
 Federal: -- Coastal salt marsh, freshwater marsh, grasslands, and agricultural fields.
 State: CSC

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
3,005.1	523.4	1,153.4	4,681.9

Foraging

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
3,005.1	523.4	1,153.4	4,681.9

Nesting

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
827.4	263.7	400.3	1,491.4

Newhall Habitats Associated with this Species

Agriculture	Both
Alluvial Scrub	Foraging
Arrow Weed Scrub	Foraging
Big Sagebrush Scrub	Foraging
Bulrush-Cattail Wetland	Both
Burned California Sagebrush Scrub	Foraging
Burned California Sagebrush/Undifferentiated Chaparral	Foraging
Burned Chamise Chaparral	Foraging
Burned Undifferentiated Chaparral	Foraging
California Annual Grassland	Both
California Buckwheat - Big Sagebrush Scrub	Foraging
California Sagebrush - Deerweed	Foraging
California Sagebrush Scrub	Foraging
California Sagebrush Scrub - Artemisia	Foraging
California Sagebrush Scrub - Black Sage	Foraging
California Sagebrush Scrub - California Buckwheat	Foraging
California Sagebrush Scrub - Encelia farinosa	Foraging
California Sagebrush Scrub - Purple Sage	Foraging
California Sagebrush Scrub/Undifferentiated Chaparral	Foraging
Cismontane Alkali Marsh	Both
Cismontane Alkali Marsh-CDFG Only	Both
Coastal And Valley Freshwater Marsh	Both
Coyote Brush Scrub	Foraging
Disturbed California Sagebrush Scrub	Foraging
Disturbed California Sagebrush Scrub - Purple Sage	Foraging
Disturbed California Sagebrush Scrub /Chaparral	Foraging
Herbaceous Wetlands	Both
Mixed Oak/Grass	Both
Purple Needlegrass	Both
River Wash	Foraging
Valley Oak/Grass	Both

Wildlife - Birds

Nuttall's woodpecker (nesting)

(Picoides nuttallii)

Status	Habitat Description
Federal: USBC	Lower elevation riparian deciduous and oak habitats
State: ***	

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
885.4	341.1	402.5	1,629.1

**Newhall Habitats Associated
with this Species**

- Coast Live Oak Woodland
- Mixed Oak Woodland
- Mixed Oak/Grass
- Mulefat Scrub
- Mulefat-CDFG Only
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood/Willow Riparian Forest
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only
- Valley Oak Woodland
- Valley Oak/Grass

Wildlife - Birds

Oak titmouse (nesting)

(Baeolophus inornatus)

Status	Habitat Description
Federal: USBC	Montane hardwood-conifer, montane hardwood, blue oak, valley oak and coastal oak woodlands, montane and valley foothill riparian habitats.
State: ***	

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
867.5	315.9	379.9	1,563.2	Coast Live Oak Woodland Mixed Oak Woodland Mixed Oak/Grass Southern Coast Live Oak Riparian Forest Southern Cottonwood/Willow Riparian Forest Valley Oak Woodland Valley Oak/Grass

Wildlife - Birds

Prairie falcon

(Falco mexicanus)

Status	Habitat Description
Federal: BCC	Grasslands, savannas, rangeland, agricultural fields, and desert scrub; requires sheltered cliff faces for shelter and nesting.
State: CSC	

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
871.4	99.5	437.7	1,408.6	Agriculture California Annual Grassland Disturbed Land Mixed Oak/Grass Purple Needlegrass Valley Oak/Grass

Wildlife - Birds

Rufous hummingbird

(Selasphorus rufus)

Status

Federal:

State: CSC

Habitat Description

The rufous hummingbird uses a variety of habitats that provide nectar-producing flowers. In its breeding range, the species uses open areas as well as coniferous forests, deciduous woods, riparian thickets, swamps, meadows, agricultural areas, parks, and residential areas (Meslow and Wight 1975, Campbell 1990). In regions of Mexico where the rufous hummingbird winters, the species has been documented in oak forests with interspersed pine and junipers, shrubby habitats, and in openings in woodland and forests (Rzedowski 1981; Des Granges 197; Calder 2006). In California, rufous hummingbirds have been documented in high montane meadows, valley foothill hardwood, valley foothill hardwood-conifer, riparian, and chaparral habitats (Zeiner et al. 1990).

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
3,600.6	588.8	1,165.0	5,354.4

Newhall Habitats Associated with this Species

- Big Sagebrush Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Eriodictyon Scrub
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland
- Mixed Oak/Grass
- Mulefat Scrub
- Mulefat-CDFG Only
- Riparian Scrub
- River Wash
- Scrub Oak Chaparral
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood/Willow Riparian Forest
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only
- Undifferentiated Chaparral

Valley Oak Woodland

Valley Oak/Grass

Wildlife - Birds

Sharp-shinned hawk

(*Accipiter striatus*)

Status **Habitat Description**
 Federal: -- Nests in woodlands and forages over dense chaparral and scrublands.
 State: CSC

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,180.6	882.8	1,510.8	6,574.2

Foraging

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,180.6	882.8	1,510.8	6,574.2

Nesting

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
878.4	327.9	402.8	1,609.2

Newhall Habitats Associated with this Species	
Ag, Developed, or Disturbed	Foraging
Agriculture	Foraging
Alluvial Scrub	Foraging
Arrow Weed Scrub	Foraging
Big Sagebrush Scrub	Foraging
Brittlebush Drought Deciduous Scrub	Foraging
Bulrush-Cattail Wetland	Foraging
Burned California Sagebrush Scrub	Foraging
Burned California Sagebrush/Undifferentiated Chaparral	Foraging
Burned Chamise Chaparral	Foraging
Burned Undifferentiated Chaparral	Foraging
California Annual Grassland	Foraging
California Buckwheat - Big Sagebrush Scrub	Foraging
California Sagebrush - Deerweed	Foraging
California Sagebrush Scrub	Foraging
California Sagebrush Scrub - Artemisia	Foraging
California Sagebrush Scrub - Black Sage	Foraging
California Sagebrush Scrub - California Buckwheat	Foraging
California Sagebrush Scrub - Encelia farinosa	Foraging
California Sagebrush Scrub - Purple Sage	Foraging
California Sagebrush Scrub/Undifferentiated Chaparral	Foraging
California Walnut Woodland	Both
Chamise - Hoaryleaf Ceanothus Chaparral	Foraging
Chamise Chaparral	Foraging
Coast Live Oak Woodland	Both
Coyote Brush Scrub	Foraging
Disturbed California Sagebrush Scrub	Foraging
Disturbed California Sagebrush Scrub - Purple Sage	Foraging
Disturbed California Sagebrush Scrub /Chaparral	Foraging
Disturbed Land	Foraging
Disturbed Mexican Elderberry Scrub	Foraging
Disturbed Mulefat	Foraging
Disturbed Riparian Scrub	Both
Disturbed Southern Cottonwood/Willow Riparian Forest	Both
Disturbed Southern Willow Scrub	Both
Eriodictyon Scrub	Foraging
Herbaceous Wetlands	Foraging
Herbaceous Wetlands-CDFG Only	Foraging
Hoaryleaf Ceanothus Chaparral	Foraging
Mexican Elderberry	Foraging
Mexican Elderberry Woodland	Foraging
Mexican Elderberry-CDFG Only	Foraging
Mixed Oak Woodland	Both
Mixed Oak/Grass	Both

Wildlife - Birds

Sharp-shinned hawk

(Accipiter striatus)

Mulefat Scrub	Foraging
Mulefat-CDFG Only	Foraging
Purple Needlegrass	Foraging
Riparian Scrub	Both
River Wash	Foraging
Scrub Oak Chaparral	Foraging
Southern Coast Live Oak Riparian Forest	Both
Southern Cottonwood/Willow Riparian Forest	Both
Southern Willow Scrub	Both
Southern Willow Scrub - CDFG Only	Both
Undifferentiated Chaparral	Foraging
Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral	Foraging
Valley Oak Woodland	Both
Valley Oak/Grass	Both

Wildlife - Birds

Short-eared owl

(Asio flammeus)

Status

Habitat Description

Federal:

State:

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 (Zeiner et al. 1990; Terres 1980). The species is commonly found in open treeless areas using fence posts and small mounds as perches (Zeiner et al. 1990). Short-eared owls typically nest on the ground, though they may roost in evergreen trees or groves near agriculture fields in the winter (Wiggins et al. 2006, Terres 1980). Individuals roost singly or communally in trees, and have been known to roost with long-eared owls (Bosakowski 1986).

Preserve Acres for Species			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
824.1	263.7	400.3	1,488.1	Agriculture Bulrush-Cattail Wetland California Annual Grassland Herbaceous Wetlands Herbaceous Wetlands-CDFG Only Mixed Oak/Grass Purple Needlegrass Valley Oak/Grass

Wildlife - Birds

Southern California rufous-crowned sparrow

(Aimophila ruficeps canescens)

Status **Habitat Description**
 Federal: -- California sagebrush scrub.
 State: CSC

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
1,306.5	51.0	629.2	1,986.6

**Newhall Habitats Associated
with this Species**

- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral

Wildlife - Birds

Southwestern willow flycatcher

(Empidonax traillii extimus)

Status **Habitat Description**
Federal: FE, USBC Riparian woodlands that contain water and low willow thickets.
State: CE

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
5.1	313.8	2.5	321.4	Disturbed Southern Cottonwood/Willow Riparian Forest Disturbed Southern Willow Scrub Southern Coast Live Oak Riparian Forest Southern Cottonwood/Willow Riparian Forest Southern Willow Scrub Southern Willow Scrub - CDFG Only

Wildlife - Birds

Summer tanager

(Piranga rubra)

Status

Habitat Description

Federal: --

Cottonwood-willow riparian habitats, especially older, dense stands along rivers and streams.

State: CSC

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
5.1	313.8	2.5	321.4

**Newhall Habitats Associated
with this Species**

- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood/Willow Riparian Forest
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only

Wildlife - Birds

Tricolored blackbird

(*Agelaius tricolor*)

Status

Federal: BCC
State: CSC

Habitat Description

Freshwater marshes and riparian scrub (nesting). Grassland and agriculture (foraging).

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
576.0	280.6	324.3	1,180.8

Newhall Habitats Associated with this Species

Agriculture	Foraging
Bulrush-Cattail Wetland	Nesting/Breeding
California Annual Grassland	Foraging
Cismontane Alkali Marsh	Foraging
Cismontane Alkali Marsh-CDFG Only	Foraging
Coastal And Valley Freshwater Marsh	Nesting/Breeding
Disturbed Land	Foraging
Herbaceous Wetlands	Foraging
Herbaceous Wetlands-CDFG Only	Foraging
Purple Needlegrass	Foraging

Foraging

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
574.6	280.6	324.3	1,179.5

Nesting

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
1.4	0.0	0.0	1.4

Wildlife - Birds

Turkey vulture

(*Cathartes aura*)

Status	Habitat Description
Federal: --	Rangeland, agriculture, grassland; uses cliffs and large trees for roosting, nesting and resting.
State: --	

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,755.5	176.8	1,334.4	4,266.8

Foraging

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,189.0	162.7	1,067.9	3,419.7

Nesting

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
866.6	14.1	379.9	1,260.6

Newhall Habitats Associated with this Species

Agriculture	Foraging
Alluvial Scrub	Foraging
Arrow Weed Scrub	Foraging
Big Sagebrush Scrub	Foraging
Brittlebush Drought Deciduous Scrub	Foraging
Burned California Sagebrush Scrub	Foraging
Burned California Sagebrush/Undifferentiated Chaparral	Foraging
California Annual Grassland	Foraging
California Buckwheat - Big Sagebrush Scrub	Foraging
California Sagebrush - Deerweed	Foraging
California Sagebrush Scrub	Foraging
California Sagebrush Scrub - Artemisia	Foraging
California Sagebrush Scrub - Black Sage	Foraging
California Sagebrush Scrub - California Buckwheat	Foraging
California Sagebrush Scrub - Encelia farinosa	Foraging
California Sagebrush Scrub - Purple Sage	Foraging
California Sagebrush Scrub/Undifferentiated Chaparral	Foraging
Coast Live Oak Woodland	Nesting/Breeding
Coyote Brush Scrub	Foraging
Disturbed California Sagebrush Scrub	Foraging
Disturbed California Sagebrush Scrub - Purple Sage	Foraging
Disturbed California Sagebrush Scrub /Chaparral	Foraging
Disturbed Land	Foraging
Eriodictyon Scrub	Foraging
Eucalyptus	Nesting/Breeding
Mixed Oak Woodland	Nesting/Breeding
Mixed Oak/Grass	Both
Purple Needlegrass	Foraging
Valley Oak Woodland	Nesting/Breeding
Valley Oak/Grass	Both

Wildlife - Birds

Vermilion flycatcher

(Pyrocephalus rubinus flammeus)

Status	Habitat Description
Federal: --	Breeding habitat includes riparian woodlands, riparian scrub, and freshwater marshes
State: CSC	

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
8.2	313.8	3.9	325.9

**Newhall Habitats Associated
with this Species**

- Disturbed Mexican Elderberry Scrub
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Riparian Scrub
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood/Willow Riparian Forest
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only

Wildlife - Birds

Western burrowing owl

(Athene cunicularia)

Status **Habitat Description**
Federal: BCC Grasslands, open scrub, and agriculture, particularly with ground squirrel burrows.
State: CSC

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
571.3	99.5	324.3	995.1	Agriculture California Annual Grassland Disturbed Land Purple Needlegrass

Wildlife - Birds

Western yellow-billed cuckoo

(Coccyzus americanus occidentalis)

Status	Habitat Description
Federal: FC, BCC	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.
State: CE	grape.

Preserve Acres for Species			Total Preserve
High	River	Salt	Acres
County	Corridor	Creek	
5.1	313.8	2.5	321.4

Newhall Habitats Associated with this Species

- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood/Willow Riparian Forest
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only

Wildlife - Birds

White-tailed kite-foraging

(Elanus leucurus)

Status

Habitat Description

Federal: --

Forages in agriculture, grasslands, and coastal scrub communities. Habitat not quantified.

State: CFP

**Newhall Habitats Associated
with this Species**

Wildlife - Birds

White-tailed kite-nesting

(Elanus leucurus)

Status	Habitat Description
Federal: --	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 6-20 m (20-100 ft) above ground. Nest
State: CFP	located near open foraging area. Habitat not quantified.

**Newhall Habitats Associated
with this Species**

Wildlife - Birds

Yellow warbler

(Dendroica petechia brewsteri)

Status **Habitat Description**
Federal: -- Riparian thickets and woodlands.
State: CSC

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
5.1	313.8	2.5	321.4

**Newhall Habitats Associated
with this Species**

- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood/Willow Riparian Forest
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only

Wildlife - Birds

Yellow-breasted chat

(Icteria virens)

Status **Habitat Description**
Federal: -- Riparian thickets and riparian woodlands with a dense understory.
State: CSC

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
5.1	313.8	2.5	321.4	Disturbed Southern Cottonwood/Willow Riparian Forest Disturbed Southern Willow Scrub Southern Coast Live Oak Riparian Forest Southern Cottonwood/Willow Riparian Forest Southern Willow Scrub Southern Willow Scrub - CDFG Only

Wildlife - Birds

Yellow-headed blackbird

(Xanthocephalus xanthocephalus)

Status

Habitat Description

Federal: -- Nests in freshwater marsh and forages in annual grassland, native grassland and agriculture

State: ***

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
609.0	477.1	331.6	1,417.7

**Newhall Habitats Associated
with this Species**

Agriculture	Foraging
Bulrush-Cattail Wetland	Both
California Annual Grassland	Foraging
Cismontane Alkali Marsh	Foraging
Cismontane Alkali Marsh-CDFG Only	Foraging
Coastal And Valley Freshwater Marsh	Both
Disturbed Land	Foraging
Herbaceous Wetlands	Foraging
Herbaceous Wetlands-CDFG Only	Foraging
Purple Needlegrass	Foraging
River Wash	Foraging

Foraging

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
609.0	477.1	331.6	1,417.7

Nesting

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
1.4	0.0	0.0	1.4

Wildlife - Fish

Arroyo chub

(Gila orcutti)

Status

Federal: --

State: CSC

Habitat Description

Slow-moving or backwater sections of warm to cool streams with mud or sand substrates. Habitat not quantified.

**Newhall Habitats Associated
with this Species**

Wildlife - Fish

Santa Ana sucker

(Catostomus santaanae)

Status

Federal: FT

State: CSC

Habitat Description

Occupies small- to medium-sized perennial streams with water ranging in depth from a few centimeters to a meter or more. Habitat not quantified.

**Newhall Habitats Associated
with this Species**

Wildlife - Fish

Steelhead rainbow trout (Southern California ESU)

(Oncorhynchus mykiss)

Status	Habitat Description
Federal: FE	Clean, clear, cool well-oxygenated streams. Needs relatively deep pools in migration and gravelly
State: CSC	substrate in which to spawn. Habitat not quantified.

**Newhall Habitats Associated
with this Species**

Wildlife - Fish

Unarmored threespine stickleback

(Gasterosteus aculeatus williamsoni)

Status	Habitat Description
Federal: FE	Slow-moving and backwater areas. Habitat not quantified.
State: CE, CFP	

**Newhall Habitats Associated
with this Species**

Wildlife - Insects

Monarch butterfly

(Danaus plexippus)

Status

Federal: --

State: ***

Habitat Description

Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby. Habitat not quantified.

**Newhall Habitats Associated
with this Species**

Wildlife - Insects

Quino checkerspot butterfly

(Euphydryas editha quino)

Status	Habitat Description
Federal: FE	Occurs in localized colonies, always closely associated with the larval foodplant dot-seed plantain (<i>Plantago erecta</i>) and clay or cryptobiotic soils. Habitat not quantified.
State: --	

**Newhall Habitats Associated
with this Species**

Wildlife - Insects

San Emigdio blue butterfly

(Plebulina emigdionis)

Status

Habitat Description

Federal: --

Often near streambeds, washes, or alkaline areas. Associated with four-wing saltbrush (*Atriplex canescens*) and quail bush (*Atriplex lentiformis*). Habitat not quantified.

State: ***

**Newhall Habitats Associated
with this Species**

Wildlife - Mammals

American badger

(*Taxidea taxus*)

Status	Habitat Description
Federal: --	Grasslands, agriculture, drier open stages of shrub, forest, and herbaceous habitats with friable soils.
State: CSC	

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,171.2	331.4	1,037.2	3,539.8

Newhall Habitats Associated with this Species

- Agriculture
- Alluvial Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Mixed Oak/Grass
- Purple Needlegrass
- River Wash
- Valley Oak/Grass

Wildlife - Mammals

Fringed myotis

(*Myotis thysanodes*)

Status	Habitat Description
Federal: --	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.
State: ***	

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,075.5	799.6	1,374.5	6,249.6

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Bulrush-Cattail Wetland
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Cismontane Alkali Marsh
- Cismontane Alkali Marsh-CDFG Only
- Coast Live Oak Woodland
- Coastal And Valley Freshwater Marsh
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Eriodictyon Scrub
- Giant Reed
- Herbaceous Wetlands
- Herbaceous Wetlands-CDFG Only
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland

Mixed Oak/Grass
Mulefat Scrub
Mulefat-CDFG Only
Purple Needlegrass
Riparian Scrub
River Wash
Scrub Oak Chaparral
Southern Coast Live Oak Riparian Forest
Southern Cottonwood/Willow Riparian Forest
Southern Willow Scrub
Southern Willow Scrub - CDFG Only
Tamarisk Scrub
Tamarisk Scrub-CDFG Only
Undifferentiated Chaparral
Undifferentiated Chaparral/Hoaryleaf Ceanothus
Chaparral
Valley Oak Woodland
Valley Oak/Grass

Wildlife - Mammals

Long-legged myotis

(*Myotis volans*)

Status	Habitat Description
Federal: FSC	Primarily coniferous forest, but also riparian and desert habitats. Roosts in abandoned bulidings, cracks in the ground, crevices in cliff faces, and spaces between exfoliating tree bark. Hibernacula include caves and mine tunnels.
State: ***	

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	Acres
4,075.5	799.6	1,374.5	6,249.6

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Bulrush-Cattail Wetland
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Cismontane Alkali Marsh
- Cismontane Alkali Marsh-CDFG Only
- Coast Live Oak Woodland
- Coastal And Valley Freshwater Marsh
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Eriodictyon Scrub
- Giant Reed
- Herbaceous Wetlands
- Herbaceous Wetlands-CDFG Only
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland

Mixed Oak/Grass
Mulefat Scrub
Mulefat-CDFG Only
Purple Needlegrass
Riparian Scrub
River Wash
Scrub Oak Chaparral
Southern Coast Live Oak Riparian Forest
Southern Cottonwood/Willow Riparian Forest
Southern Willow Scrub
Southern Willow Scrub - CDFG Only
Tamarisk Scrub
Tamarisk Scrub-CDFG Only
Undifferentiated Chaparral
Undifferentiated Chaparral/Hoaryleaf Ceanothus
Chaparral
Valley Oak Woodland
Valley Oak/Grass

Wildlife - Mammals

Mexican long-tongued bat

(Choeronycteris mexicana)

Status	Habitat Description
Federal: --	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland. Roosts
State: CSC	in caves, mines, and buildings. Habitat not quantified.

**Newhall Habitats Associated
with this Species**

Wildlife - Mammals

Mountain lion

(*Puma concolor*)

Status **Habitat Description**
 Federal: -- Occurs in a variety of scrub and forested habitats.
 State: CFP

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
3,568.2	402.7	1,158.3	5,129.1

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Giant Reed
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland
- Mixed Oak/Grass
- Mulefat Scrub
- Mulefat-CDFG Only
- Riparian Scrub
- Scrub Oak Chaparral
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood/Willow Riparian Forest
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only
- Tamarisk Scrub

Tamarisk Scrub-CDFG Only
Undifferentiated Chaparral
Undifferentiated Chaparral/Hoaryleaf Ceanothus
Chaparral
Valley Oak Woodland
Valley Oak/Grass

Wildlife - Mammals

Pallid bat

(*Antrozous pallidus*)

Status	Habitat Description
Federal: --	Arid habitats, including grasslands, shrublands, woodlands and forests; prefers rocky outcrops, cliffs and crevices with access to open habitats for foraging.
State: CSC	

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,037.8	414.2	1,367.0	5,819.0

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Eriodictyon Scrub
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland
- Mixed Oak/Grass
- Mulefat Scrub
- Mulefat-CDFG Only
- Purple Needlegrass
- Riparian Scrub
- Scrub Oak Chaparral
- Southern Coast Live Oak Riparian Forest

Wildlife - Mammals

Pallid bat

(Antrozous pallidus)

-
- Southern Cottonwood/Willow Riparian Forest
 - Southern Willow Scrub
 - Southern Willow Scrub - CDFG Only
 - Undifferentiated Chaparral
 - Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral
 - Valley Oak Woodland
 - Valley Oak/Grass

Wildlife - Mammals

Pocketed free-tailed bat

(Nyctinomops femorosaccus)

Status **Habitat Description**
 Federal: -- Roosts in rugged, rocky canyons. Forages over all available habitats
 State: CSC

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,075.5	799.6	1,374.5	6,249.6

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Bulrush-Cattail Wetland
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Cismontane Alkali Marsh
- Cismontane Alkali Marsh-CDFG Only
- Coast Live Oak Woodland
- Coastal And Valley Freshwater Marsh
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Eriodictyon Scrub
- Giant Reed
- Herbaceous Wetlands
- Herbaceous Wetlands-CDFG Only
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland

Wildlife - Mammals

Pocketed free-tailed bat

(Nyctinomops femorosaccus)

Mixed Oak/Grass
Mulefat Scrub
Mulefat-CDFG Only
Open Water
Purple Needlegrass
Riparian Scrub
River Wash
Scrub Oak Chaparral
Southern Coast Live Oak Riparian Forest
Southern Cottonwood/Willow Riparian Forest
Southern Willow Scrub
Southern Willow Scrub - CDFG Only
Tamarisk Scrub
Tamarisk Scrub-CDFG Only
Undifferentiated Chaparral
Undifferentiated Chaparral/Hoaryleaf Ceanothus
Chaparral
Valley Oak Woodland
Valley Oak/Grass

Wildlife - Mammals

Ringtail

(Bassariscus astutus)

Status	Habitat Description
Federal: --	Mixture of forest and shrubland in close association with rocky areas and riparian habitats; uses hollow trees, snags, and logs for cover and reproduction.
State: CFP	

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
571.6	327.9	269.0	1,168.5	Coast Live Oak Woodland Disturbed Riparian Scrub Disturbed Southern Cottonwood/Willow Riparian Forest Disturbed Southern Willow Scrub Mixed Oak Woodland Riparian Scrub Southern Coast Live Oak Riparian Forest Southern Cottonwood/Willow Riparian Forest Southern Willow Scrub Southern Willow Scrub - CDFG Only Valley Oak Woodland

Wildlife - Mammals

San Diego black-tailed jackrabbit

(Lepus californicus bennettii)

Status	Habitat Description
Federal: --	Open chaparral and California sagebrush scrub, grassland and agriculture.
State: CSC	

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,171.2	331.4	1,037.2	3,539.8

Newhall Habitats Associated with this Species

- Agriculture
- Alluvial Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Mixed Oak/Grass
- Purple Needlegrass
- River Wash
- Valley Oak/Grass

Wildlife - Mammals

San Diego desert woodrat

(Neotoma lepida intermedia)

Status **Habitat Description**
 Federal: -- Open chaparral, California sagebrush scrub, cactus patches and the understory of tree thickets.
 State: CSC

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,679.6	53.7	754.2	3,487.5

**Newhall Habitats Associated
with this Species**

- Alluvial Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Eriodictyon Scrub
- Hoaryleaf Ceanothus Chaparral
- Scrub Oak Chaparral
- Undifferentiated Chaparral
- Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral

Wildlife - Mammals

Southern grasshopper mouse

(Onychomys torridus ramona)

Status	Habitat Description
Federal: --	Inhabits desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Species habitat estimate is over-stated because the habitat for the southern grasshopper mouse is limited to areas of the vegetation communities that also have specific soils.
State: CSC	

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
1,778.3	60.8	817.5	2,656.6

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Purple Needlegrass

Wildlife - Mammals

Spotted bat

(Euderma maculatum)

Status	Habitat Description
Federal: --	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.
State: CSC	

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
56.5	712.4	30.1	799.1

**Newhall Habitats Associated
with this Species**

- Bulrush-Cattail Wetland
- Cismontane Alkali Marsh
- Cismontane Alkali Marsh-CDFG Only
- Coastal And Valley Freshwater Marsh
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Giant Reed
- Herbaceous Wetlands
- Herbaceous Wetlands-CDFG Only
- Mexican Elderberry-CDFG Only
- Mulefat Scrub
- Mulefat-CDFG Only
- Open Water
- Riparian Scrub
- River Wash
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood/Willow Riparian Forest
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only
- Tamarisk Scrub
- Tamarisk Scrub-CDFG Only

Wildlife - Mammals

Townsend's big-eared bat

(Corynorhinus townsendii)

Status	Habitat Description
Federal: --	Utilizes a variety of communities, including conifer and oak woodlands and forests, arid grasslands and deserts and high-elevation forests and meadows. Requires appropriate roosting, maternity and hibernacula sites free from human disturbance.
State: CSC	

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,075.5	799.6	1,374.5	6,249.6

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Bulrush-Cattail Wetland
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Cismontane Alkali Marsh
- Cismontane Alkali Marsh-CDFG Only
- Coast Live Oak Woodland
- Coastal And Valley Freshwater Marsh
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Eriodictyon Scrub
- Giant Reed
- Herbaceous Wetlands
- Herbaceous Wetlands-CDFG Only
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland

Wildlife - Mammals

Townsend's big-eared bat

(Corynorhinus townsendii)

Mixed Oak/Grass
Mulefat Scrub
Mulefat-CDFG Only
Purple Needlegrass
Riparian Scrub
River Wash
Scrub Oak Chaparral
Southern Coast Live Oak Riparian Forest
Southern Cottonwood/Willow Riparian Forest
Southern Willow Scrub
Southern Willow Scrub - CDFG Only
Tamarisk Scrub
Tamarisk Scrub-CDFG Only
Undifferentiated Chaparral
Undifferentiated Chaparral/Hoaryleaf Ceanothus
Chaparral
Valley Oak Woodland
Valley Oak/Grass

Wildlife - Mammals

Western mastiff bat

(Eumops perotis californicus)

Status	Habitat Description
Federal: --	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.
State: CSC	

Preserve Acres for Species			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
4,075.5	799.6	1,374.5	6,249.6	Alluvial Scrub Arrow Weed Scrub Big Sagebrush Scrub Brittlebush Drought Deciduous Scrub Bulrush-Cattail Wetland Burned California Sagebrush Scrub Burned California Sagebrush/Undifferentiated Chaparral Burned Chamise Chaparral Burned Undifferentiated Chaparral California Annual Grassland California Buckwheat - Big Sagebrush Scrub California Sagebrush - Deerweed California Sagebrush Scrub California Sagebrush Scrub - Artemisia California Sagebrush Scrub - Black Sage California Sagebrush Scrub - California Buckwheat California Sagebrush Scrub - Encelia farinosa California Sagebrush Scrub - Purple Sage California Sagebrush Scrub/Undifferentiated Chaparral California Walnut Woodland Chamise - Hoaryleaf Ceanothus Chaparral Chamise Chaparral Cismontane Alkali Marsh Cismontane Alkali Marsh-CDFG Only Coast Live Oak Woodland Coastal And Valley Freshwater Marsh Coyote Brush Scrub Disturbed California Sagebrush Scrub Disturbed California Sagebrush Scrub - Purple Sage Disturbed California Sagebrush Scrub /Chaparral Disturbed Mexican Elderberry Scrub Disturbed Mulefat Disturbed Riparian Scrub Disturbed Southern Cottonwood/Willow Riparian Forest Disturbed Southern Willow Scrub Eriodictyon Scrub Giant Reed Herbaceous Wetlands Herbaceous Wetlands-CDFG Only Hoaryleaf Ceanothus Chaparral Mexican Elderberry Mexican Elderberry Woodland Mexican Elderberry-CDFG Only Mixed Oak Woodland

Wildlife - Mammals

Western mastiff bat

(Eumops perotis californicus)

Mixed Oak/Grass
Mulefat Scrub
Mulefat-CDFG Only
Purple Needlegrass
Riparian Scrub
River Wash
Scrub Oak Chaparral
Southern Coast Live Oak Riparian Forest
Southern Cottonwood/Willow Riparian Forest
Southern Willow Scrub
Southern Willow Scrub - CDFG Only
Tamarisk Scrub
Tamarisk Scrub-CDFG Only
Undifferentiated Chaparral
Undifferentiated Chaparral/Hoaryleaf Ceanothus
Chaparral
Valley Oak Woodland
Valley Oak/Grass

Wildlife - Mammals

Western red bat

(Lasiurus blossevillii)

Status	Habitat Description
Federal: --	Roosts in trees or shrubs in edge habitats close to streams, open fields and urban areas. Forages in grasslands, shrublands, open woodlands and forest, and croplands. Absent from deserts.
State: ***	

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,075.5	799.6	1,374.5	6,249.6

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Bulrush-Cattail Wetland
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Cismontane Alkali Marsh
- Cismontane Alkali Marsh-CDFG Only
- Coast Live Oak Woodland
- Coastal And Valley Freshwater Marsh
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Eriodictyon Scrub
- Giant Reed
- Herbaceous Wetlands
- Herbaceous Wetlands-CDFG Only
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland

Mulefat Scrub
Mulefat-CDFG Only
Purple Needlegrass
Riparian Scrub
River Wash
Scrub Oak Chaparral
Southern Coast Live Oak Riparian Forest
Southern Cottonwood/Willow Riparian Forest
Southern Willow Scrub
Southern Willow Scrub - CDFG Only
Tamarisk Scrub
Tamarisk Scrub-CDFG Only
Undifferentiated Chaparral
Undifferentiated Chaparral/Hoaryleaf Ceanothus
Chaparral
Valley Oak Woodland
Valley Oak/Grass

Wildlife - Mammals

Western small-footed myotis

(*Myotis ciliolabrum*)

Status	Habitat Description
Federal: FSC	Roosts in summer in rock crevices, caves, tunnels, under boulders, under exfoliating bark, and buildings. Hibernacula include caves and mines. Foraging habitat includes riparian, grassland, shrubland/chaparral, coniferous forests and deciduous woodlands.
State: ***	

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,075.5	799.6	1,374.5	6,249.6

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Bulrush-Cattail Wetland
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Cismontane Alkali Marsh
- Cismontane Alkali Marsh-CDFG Only
- Coast Live Oak Woodland
- Coastal And Valley Freshwater Marsh
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Eriodictyon Scrub
- Giant Reed
- Herbaceous Wetlands
- Herbaceous Wetlands-CDFG Only
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland

Wildlife - Mammals

Western small-footed myotis

(Myotis ciliolabrum)

Mixed Oak/Grass
Mulefat Scrub
Mulefat-CDFG Only
Purple Needlegrass
Riparian Scrub
River Wash
Scrub Oak Chaparral
Southern Coast Live Oak Riparian Forest
Southern Cottonwood/Willow Riparian Forest
Southern Willow Scrub
Southern Willow Scrub - CDFG Only
Tamarisk Scrub
Tamarisk Scrub-CDFG Only
Undifferentiated Chaparral
Undifferentiated Chaparral/Hoaryleaf Ceanothus
Chaparral
Valley Oak Woodland
Valley Oak/Grass

Wildlife - Mammals

Yuma myotis

(*Myotis yumanensis*)

Status	Habitat Description
Federal: --	Inhabits open forests and woodlands with sources of water. Species is closely tied to bodies of water, over
State: ***	which it feeds. Forms maternity colonies in caves, mines, buildings, or crevices.

Preserve Acres for Species			Total Preserve
High	River	Salt	Acres
County	Corridor	Creek	
23.5	516.0	22.8	562.3

Newhall Habitats Associated with this Species

- Bulrush-Cattail Wetland
- Cismontane Alkali Marsh
- Cismontane Alkali Marsh-CDFG Only
- Coastal And Valley Freshwater Marsh
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Giant Reed
- Herbaceous Wetlands
- Herbaceous Wetlands-CDFG Only
- Mexican Elderberry-CDFG Only
- Mulefat Scrub
- Mulefat-CDFG Only
- Open Water
- Riparian Scrub
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood/Willow Riparian Forest
- Southern Willow Scrub
- Southern Willow Scrub - CDFG Only
- Tamarisk Scrub
- Tamarisk Scrub-CDFG Only

Wildlife - Reptiles

Coast horned lizard

(*Phrynosoma coronatum*)

Status	Habitat Description
Federal: --	Exposed gravelly-sandy soils with minimal shrubs, riparian woodland clearings, dry chamise chaparral, and annual grasslands with scattered seepweed or saltbush.
State: CSC	

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,051.9	283.6	1,351.8	5,687.3

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Eriodictyon Scrub
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mixed Oak Woodland
- Mixed Oak/Grass
- Purple Needlegrass
- River Wash
- Scrub Oak Chaparral
- Undifferentiated Chaparral
- Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral
- Valley Oak Woodland
- Valley Oak/Grass

Wildlife - Reptiles

Coast patch-nosed snake

(*Salvadora hexalepis virgulata*)

Status **Habitat Description**
 Federal: -- Inhabits brushy or shrubby vegetation. Requires small mammal burrows for refuge and overwintering sites.
 State: CSC

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,712.6	250.2	761.6	3,724.3

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Eriodictyon Scrub
- Hoaryleaf Ceanothus Chaparral
- River Wash
- Scrub Oak Chaparral
- Undifferentiated Chaparral
- Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral

Wildlife - Reptiles

Coastal western whiptail

(Aspidoscelis tigris stejnegeri)

Status **Habitat Description**
 Federal: -- Open areas in semiarid grasslands, scrublands, and woodlands.
 State: ***

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,051.9	283.6	1,351.8	5,687.3

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Eriodictyon Scrub
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mixed Oak Woodland
- Mixed Oak/Grass
- Purple Needlegrass
- River Wash
- Scrub Oak Chaparral
- Undifferentiated Chaparral
- Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral
- Valley Oak Woodland
- Valley Oak/Grass

Wildlife - Reptiles

Rosy boa

(Charina trivirgata ssp. roseofusca)

Status	Habitat Description
Federal: --	Inhabits desert and chaparral habitats with rocky soils in coastal canyons and hillsides, desert canyons, washes and mountains.
State: ***	

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
2,712.6	250.2	761.6	3,724.3

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Eriodictyon Scrub
- Hoaryleaf Ceanothus Chaparral
- River Wash
- Scrub Oak Chaparral
- Undifferentiated Chaparral
- Undifferentiated Chaparral/Hoaryleaf Ceanothus Chaparral

Wildlife - Reptiles

San Bernardino ringneck snake

(Diadophis punctatus modestus)

Status	Habitat Description
Federal: --	Inhabits open, relatively rocky areas, often in somewhat moist microhabitats near intermittent streams.
State: ***	Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous vegetation.

Preserve Acres for Species			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,070.8	602.1	1,373.9	6,046.7

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Eriodictyon Scrub
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland
- Mixed Oak/Grass
- Mulefat Scrub
- Mulefat-CDFG Only
- Purple Needlegrass
- Riparian Scrub
- River Wash
- Scrub Oak Chaparral
- Southern Coast Live Oak Riparian Forest

Wildlife - Reptiles

San Bernardino ringneck snake

(Diadophis punctatus modestus)

Southern Cottonwood/Willow Riparian Forest
Southern Willow Scrub
Southern Willow Scrub - CDFG Only
Tamarisk Scrub
Undifferentiated Chaparral
Undifferentiated Chaparral/Hoaryleaf Ceanothus
Chaparral
Valley Oak Woodland
Valley Oak/Grass

Wildlife - Reptiles

Silvery legless lizard

(Anniella pulchra pulchra)

Status	Habitat Description
Federal: --	Stabilized dunes, beaches, dry washes, chaparral, scrubs, pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils. Species habitat estimate is over-stated because the habitat for the lizard is limited to areas of the vegetation communities that also have the soils specified above.
State: CSC	

<u>Preserve Acres for Species</u>			Total Preserve Acres
High County	River Corridor	Salt Creek	
4,070.8	612.9	1,374.5	6,058.3

Newhall Habitats Associated with this Species

- Alluvial Scrub
- Arrow Weed Scrub
- Big Sagebrush Scrub
- Brittlebush Drought Deciduous Scrub
- Burned California Sagebrush Scrub
- Burned California Sagebrush/Undifferentiated Chaparral
- Burned Chamise Chaparral
- Burned Undifferentiated Chaparral
- California Annual Grassland
- California Buckwheat - Big Sagebrush Scrub
- California Sagebrush - Deerweed
- California Sagebrush Scrub
- California Sagebrush Scrub - Artemisia
- California Sagebrush Scrub - Black Sage
- California Sagebrush Scrub - California Buckwheat
- California Sagebrush Scrub - Encelia farinosa
- California Sagebrush Scrub - Purple Sage
- California Sagebrush Scrub/Undifferentiated Chaparral
- California Walnut Woodland
- Chamise - Hoaryleaf Ceanothus Chaparral
- Chamise Chaparral
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Disturbed California Sagebrush Scrub
- Disturbed California Sagebrush Scrub - Purple Sage
- Disturbed California Sagebrush Scrub /Chaparral
- Disturbed Mexican Elderberry Scrub
- Disturbed Mulefat
- Disturbed Riparian Scrub
- Disturbed Southern Cottonwood/Willow Riparian Forest
- Disturbed Southern Willow Scrub
- Eriodictyon Scrub
- Hoaryleaf Ceanothus Chaparral
- Mexican Elderberry
- Mexican Elderberry Woodland
- Mexican Elderberry-CDFG Only
- Mixed Oak Woodland
- Mixed Oak/Grass
- Mulefat Scrub
- Mulefat-CDFG Only
- Purple Needlegrass
- Riparian Scrub
- River Wash
- Scrub Oak Chaparral

Wildlife - Reptiles

Silvery legless lizard

(Anniella pulchra pulchra)

Southern Coast Live Oak Riparian Forest
Southern Cottonwood/Willow Riparian Forest
Southern Willow Scrub
Southern Willow Scrub - CDFG Only
Tamarisk Scrub
Tamarisk Scrub-CDFG Only
Undifferentiated Chaparral
Undifferentiated Chaparral/Hoaryleaf Ceanothus
Chaparral
Valley Oak Woodland
Valley Oak/Grass

Wildlife - Reptiles

South Coast garter snake

(Thamnophis sirtalis spp.)

Status	Habitat Description
Federal: --	Inhabits marsh and riparian habitats and uplands adjacent to the habitats associated with this species.
State: CSC	

Preserve Acres for Species			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
68.7	716.8	32.4	817.9	Alluvial Scrub Arrow Weed Scrub Big Sagebrush Scrub Bulrush-Cattail Wetland Cismontane Alkali Marsh Cismontane Alkali Marsh-CDFG Only Coastal And Valley Freshwater Marsh Disturbed Mexican Elderberry Scrub Disturbed Mulefat Disturbed Riparian Scrub Disturbed Southern Cottonwood/Willow Riparian Forest Disturbed Southern Willow Scrub Herbaceous Wetlands Herbaceous Wetlands-CDFG Only Mexican Elderberry Mexican Elderberry Woodland Mexican Elderberry-CDFG Only Mulefat Scrub Mulefat-CDFG Only Riparian Scrub River Wash Southern Coast Live Oak Riparian Forest Southern Cottonwood/Willow Riparian Forest Southern Willow Scrub Southern Willow Scrub - CDFG Only

Wildlife - Reptiles

Southwestern pond turtle

(Clemmys marmorata pallida)

Status	Habitat Description
Federal: --	Streams, ponds, freshwater marshes, and lakes with growth of aquatic vegetation.
State: ***	

<u>Preserve Acres for Species</u>			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
56.5	706.9	30.1	793.5	Bulrush-Cattail Wetland Cismontane Alkali Marsh Cismontane Alkali Marsh-CDFG Only Coastal And Valley Freshwater Marsh Disturbed Mexican Elderberry Scrub Disturbed Mulefat Disturbed Riparian Scrub Disturbed Southern Cottonwood/Willow Riparian Forest Disturbed Southern Willow Scrub Herbaceous Wetlands Herbaceous Wetlands-CDFG Only Mexican Elderberry-CDFG Only Mulefat Scrub Mulefat-CDFG Only Open Water Riparian Scrub River Wash Southern Coast Live Oak Riparian Forest Southern Cottonwood/Willow Riparian Forest Southern Willow Scrub Southern Willow Scrub - CDFG Only Tamarisk Scrub Tamarisk Scrub-CDFG Only

Wildlife - Reptiles

Two-striped garter snake

(Thamnophis hammondi)

Status	Habitat Description
Federal: --	Perennial and intermittent streams with rocky or sandy beds and artificially-created aquatic habitats (manmade lakes and stock ponds); requires dense riparian vegetation.
State: CSC	

Preserve Acres for Species			Total Preserve Acres	Newhall Habitats Associated with this Species
High County	River Corridor	Salt Creek		
56.5	706.9	30.1	793.5	Bulrush-Cattail Wetland Cismontane Alkali Marsh Cismontane Alkali Marsh-CDFG Only Coastal And Valley Freshwater Marsh Disturbed Mexican Elderberry Scrub Disturbed Mulefat Disturbed Riparian Scrub Disturbed Southern Cottonwood/Willow Riparian Forest Disturbed Southern Willow Scrub Herbaceous Wetlands Herbaceous Wetlands-CDFG Only Mexican Elderberry-CDFG Only Mulefat Scrub Mulefat-CDFG Only Open Water Riparian Scrub River Wash Southern Coast Live Oak Riparian Forest Southern Cottonwood/Willow Riparian Forest Southern Willow Scrub Southern Willow Scrub - CDFG Only Tamarisk Scrub Tamarisk Scrub-CDFG Only

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