Resource Management Plan
for
El Capitan Preserve
San Diego County





June 2009

PARKS AND RECREATION
COUNTY OF SAN DIEGO
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EL CAPITAN PRESERVE

RESOURCE MANAGEMENT PLAN

June 30, 2009

Approved by:

Renee Hilton, Assistant Director
County of San Diego
Department of Parks and Recreation

6/30/09
Date

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1.0 INTRODUCTION

El Capitan Preserve (Preserve) is an approximately 2,611-acre open space preserve. The Preserve property is owned by the U.S. Department of the Interior Bureau of Land Management (BLM) and leased to the County of San Diego (County) Department of Parks and Recreation (DPR) for the operation, maintenance and management of outdoor recreation as part of the County's existing local and regional park system. The Preserve is located at 13775 Blue Sky Ranch Road, Lakeside an unincorporated community of San Diego County (County). The Preserve is within the upper San Diego River watershed, approximately 0.8 mile west of the El Capitan Reservoir (Figures 1 and 2). The Preserve consists of areas of high value natural communities and includes a trail system and staging area. In addition, 25 known cultural resources have been identified within the Preserve. The Preserve is included in the County of San Diego's Multiple Species Conservation Program (MSCP) preserve system.

1.1 Purpose of Resource Management Plan

This Resource Management Plan (RMP) has been prepared as a guidance document to manage and preserve the biological and cultural resources within the Preserve, and to provide Area-Specific Management Directives (ASMDs) pursuant to the requirements of the County's MSCP Subarea Plan (County of San Diego 1997), the Framework Management Plan (County of San Diego 2001), and Sections 10.9A and 10.9B of the Implementing Agreement (County of San Diego 1998). These sections specify that the County will be responsible for managing lands which it owns or acquires within the MSCP preserve system. While the County does not own El Capitan Preserve, it does operate and manage the property under the terms of a BLM Resource and Public Purpose Act (R&PP) lease. The RMP has been prepared in accordance with the BLM R&PP lease agreement.

This RMP will:

a) guide the management of vegetation communities/habitats, plant and animal species, cultural resources, and programs described herein to protect and, where appropriate, enhance biological and cultural values;

b) serve as a guide for appropriate public uses of the property;

c) provide a descriptive inventory of the vegetation communities/habitats, plant and animal species, and the archaeological and/or historical resources that occur on this property;

d) establish the baseline conditions from which adaptive management will be determined and success will be measured; and

e) provide an overview of the operation and maintenance requirements to implement management goals.

Chapter 5 of this RMP includes ASMDs for El Capitan Preserve.

It is recognized that County-owned or managed land is only a small portion of the MSCP preserve system. The County does ensure management of other lands that are dedicated as a conservation easement for discretionary project mitigation through requiring land developers to prepare Resource Management Plans. The County will spearhead a larger coordinated effort to ensure that other conserved lands in the area that make up the MSCP preserve are also being monitored and managed consistent with this RMP and the overall goals of the MSCP Plan and County's MSCP Subarea Plan when a regional funding source is identified pursuant to Section 10.9C of the Implementing Agreement.

1.1.1 MSCP Background

The MSCP is a cooperative habitat program that encompasses 582,000 acres and establishes a 172,000-acre preserve system in southwestern San Diego County. The MSCP covers 85 plant and animal species and 23 vegetation communities. Agencies participating in the MSCP include the County, other local jurisdictions, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). Local jurisdictions and special districts implement their respective portions of the MSCP Plan (City of San Diego 1998) through Subarea plans, which describe specific implementing mechanisms for the MSCP. The combination of the subregional MSCP Plan and Subarea plans serve as a Multiple Species Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA), the Natural Community Conservation Planning (NCCP) Program pursuant to the California NCCP Act of 1991 and the California Endangered Species Act (CESA). El Capitan Preserve is leased from the BLM and operated by the County and is included under the County of San Diego South County MSCP Subarea Plan.

1.1.2 County Subarea Plan

The South County MSCP Subarea Plan (MSCP Subarea Plan) was adopted in October 1997. The MSCP Subarea Plan is subdivided into three segments: Lake Hodges, South County, and Metro-Lakeside-Jamul, with El Capitan Preserve in the latter segment. In this segment, preserve boundaries were not designated; rather, pre-approved mitigation areas consisting of high-value habitats were identified and a set of preserve design goals and criteria for cores and linkages were established for consideration during project review.

1.1.3 Framework Management Plan and Area-Specific Management Directives

According to Section 6.3.1 of the MSCP Plan and as a condition of the Implementing Agreement with the Wildlife Agencies (Section 10.10), the County was required to prepare a Framework Management Plan for the portion of the MSCP preserve within the MSCP Subarea Plan's boundaries. The Framework Management Plan sets forth management goals and objectives, along with general management directives that apply to all areas of the MSCP Subarea Plan.

The Framework Management Plan states that appropriate recreational activities shall be accommodated in concurrence with the goals of the MSCP and MSCP Subarea Plan, as follows:

a) Public access and passive recreation are permitted uses within specified areas of the preserve. Access points, new trails and facilities, and a public control plan will be included in the specific framework habitat management plans and the area-specific management directives.

b) Riding and hiking trails will be allowed within the preserves to allow passive recreational opportunities for the public. Passive recreation includes hiking, scientific research, bird watching, and under specified conditions and locations identified in approved projects and or management plans, mountain biking, horseback riding, sailing, sun bathing, fishing, and swimming. Equestrian, hiking, and bicycles may be allowed when in accordance with approved management plans and are consistent with the County of San Diego Subarea Plan. All recreational activities will be required to avoid impacts to narrow endemics or unique critical populations of specific species, unless the activities are in "take" authorized areas as identified or allowed under the MSCP.

The Framework Management Plan incorporates a requirement for the subsequent preparation and implementation of ASMDs. These directives are required to be developed following baseline surveys using generally accepted practices and procedures for management of biological preserves, and in compliance with the criteria established by the Framework Management Plan and Table 3-5 of the MSCP Plan. They are intended to be specific management actions that are appropriate for the habitats and species found in a local area and take into account the particular circumstances of the given area. In addition to addressing the general directives of the Framework Management Plan and species-specific management requirements of MSCP Table 3-5, ASMDs are required to address fuel management activities. Chapter 5 of this RMP includes ASMDs for El Capitan Preserve.

1.2 Implementation

1.2.1 Management Approach

A key concept of the MSCP is the use of "Adaptive Management Techniques" directed at the conservation and recovery of individual species. This term refers to modifying management actions when monitoring of the resources indicates that changes are needed. It is particularly useful where there is uncertainty regarding the efficacy of certain management measures and/or the needs of target species. Adaptive management and an associated monitoring program are designed to inform land managers of the status and trends of covered species, natural communities, and landscapes in a manner that provides data to allow informed management actions and decisions.

It is anticipated that the recommended management actions provided in this RMP will be dynamic in nature. Applying adaptive management, the effectiveness and appropriateness of recommended management actions would be determined through review of management goal and objective achievement so that changes can be made to management directives and implementation measures as needed. Adaptive management techniques depend upon the specific issues impacting the resources. Therefore, the techniques herein may be subject to change or revisions when applied. Additionally, the monitoring protocols/requirements for MSCP covered species and habitats are being revisited by participants of the MSCP and are subject to change based on adoption of updated protocols. It is anticipated that this RMP will be revised once every five years, as needed. The RMP may be revised on a shorter time scale if there is a change in circumstance, for example, acquisition of additional Preserve land.

1.2.2 Responsible Parties/Designation of Land Manager

The County is responsible for management, biological monitoring, and meeting the conditions of MSCP coverage on County-owned/managed lands conserved as part of the MSCP preserve system. The Preserve is leased from the BLM and is operated and managed by the County Department of Parks and Recreation (DPR). The DPR District Park Manager assigned to the Preserve is the land manager. DPR will be responsible for the implementation and enforcement of the RMP.

The Preserve is located in the management district of one supervising park ranger, one senior park ranger, 1.5 park rangers, one park maintenance worker, and four MSCP seasonal employees. Park rangers patrol the Preserve daily. It is expected that many of the implementation measures, especially the maintenance tasks, will be carried out by the rangers who are most familiar with the site and currently patrol the Preserve.

1.2.3 Regulatory Context

The County's park rangers manage County parks and enforce park rules and regulations pursuant to San Diego County Code of Regulatory Ordinances Title 4, Division 1, Chapter 1 County Parks and Recreation. In addition, per County Code of Regulatory Ordinance Sec 41.111, 41.112, 41.113, all wildlife, plant, historical artifacts, and geologic features are protected and are not to be damaged or removed. Any person who violates any provision of Sections 41.111, 41.112, 41.113 is guilty of a misdemeanor as provided in Sections 11.116, 11.117, and 11.118 of this Code, punishable by fines up to $2,500 a day for each day the person violates these sections. The park rangers will contact law enforcement who will cite the offending individual. In addition, if an individual does not comply with signs within a facility and ignores park ranger instructions, the individual could potentially be charged with a misdemeanor by law enforcement.

1.2.4 Limitations and Constraints

Implementation and the timing of many of the management directives will be based on funding in any fiscal year and will be determined through the DPR Operations Division who will prioritize park/preserve needs in their work plan for the fiscal year based on the priority of the directives in the RMP for each park/preserve.

2.0 PROPERTY DESCRIPTION

2.1 Property Location

El Capitan Preserve is located at 13775 Blue Sky Ranch Road, Lakeside, CA 92040. The Preserve is located in the San Vicente Reservoir U.S. Geological Survey (USGS) quadrangle, Township 15 South, Range 1 East, Section 4 and Township 14 South, Range 1 East, Section 33 and also in the El Cajon Mountain USGS quadrangle, Township 15 South, Range 1 East, Sections 1, 2, 3, and 4 and Township 14 South, Range 1 East, Sections 25, 33, 34, 35, and 36 (Figures 1 and 2). The Assessor's Parcel Numbers for the Preserve are: 329-140-45; 329-141-16; 330-080-24; 330-081-01; 330-090-13; 330-091-03; 330-100-07; 330-111-03; 389-040-29; 389-041-07; 390-010-05; 390-020-05; 390-030-10.

2.2 Geographical Setting

The El Capitan Preserve encompasses the western hills of El Cajon Mountain. The natural setting within the Preserve is characterized by steep coastal foothills with ridgelines separated by numerous small canyons, ravines, and drainages. Specifically, the Preserve is situated north of the San Diego River, west of El Capitan Reservoir, and east of San Vicente Reservoir. Several blue-line streams occur within the Preserve. Elevation ranges from 800 feet (244 meters) above mean sea level (AMSL) along the southern foothills to 3,360 feet (1,024 meters) AMSL on the western portion of El Cajon Mountain. Elevation drops to approximately 1,000 feet (305 meters) AMSL in the drainages and to 530 feet (162 meters) AMSL in areas adjacent to the San Diego River. The closest sources of fresh water are the San Diego River and El Capitan Reservoir, although one freshwater seep does occur immediately adjacent to Blue Sky Ranch Road within the northeastern portion of the Preserve.

2.2.1 Site Access

The Preserve is open to the public daily between 8:00 a.m. and sunset and is closed the month of August. The Preserve is accessible to the public along the northwestern boundary via Blue Sky Ranch Road off of Wildcat Canyon Road, north of Interstate 8 and east of State Route 67. The staging area for the Preserve is located on the northeast corner of the intersection of Blue Sky Ranch Road and Wildcat Canyon Road. The Preserve entrance, which can be accessed by non-motorized means only, is located approximately 0.4 mile from the staging area at the east end of Blue Sky Ranch Road. In addition, there is a private residential road, Pata Ranch Road, which provides access through the western boundary of the Preserve, and an unnamed private road which provides access through the south central portion of the Preserve to private property.

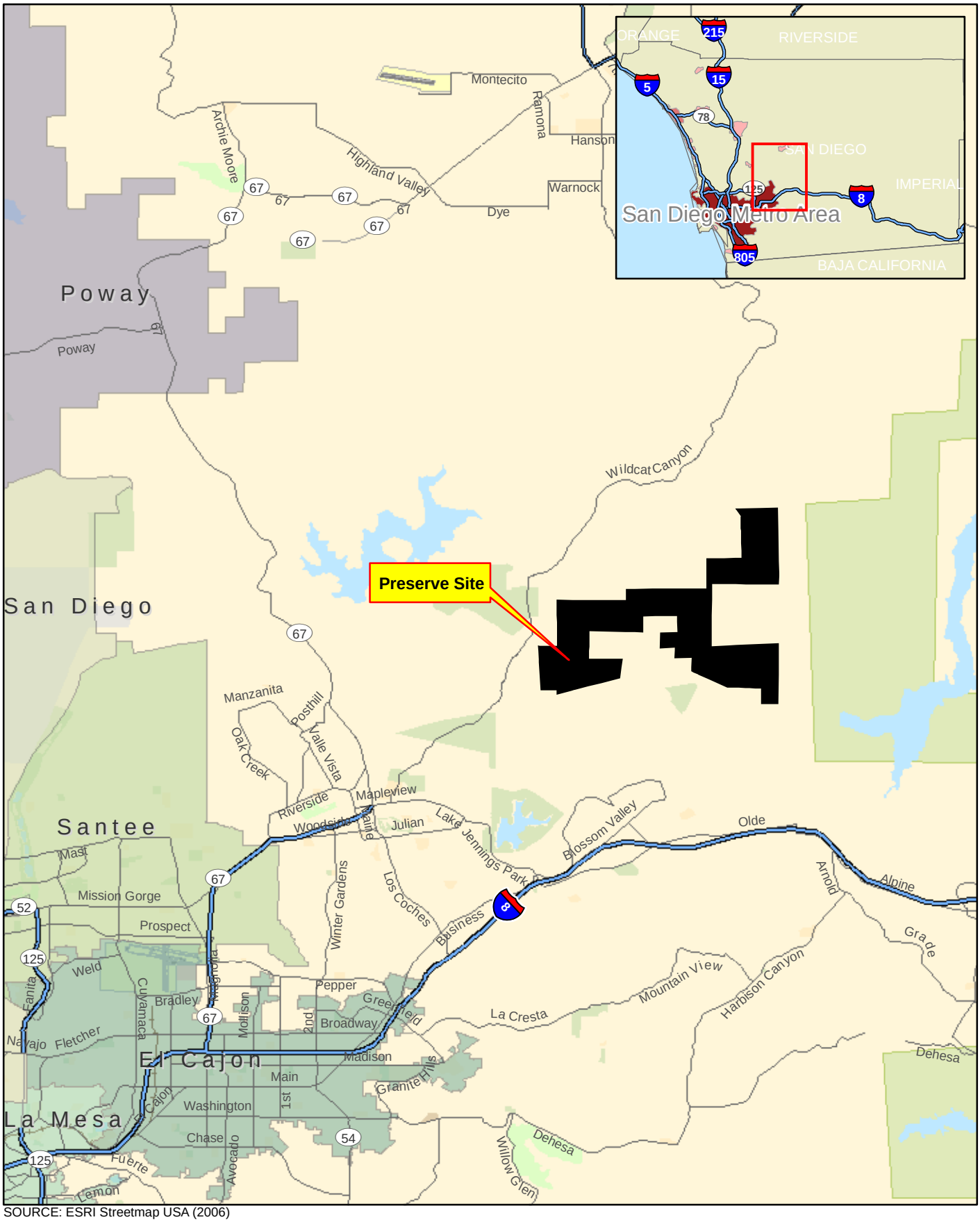

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Figure 1
Regional Location
El Capitan Preserve

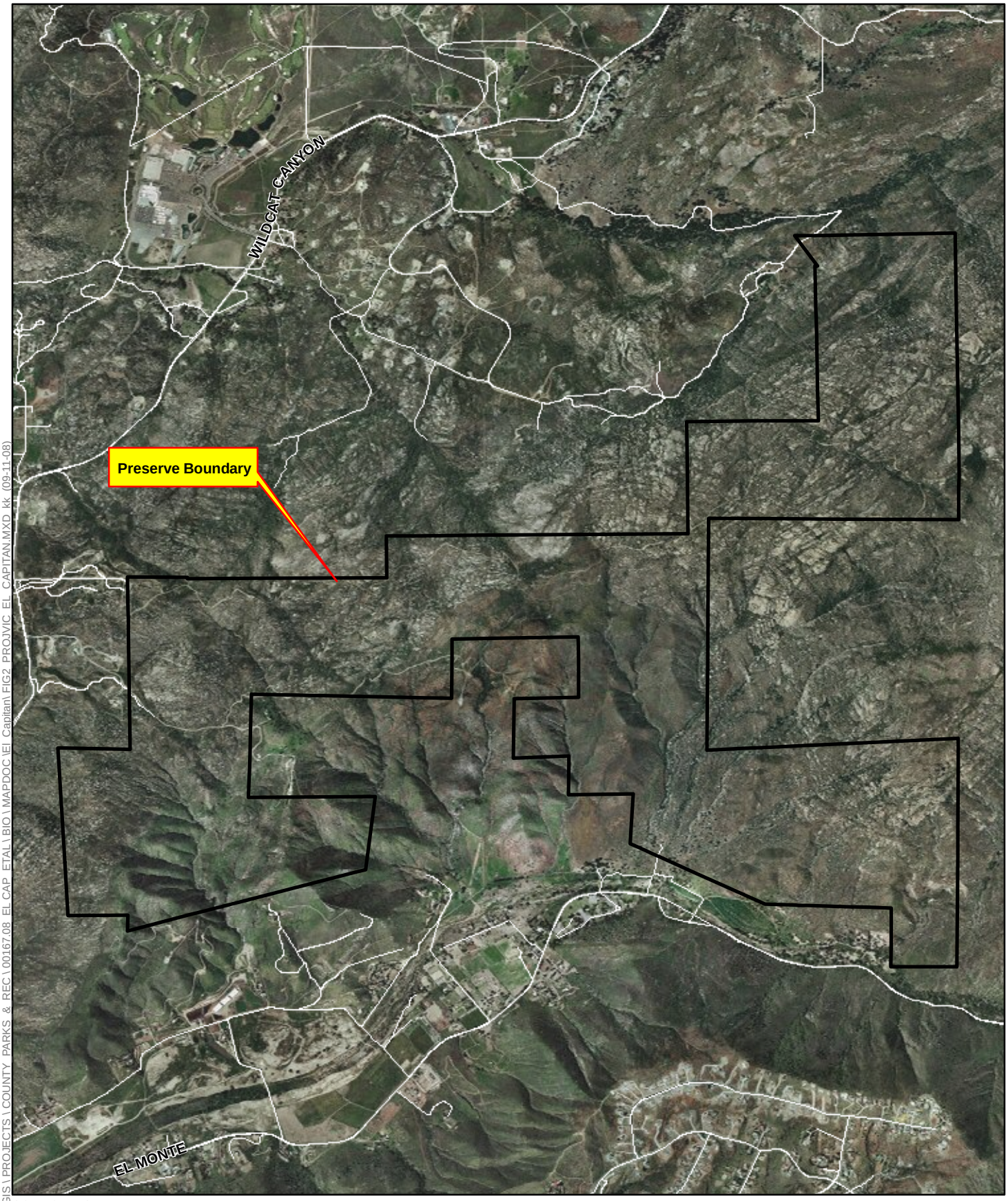

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Figure 2
Preserve Vicinity
El Capitan Preserve

2.2.2 MSCP Context

The Preserve is included within the Metro-Lakeside-Jamul segment of the County's MSCP South County Subarea Plan. With the exception of the north easternmost corner of the property, the entire Preserve is identified as Pre-Approved Mitigation Area (PAMA) and is considered part of the MSCP preserve (Figure 3).

2.3 Physical and Climatic Conditions

2.3.1 Geology and Soils

The Preserve is situated atop the southern California batholith consisting of Cretaceous granitic rocks. These rocks form the majority element of this massive feature that underlies roughly two-fifths of San Diego County. The exposed granitic bedrock in the Preserve is comprised, principally, of either the Bonsall Tonalite Formation, consisting of light-gray massive quart diorite, often containing streaked-out dark inclusions, or of the Woodson Mountain Granodiorite Formation, consisting mostly of granodiorite, but with minor occurrences of granite and quartz diorite (tonalite) (Strand 1962; Weber 1963). Also present within the Preserve are areas of exposed bedrock consisting of undifferentiated Pre-Cretaceous metamorphic rocks (Strand 1962).

Within the Preserve, several general soil associations are represented: Acid igneous rock land, the Cieneba series, Friant series, Huerhuero series, Las Posas series, Riverwash, and Stony land (Figure 4) (USDA 1973). Each of these series is described in detail below.

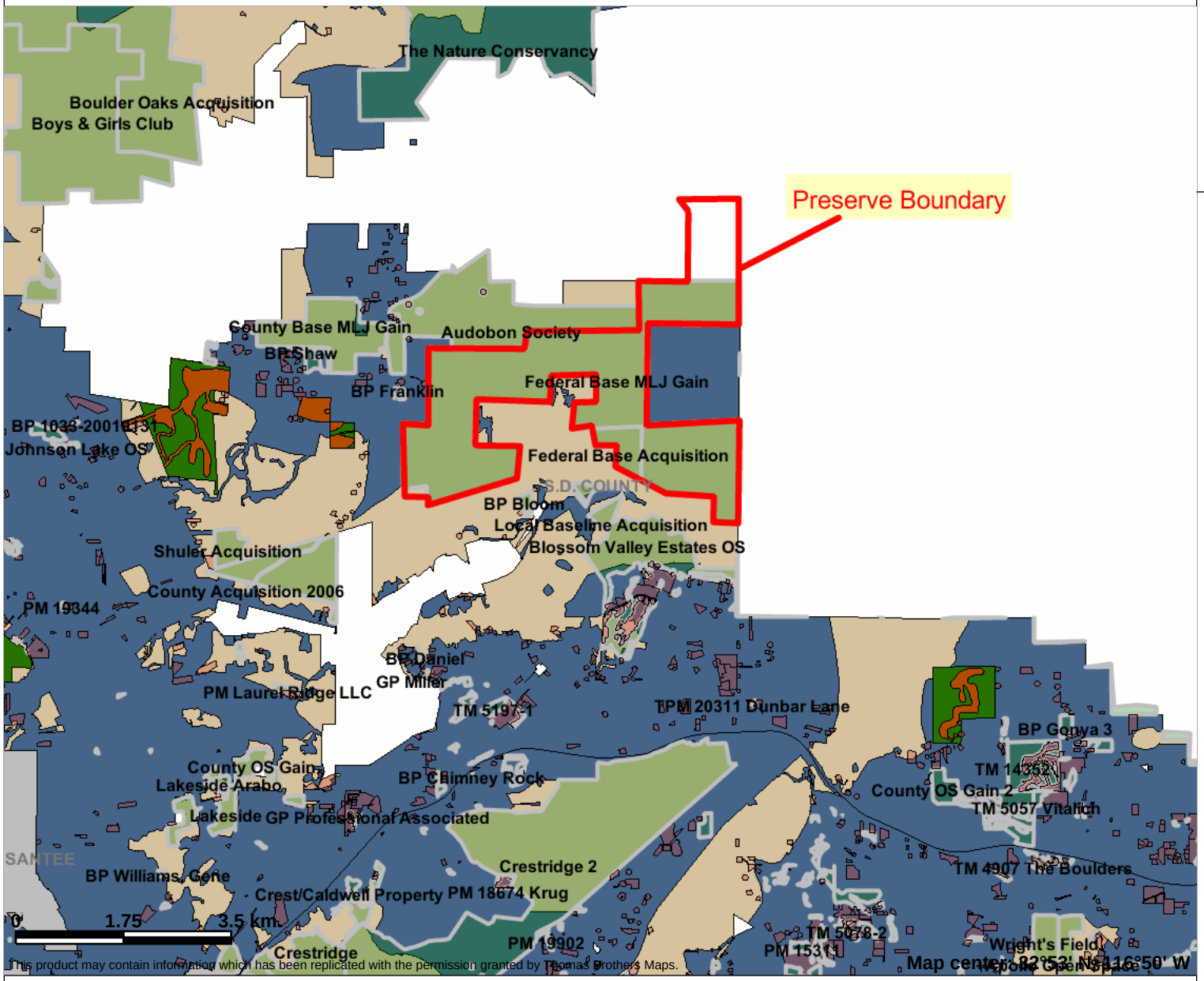
Acid Igneous Rock Land

Acid igneous rock land is rough broken terrain. The topography ranges from low hills to very steep mountains. Large boulders and rock outcrops cover 50 to 90 percent of the total area. The soil material is loam to loamy coarse sand in texture and is very shallow over decomposed granite or basic igneous rock. Within the Preserve this soil type supports southern mixed chaparral, freshwater seep and coast live oak woodland.

Cieneba Series

The Cieneba soil series is characterized as excessively drained, very shallow to shallow coarse sandy loams and is usually found on slopes ranging from 5 to 75 percent. It is found on uplands at elevations ranging from 200 to 3,000 feet (61 to 914 meters) AMSL. It is usually 10 to 20 inches thick and medium acidic. The topsoil ranges from brown to dark brown in color and coarse sandy loam to sandy loam in texture. The layer below this consists of weathered granodiorite. Runoff is high to very high and the erosion hazard is very high. Boulders and rock outcrops

Figure 3. El Capitan Preserve MSCP Designations



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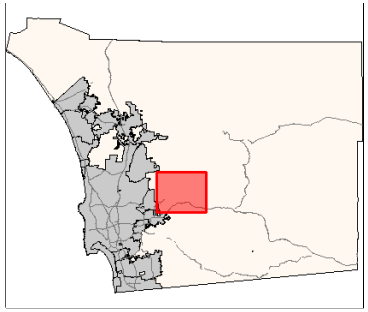

Legend

Habitrak 2005 Data

- Habitrak Gain
- Habitrak Loss

MSCP_Designations - South

- Hardline Preserve
- Pre-Approved Mitigation Area (PAMA)
- Major Amendment Area
- Minor Amendment Area
- Minor Amendment Area Subject to Special Considerations
- Conserved Subject to Agreement with Wildlife Agencies
- Santa Fe Valley Open Space II
- Santa Fe Valley 'D' Designator
- Otay Ranch Areas Where No Take Permits will be Issued
- Take Authorized Area
- Unicorporated Land in Metro-Lakeside-Jamul Segment
- Other

Incorporated Areas

- S.D. COUNTY
- Other

N

Scale: 1:97,026

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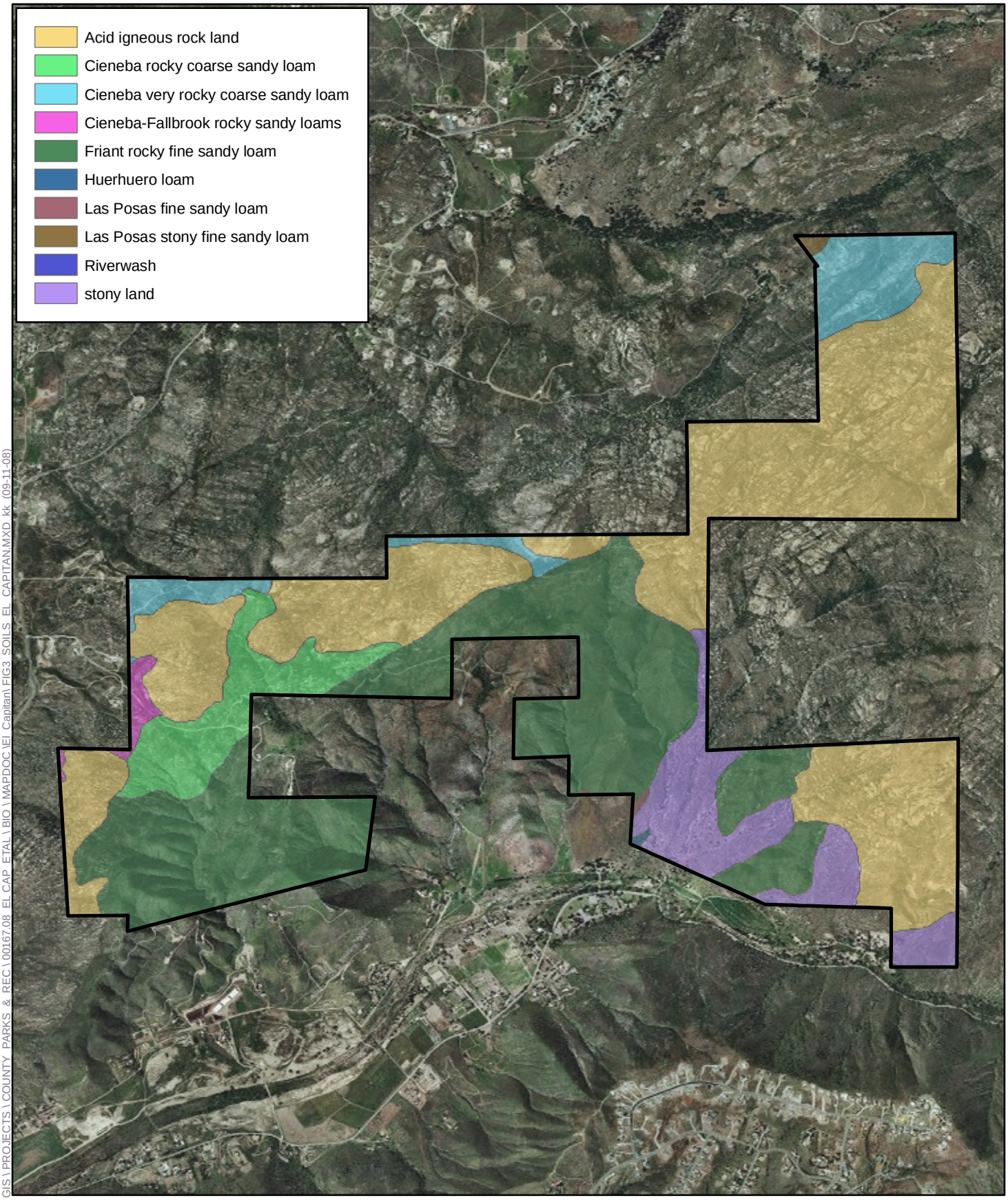

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Figure 4
Soils Map
El Capitan Preserve

are present. Specific soil types found in the Preserve consist of Cieneba rocky coarse sandy loam (9 to 30 percent slopes, eroded), Cieneba very rocky coarse sandy loam (30 to 75 slopes), and Cieneba-Fallbrook rocky sandy loams (30 to 65 percent slopes, eroded). The Cieneba-Fallbrook soil complex is about 55 percent Cieneba coarse sandy loam and 40 percent Fallbrook sandy loam. Within the Preserve these soil types support southern mixed chaparral and coast live oak woodland.

Friant Series

The Friant soil series is characterized by very shallow to shallow, fine sandy loams and are usually found on mountainous uplands at elevations ranging from 500 to 3,500 feet (152 to 1,067 meters) AMSL. The surface layer is usually 12 inches thick and slightly acidic. The layer below this consists of metasedimentary rock. Boulders and rock outcrops are present. The specific soil type found in the Preserve is Friant rocky fine sandy loam (30 to 70 percent slopes). Within the Preserve this soil type supports southern mixed chaparral and non-native grassland.

Huerhuero Series

The Huerhuero soil series consists of moderately well drained loams that have a clay subsoil. These soils developed in sandy marine sediment and are typically found on slopes ranging from 2 to 30 percent with elevation ranging from 10 to 400 feet (3 to 122 meters) AMSL. In a representative profile the surface layer is brown and pale-brown, strongly acid and medium acid loam about 12 inches thick. The upper part of the subsoil is brown, moderately alkaline clay and extends to a depth of about 41 inches. Below this, and extending to a depth of more than 60 inches, is a brown, mildly alkaline clay loam and sandy loam (USDA 1973). The specific soil type found in the Preserve is Huerhuero loam (9 to 15 percent slopes, eroded). Within the Preserve this soil type supports southern mixed chaparral.

Las Posas Series

The Las Posas soil series is characterized by well-drained, moderately deep stony fine sandy loams with clay subsoil and is usually found on slopes ranging from 2 to 65 percent. It is found on uplands at elevations ranging from 200 to 3,000 feet (61 to 914 meters) AMSL. The surface layer is usually four inches thick and neutral. The topsoil is reddish-brown in color and stony fine sandy loam in texture. The subsoil is reddish-brown and red, neutral, light clay and clay loam, and is more than 29 inches thick. The substratum is yellowish-red, deeply weathered gabbro soil. Runoff is medium to very rapid and the erosion hazard is moderate to very high. The specific soil types found in the Preserve consist of Las Posas stony fine sandy loam (30 to 65 percent) and Las Posas fine sandy loam (15 to 30 percent, eroded). Within the Preserve this soil type supports southern mixed chaparral.

Riverwash

Riverwash occurs in a small area within the stream banks along the San Diego River. Riverwash is a term used to collectively refer to unconsolidated sands, gravels, and cobbles that occur in intermittent or ephemeral stream courses. This soil is often barren due to scour from storm events. This soil type occurs exclusively along the river bottom. Within the Preserve this soil type supports open Englemann oak woodland.

Stony Land

Stony land occurs at the base of cliffs or below steep rocky slopes. The material consists of many stones, in many places there are large boulders three to six feet in diameter on the surface. Within the Preserve this soil type supports open coast live oak woodland and southern mixed chaparral.

2.3.2 Climate

A semi-permanent, Pacific high-pressure cell, located over the Pacific Ocean, dominates San Diego County's climate. This cell drives the dominant on-shore circulation, maintaining clear skies for much of the year. Summers at the Preserve are typically warm and dry, while winters are mild with occasional rain (USDA 1973).

The Western Regional Climate Center, a collaborative project of the National Oceanic and Atmospheric Agency and the Desert Research Institute, maintains a climatic station in El Cajon, the closest such station to the Preserve. Data collected at the station indicate that the area experiences a normal mean temperature of approximately 65 degrees Fahrenheit (°F) (18.3 degrees Celsius; °C), with a mean maximum temperature of 77.8°F (25.4°C) and a mean minimum of 52.4°F (11.3°C). The El Cajon area tends to experience more sunshine than the coastal regions of southern California due to its inland location. In a normal year, precipitation at the Preserve averages 15 to 18 inches and falls mostly in the winter and spring (San Diego County Flood Control District 2007).

A predominant feature of the local climate is the sea-breeze/land-breeze cycle. During the daytime, particularly in the summer, on-shore winds move inland with speeds of approximately seven to ten miles per hour (mph). Easterly land breezes of approximately two to four mph often occur at night. Surrounding rugged terrain, which induces turbulence into the airflow, modifies the influence of this cycle. This cycle is also periodically affected by land airflow that dominates weather patterns. The most widely recognized of these are the Santa Ana conditions, during which strong, hot and dry easterly winds prevail for two- or three-day periods.

2.3.3 Hydrology

The Preserve is situated within the San Diego River Watershed. Designated beneficial uses for the San Diego River and its tributaries include: municipal and domestic supply; agricultural supply; industrial service supply; industrial process supply; contact and non-contact water recreation; warm freshwater habitat; cold freshwater habitat; wildlife habitat; and rare, threatened, or endangered species habitat (California RWQCB 1994).

Five intermittent blue-line streams occur within the Preserve. Of these, four are tributaries to the San Diego River, two pairs of which converge into single tributaries. A single tributary to Padre Barona Creek occurs in the northern portion of the Preserve (Figure 5).

2.3.4 Fire History

According to the County of San Diego fire burn history data, portions of the Preserve have burned multiple times over the years. Most recently, the majority of the Preserve burned in the 2003 Cedar Fire, and the southeast portion of the Preserve also burned in the 2007 Witch Fire (SanGIS 2008) (Figure 6).

The majority of the Preserve is located in the San Diego Rural Fire Protection District while the western portion of the Preserve is located in the Lakeside Fire Protection District.

2.4 Land Use

2.4.1 On-Site Land Use

The Preserve is an approximately 2,611-acre open space preserve. The Preserve entrance is located at the northwestern corner of the property at the end of Blue Sky Ranch Road. The Preserve entrance is fenced along two sides and includes both a vehicle access gate for Preserve employees only and an equestrian gate. This entrance area is developed with restrooms, a sheltered picnic area, and a kiosk. An 8.2-mile multi-use trail system and several private access roads occur throughout the undeveloped portion of the Preserve (Figure 7).

In addition, there are inactive mine sites located in the northeastern portion of the Preserve in the western hills of El Cajon Mountain, and at the old Hoover residence within the southeastern portion of the Preserve (currently just a foundation with remnant evidence of habitation). There is also an existing well onsite that was most likely associated with the old Hoover residence.

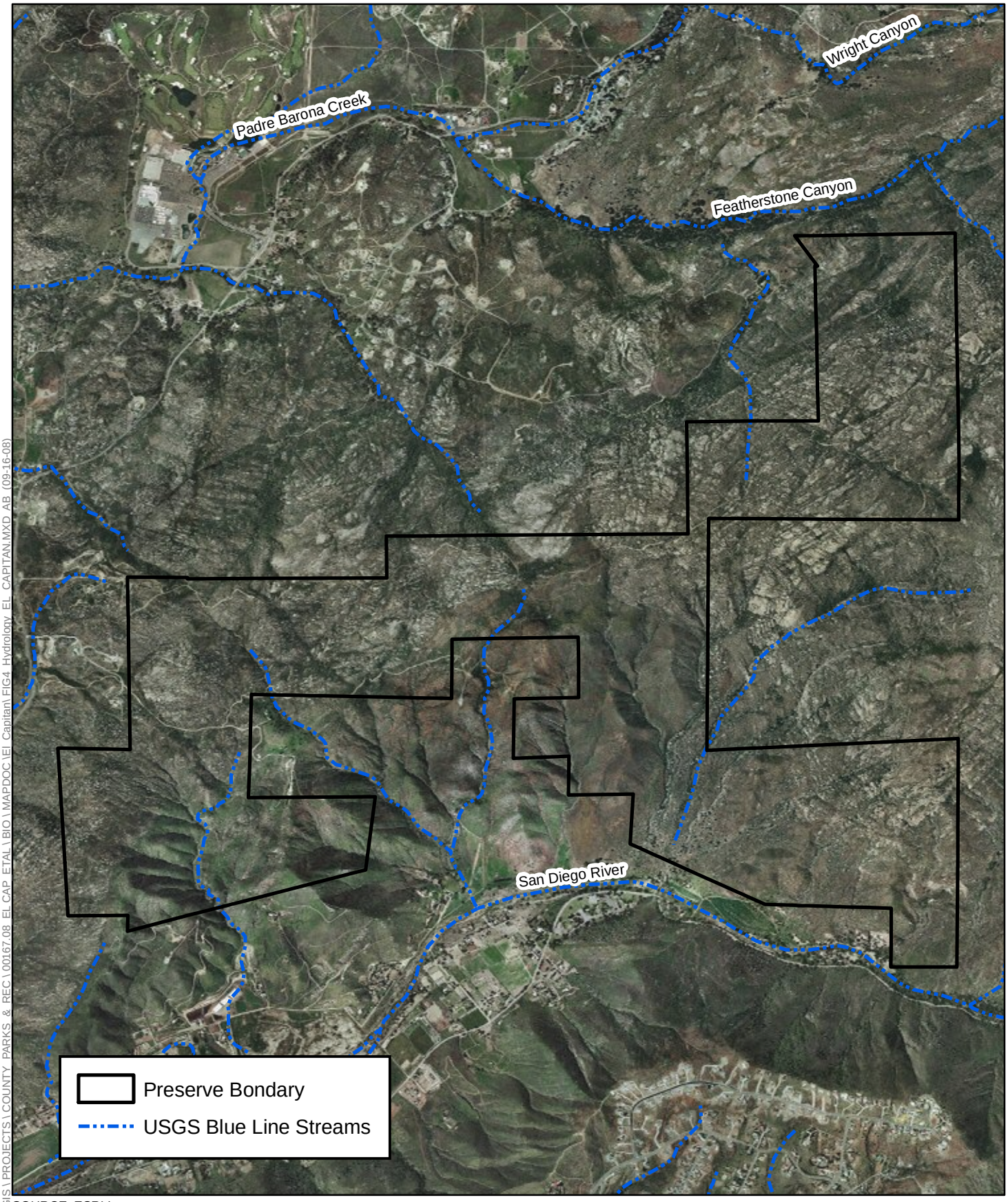

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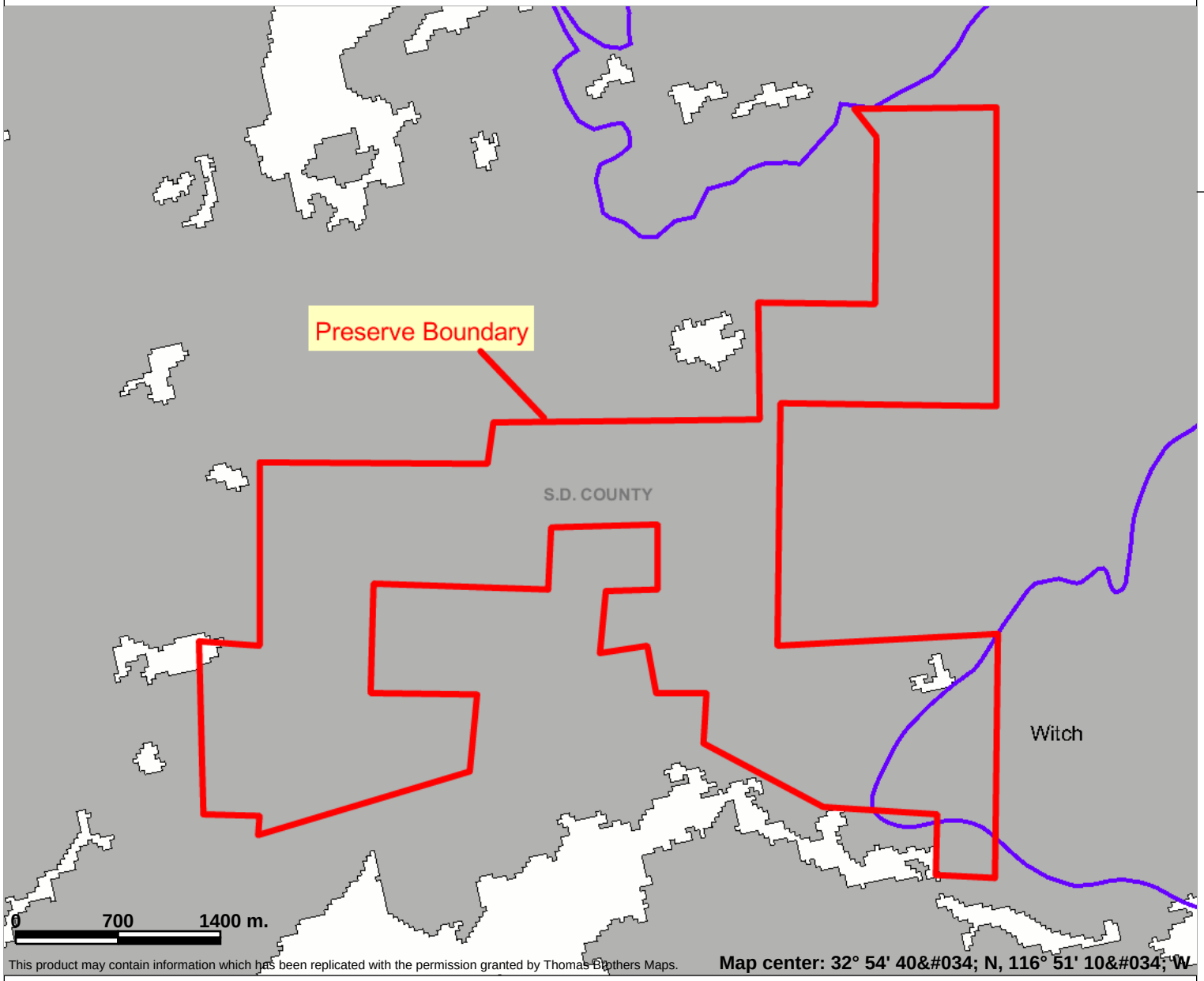
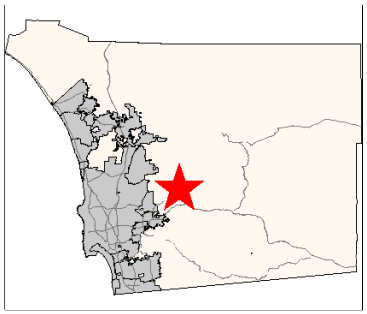
Figure 5
Hydrology Map
El Capitan Preserve

Figure 6. El Capitan Preserve Fire History





Legend

Fire Perimeters-October 2007

- Ammo
- Harris
- Poomacha
- Rice
- Witch

2003 Fire Burn Scar

Incorporated Areas

- S.D. COUNTY
- Other

Scale: 1:40,869

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Map center: 32° 54' 40" N, 116° 51' 10" W

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2.4.2 Adjacent Properties

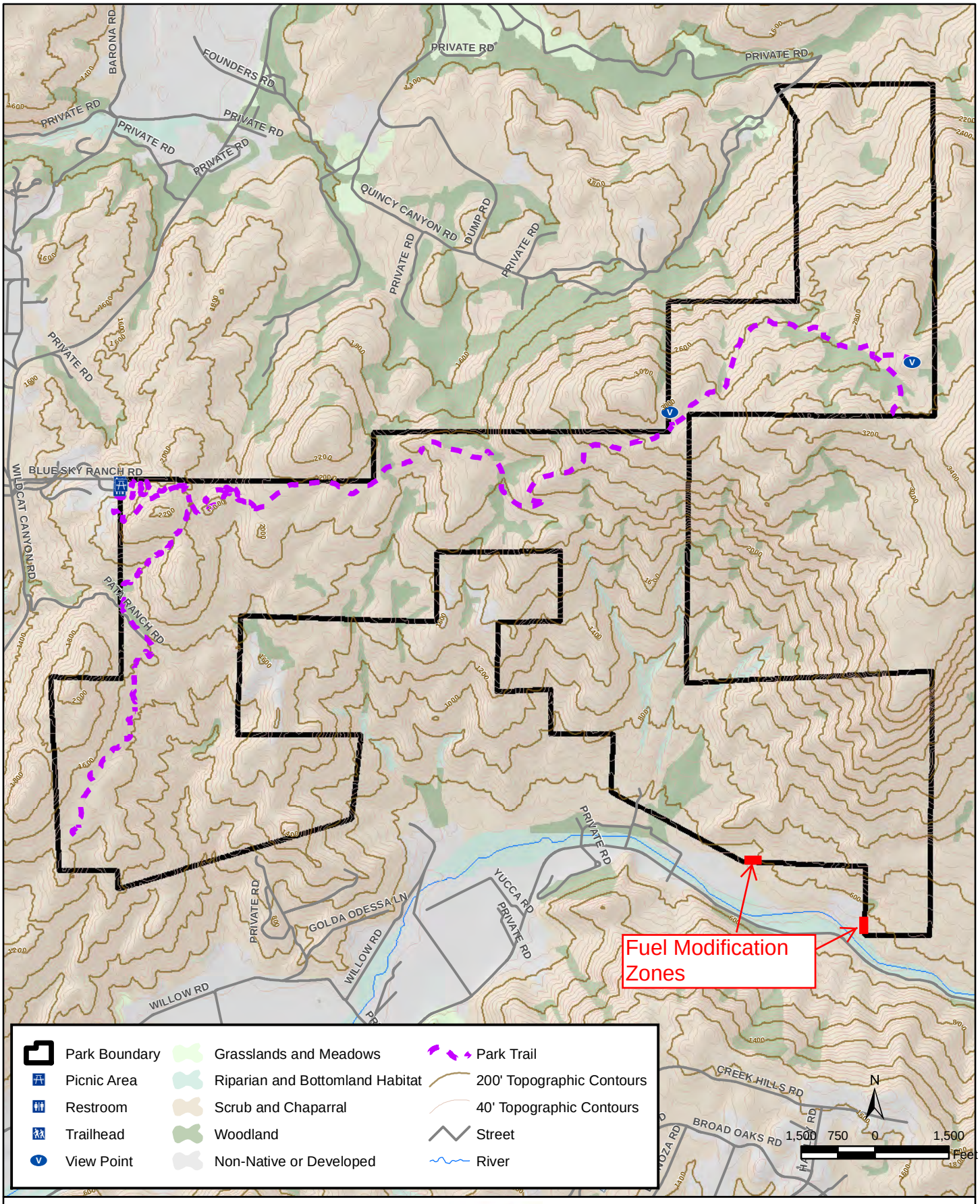
The Preserve is surrounded by undeveloped open space, and rural residential and limited agricultural uses. The eastern boundary of the Preserve is immediately adjacent to the Cleveland National Forest and lies approximately 0.8 mile to the east of the El Capitan Reservoir. To the north and east of the Preserve is San Diego Audubon Society owned property, including the Silverwood Wildlife Sanctuary, and the Barona Indian Reservation. Sparse rural residences and limited agriculture occur along the western and southern boundaries of the Preserve.

2.4.3 Easements or Rights

A SDG&E easement crosses the western portion of the Preserve through APNs 329-140-45 and 330-091-03. The 12-foot wide distribution line right-of-way was granted to SDG&E on April 6, 1959 and roughly parallels Pata Ranch Road (Figure 8). SDG&E conducts operation and maintenance activities for their facilities in accordance with the SDG&E Subregional Natural Community Conservation Plan (NCCP) (SDG&E 1995). The SDG&E NCCP was approved by the Wildlife Agencies and is consistent with this RMP.

2.5 Trails

The Preserve contains approximately 8.2 miles of existing multi-use (hiking, biking, and equestrian use) trails through the western and northern portions of the Preserve (Figure 7). These trails include dirt roads and single track footpaths. The main east-west trail through the northern portion of the Preserve is part of the Trans-County Trail which, when completed, will be a vital trail "freeway" for all San Diego County trail connections. Currently this trail ends at the eastern boundary of the Preserve as there is not yet an approved route through the adjacent Cleveland National Forest property. Also, several private access roads occur throughout the undeveloped portion of the Preserve. These dirt roads provide access to privately owned parcels surrounding the Preserve.



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SanGIS

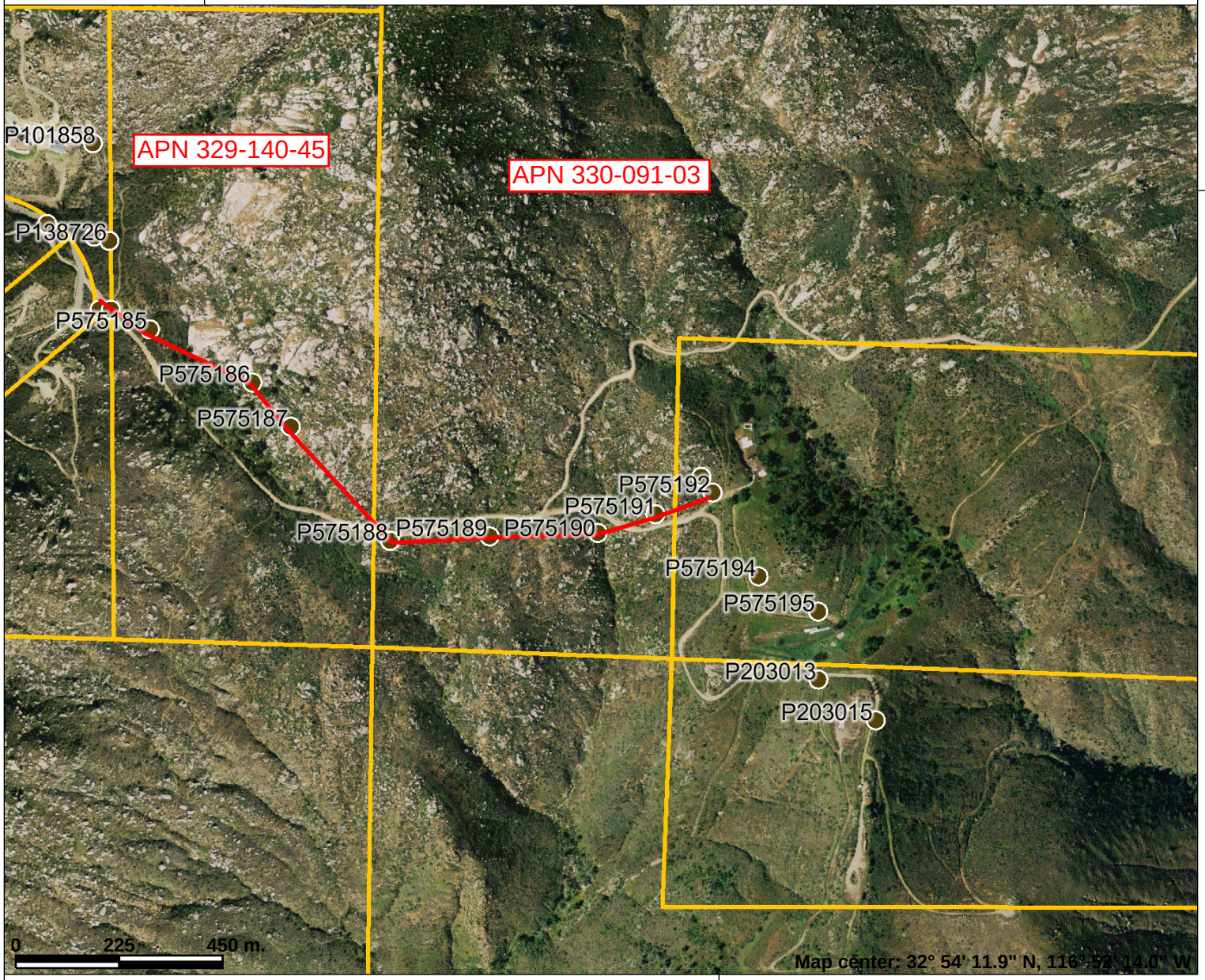
PARKS AND RECREATION COUNTY OF SAN DIEGO

Figure 7
Land Use Map
El Capitan Preserve

Path: F:\MXDs\09\09_04_RMP_ElCapitan.mxd, 04/13/09, ekochert

LAND SERVICES GIS
http://gis.sempra.com

Figure 8. El Capitan Preserve SDG&E Easement Map





Legend

Transmission Structures

- Aerial Marker
- Bridge
- Portal
- Steel
- Tower
- Underground
- Wood
- Pole

- Freeway
- Highway

Major Roads

- Orange County Roads
- Gas Pipelines

Transmission Tielines Detailed INTERNAL USE ONLY

- 138kV
- 230kV
- 500kV
- 69kV

- Railroad
- Runways
- District Boundary
- SD County Parcels

SDG&E Fee Property

- Lease
- Own
- Sold

- Lakes

N

Scale: 1:13,005

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3.0 BIOLOGICAL RESOURCES

In 2008 (February to October) Jones & Stokes Associates, Inc. conducted baseline biological resources surveys of the Preserve. The results of these surveys can be found in the biological resources report entitled, *Baseline Biological Resources Evaluation for the El Capitan Preserve*, dated December 2008, and attached as Appendix A. The survey results were used in the preparation of this RMP.

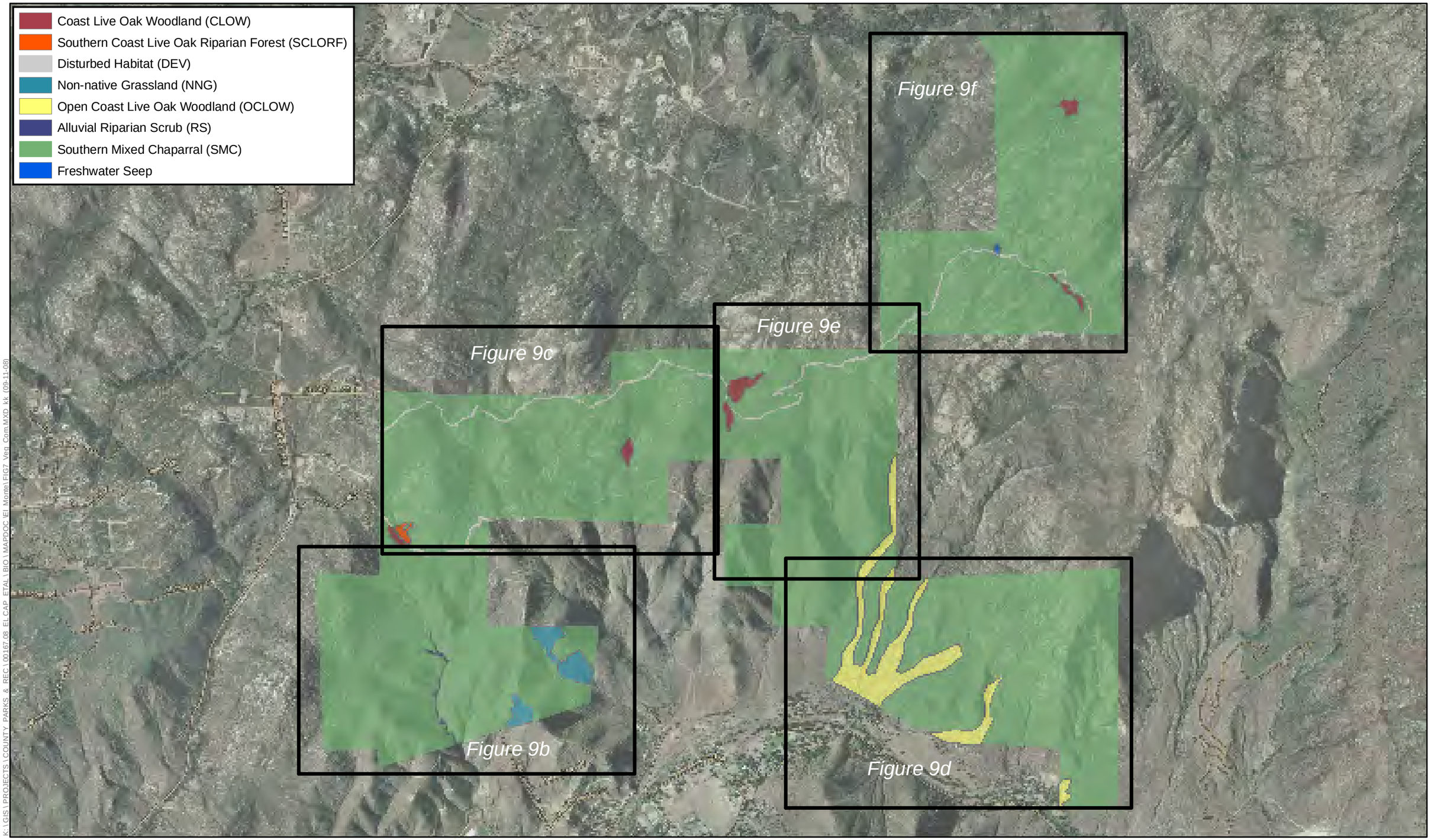
The 2008 surveys documented eight land cover types and 466 species within the Preserve. These surveys detected 312 plant species, 56 bird species, 32 mammal species (11 small mammals, eight medium and large bodied mammals, and 13 bats), 24 herpetiles (three amphibians and 21 reptiles), and 42 invertebrate species. This list includes 36 sensitive species, of which eight are MSCP-covered species (six wildlife and two plants).

3.1 Vegetation Communities/Habitat

Vegetation communities present within the Preserve consist of southern coast live oak riparian forest, riparian scrub, southern mixed chaparral, open coast live oak woodland, coast live oak woodland, non-native grassland, freshwater seep and disturbed habitat (Figures 9a-f, Table 1). A description of the vegetation communities and the dominant plant species detected during the survey are found below.

Table 1. Vegetation Communities within the Preserve

Vegetation Community	Acreage
Southern Coast Live Oak Riparian Forest	1.7
Southern Mixed Chaparral	2,466.0
Non-native Grassland	23.0
Coast Live Oak Woodland	15.8
Riparian Scrub	4.1
Open Coast Live Oak Woodland	87.0
Freshwater Seep	0.5
Disturbed Habitat	13.1
Total	**2,611.2**



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SOURCE: ESRI Imagery

ICF Jones & Stokes
an ICF International Company

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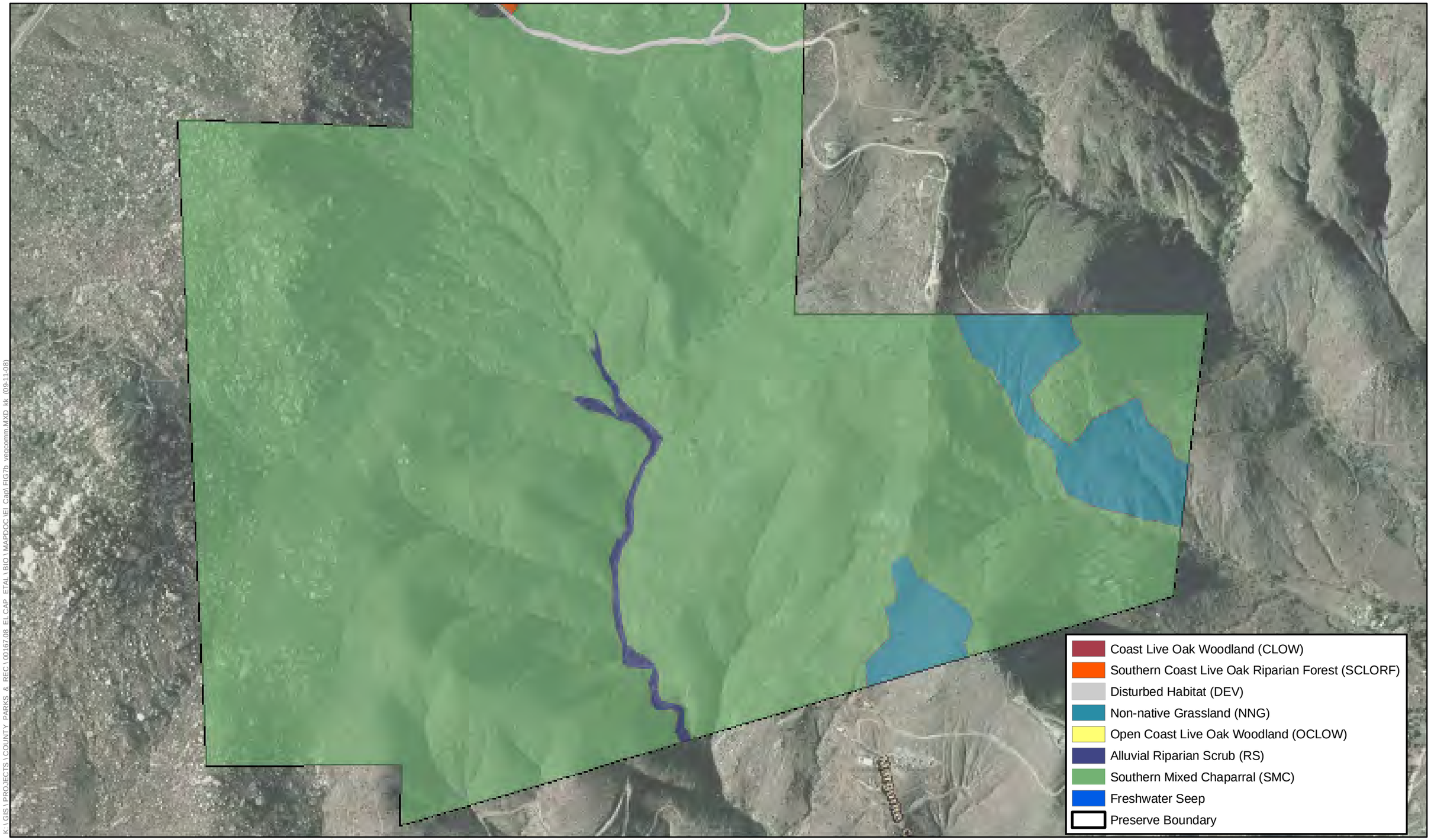
Figure 9a
Overview Vegetation Communities
El Capitan Preserve



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SOURCE: ESRI Imagery

ICF Jones & Stokes
an ICF International Company

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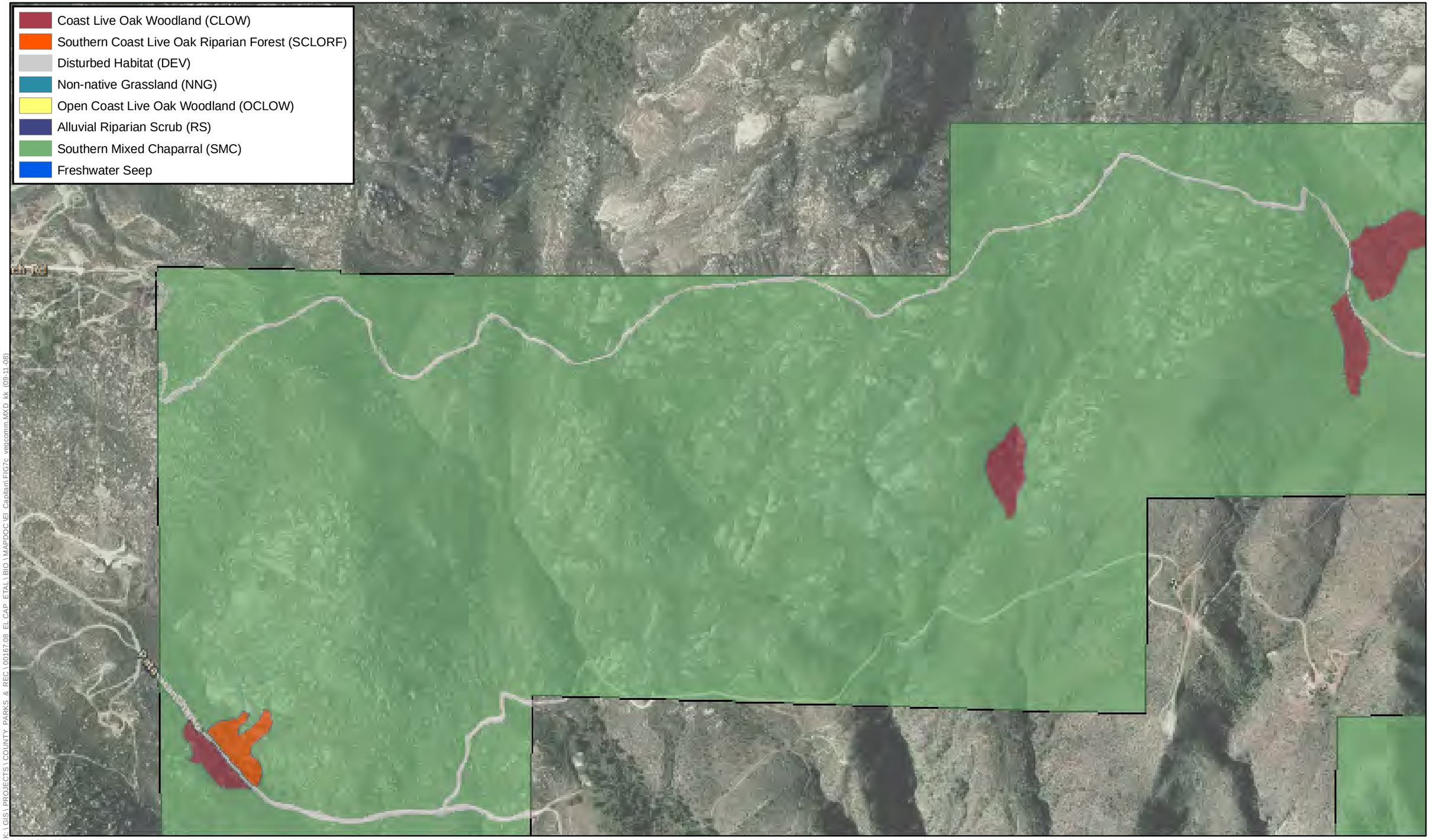
Figure 9b
Vegetation Communities
El Capitan Preserve



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SOURCE: ESRI Imagery

ICF Jones & Stokes
an ICF International Company

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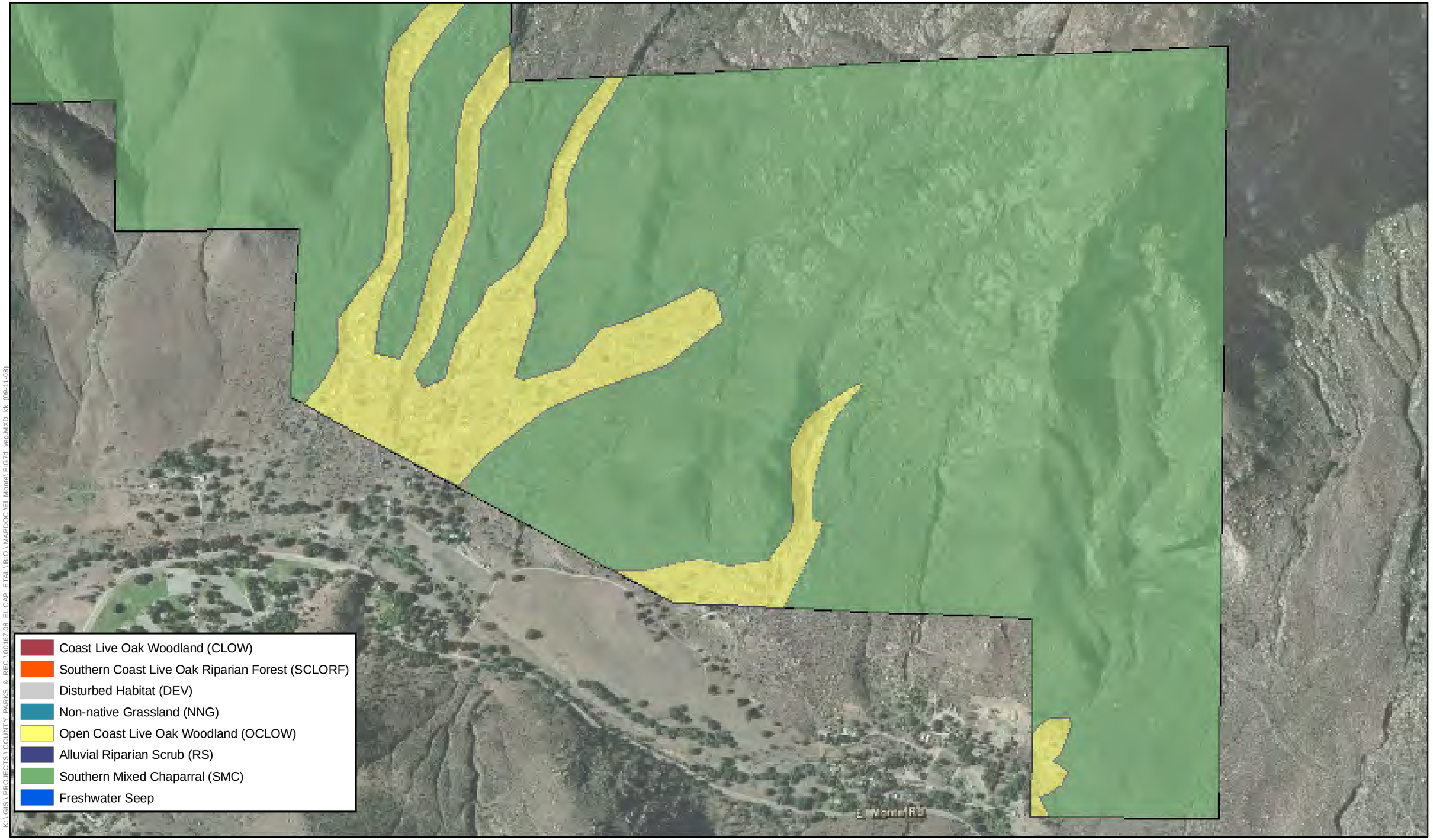
Figure 9c
Vegetation Communities
El Capitan Preserve



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SOURCE: ESRI Imagery

ICF Jones & Stokes
an ICF International Company

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Figure 9d
Vegetation Communities
El Capitan Preserve

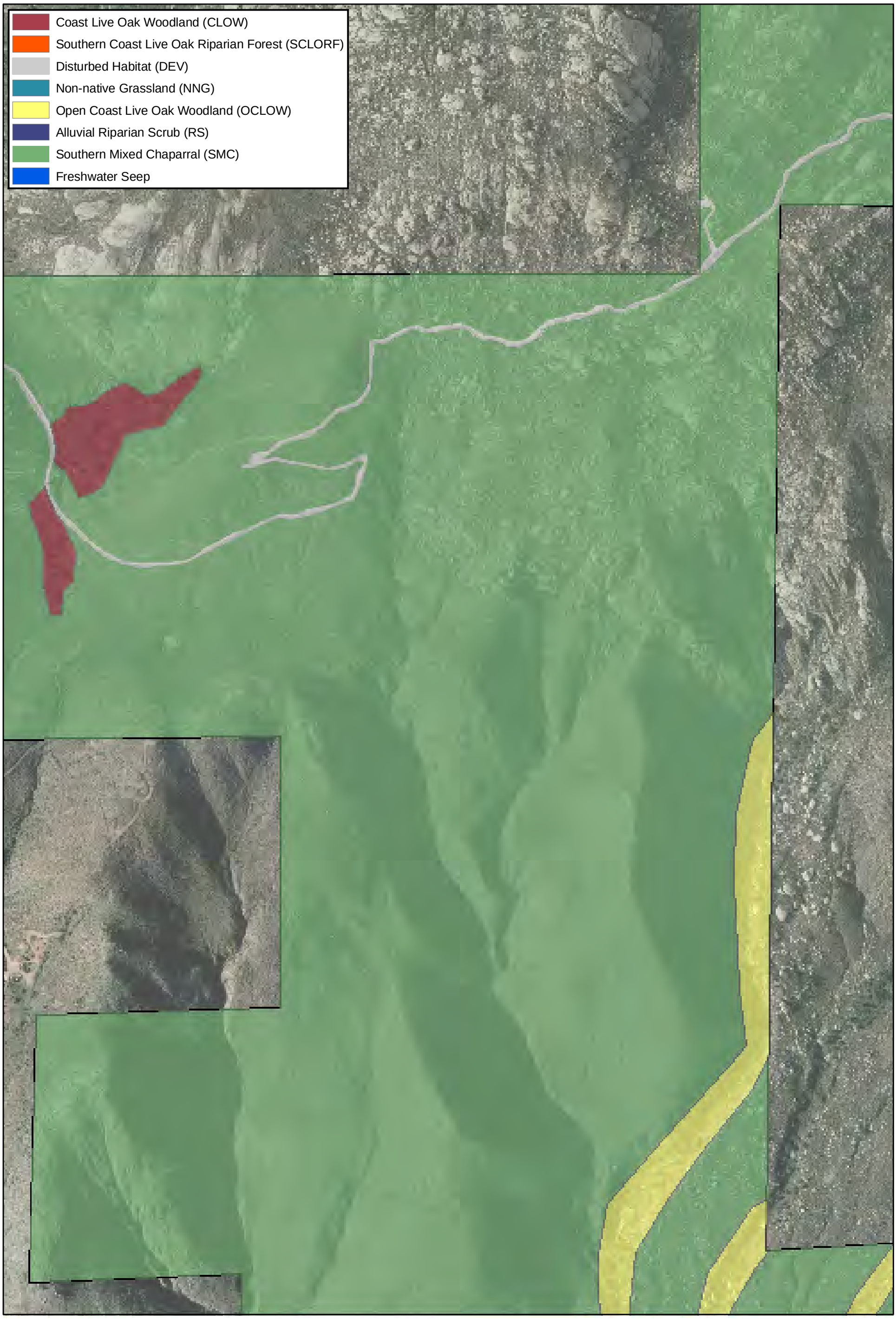

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Figure 9e
Vegetation Communities
El Capitan Preserve

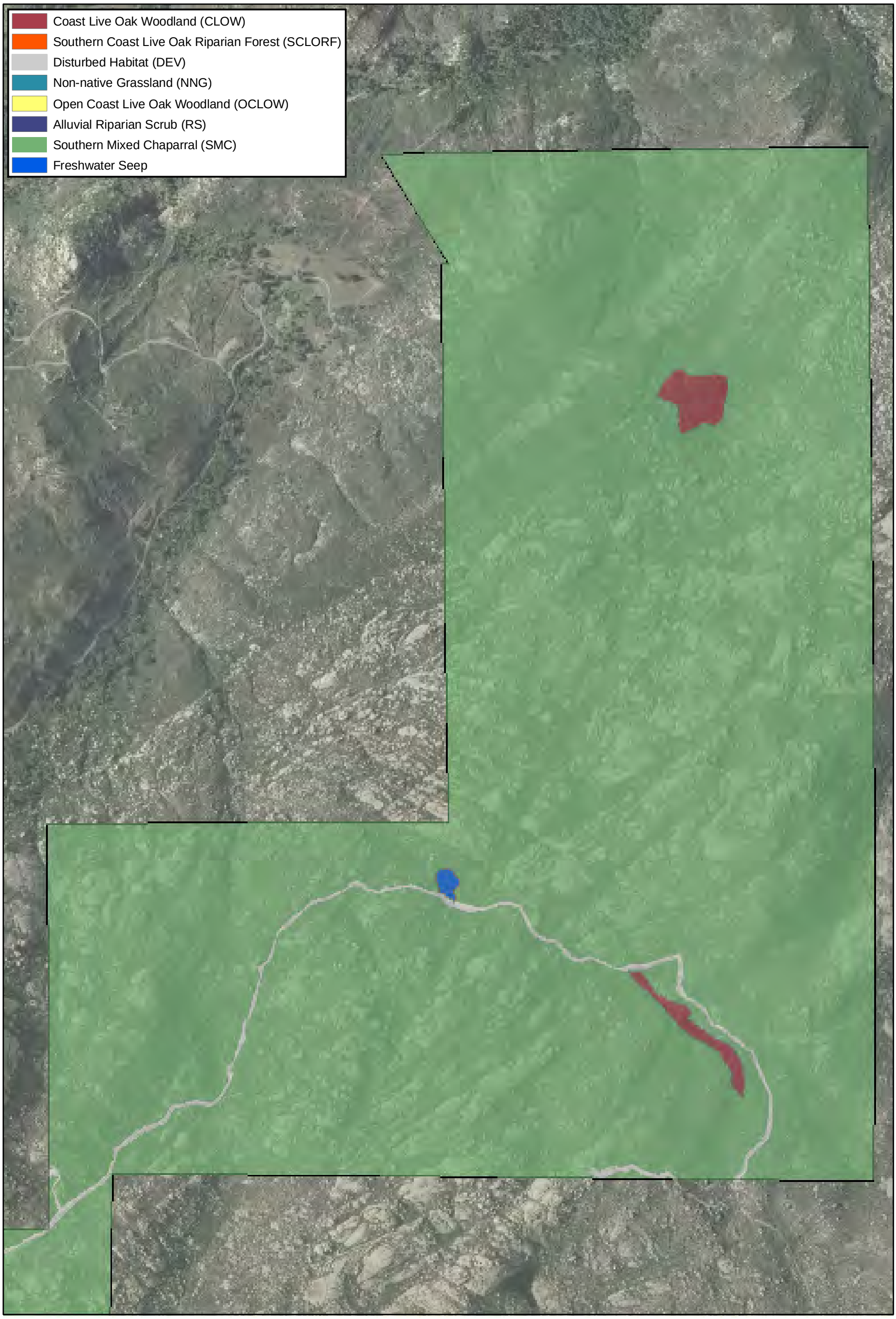

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Figure 9f
Vegetation Communities
El Capitan Preserve

Southern Coast Live Oak Riparian Forest (Holland Code 61310)

Southern coast live oak riparian forest is a dense evergreen sclerophyllous riparian forest dominated by coast live oak (*Quercus agrifolia*). According to Holland (1986), it is richer in herbs and poorer in understory shrubs than other riparian communities. It typically occurs in bottom lands and outer floodplains along larger streams, on fine-grained, rich alluvium.

Approximately 1.7 acres of southern coast live oak riparian forest occurs in the northeastern portion of the Preserve adjacent to the Trans-County Trail. Characteristic species include mule-fat (*Baccharis salicifolia*), Mexican elderberry (*Sambucus mexicanus*), poison oak (*Toxicodendron diverilobum*), stinging nettle (*Urtica urens*), and umbrella sedge (*Cyperus involucratus*).

Riparian Scrub (Holland Code 63000)

Riparian scrub consists of poorly developed, tall, herbaceous riparian scrub loosely dominated by mule-fat. Approximately 4.1 acres of riparian scrub occurs along a tributary to the San Diego River in the southwestern portion of the Preserve. Other species observed within this community included chaparral broom (*Baccharis sarothroides*), stinging nettle, sand bar willow (*Salix exigua*), Mexican elderberry, and arroyo willow (*Salix lasiolepis*).

Freshwater Seep (Holland Code 45400)

Freshwater seeps occur where ground water is pushed to the surface, typically by impermeable granitic bedrock. On site approximately 0.5 acre of this vegetation community is found in the northeastern portion of the Preserve. Dominant plants observed include cattail (*Typha sp.*), Mexican rush (*Juncus mexicanus*), western azalea (*Rhododendron occidentale*), California huckleberry (*Vaccinium ovatum*), and bulrush (*Schoenoplectus sp.*).

Southern Mixed Chaparral (Holland Code 37120)

Southern mixed chaparral is a broad-leaved sclerophyll shrub community forming dense often impenetrable vegetation dominated by chamise (*Adenostoma fasciculatum*), mission manzanita (*Xylococcus bicolor*), Ramona lilac (*Ceanothus oliganthus*), scrub oak (*Quercus berberidifolia*), and manzanita (*Arctostaphylos glauca*). Southern mixed chaparral is the most common vegetation community on site with approximately 2,466 acres found throughout the Preserve. Other species observed during the field surveys included Mexican elderberry, poison oak, Lakeside ceanothus (*Ceanothus cyaneus*), rhus (*Rhus trilobata*), felt-leaved monardella (*Monardella hypoleuca ssp. lanata*), and toyon (*Heteromoles arbutifolia*).

Non-Native Grassland (Holland Code 42200)

Non-native grassland is characterized by a dense to sparse cover of annual grasses reaching up to three feet (one meter), which may include numerous native wildflowers, particularly in years of high rainfall. These annuals germinate with the onset of the rainy season and set seeds in the late spring or summer. This community is usually found on fine-textured soils that proceed from moist or waterlogged in the winter to very dry during the summer and fall (Holland 1986).

Approximately 23 acres of non-native grasslands occur within the southwestern portion of the Preserve. Non-native grasslands, in many circumstances, have replaced native grasslands as a result of disturbance either directly manmade (e.g., mechanical disturbance, grazing) or natural (e.g., altered fire cycles). Although, on the Preserve this community has likely replaced Diegan coastal sage scrub. Most of the areas mapped as non-native grassland would typically be dominated by shrub species and it is likely that the 2003 Cedar Fire has converted these shrublands to annual grasslands.

Coast Live Oak Woodland (Holland Code 71160)

Coast live oak woodland consists of a moderately dense canopy of Coast Live Oak trees that reach 33 to 82 feet (10 to 25 meters) in height. The shrub layer is typically poorly developed but may include toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*) or Mexican elderberry. Approximately 15.8 acres of coast live oak woodland is found dispersed within the central and northeastern portions of the Preserve. On site this community had a dense layer of poison oak within the understory. Other species observed included Palmer's sagebrush (*Artemisia palmeri*), rhus, and white flowering currant (*Ribes indecorum*).

Open Coast Live Oak Woodland (Holland Code 71161)

Open coast live oak woodland is typically dominated by coast live oak trees that reach 30 to 80 feet (nine to 24 meters) in height. The shrub layer within this habitat is usually poorly developed while the herb layer is continuous and typically dominated by non-native grasses. This community typically occurs on north-facing slopes and shaded ravines in southern California (Holland 1986).

Approximately 87 acres of open coast live oak woodland is dispersed through slopes and ravines in the southeastern portion of the Preserve. Other species observed within this community included Engelmann oak (*Quercus engelmannii*), toyon, laurel sumac, and Mexican elderberry.

Disturbed Habitat (Holland Code 11300)

Disturbed habitat within the Preserve consists of two dirt roads. One road located in the northern portion of the site is primarily used as a footpath, and

Pata Ranch Road that bisects the center portion of the Preserve is used to access residential buildings surrounding the Preserve.

3.2 Plant Species

3.2.1 Plant Species Present

Floristic inventories detected 312 plant species at the Preserve. The Baseline Biological Resources Evaluation (Appendix A) includes the complete list of all plant species observed during the surveys.

3.2.2 Rare, Threatened or Endangered Plants Present

A special-status plant species is one listed by federal or state agencies as threatened or endangered; considered to be of special status by one or more special interest groups, such as the California Native Plant Society (e.g., CNPS List 1, 2, 3, and 4 Plant Species); is included on the County's Sensitive Plant list (Group A, B, C, or D Listed Plants); or is covered under the MSCP.

Nine special status plant species were detected at the Preserve (Figure 10) including: Lakeside ceanothus (*Ceanothus cyaneus*), San Diego sunflower (*Viguiera laciniata*), felt-leaved monardella (*Monardella hypoleuca ssp. lanata*), Ramona horkelia (*Horkelia truncata*), Moreno currant (*Ribes canthariforme*), Palmer's sagewort (also known as San Diego sagewort) (*Artemisia palmeri*), Engelmann oak (*Quercus engelmannii*), San Diego marsh elder (*Iva hayesiana*), and Palmer's grappling hook (*Harpagonella palmeri*). Each of these species is addressed below in more detail.

Lakeside Ceanothus (*Ceanothus cyaneus*)

CNPS List 1B, San Diego County Group A, MSCP Covered Species

Lakeside ceanothus is known from an extremely small range (southern Ramona to the foothills of Lakeside). Typically, this ceanothus occurs in dense, almost impenetrable chaparral with a mix of chamise and other shrubs such as manzanita. On the Preserve, Lakeside ceanothus is found within the rocky southern mixed chaparral located along the southwestern and northeastern most portions of the Preserve.

San Diego Sunflower (*Viguiera laciniata*)

CNPS List 4, San Diego County Group D

San Diego sunflower is associated with arid Diegan coastal sage scrub at a variety of elevations. In San Diego County, its distribution is primarily south of Highway 78 to the international border. This species occurs sporadically along the south facing slopes within the southeast portion of the Preserve.

Sensitive species detected at Herpetological Array
Included: Western Spadefoot Toad,
Coastal Western Whiptail, San Diego Horned Lizard

Sensitive species detected at Herpetological Array
Included: Coastal Western Whiptail,
San Diego Horned Lizard

Sensitive species detected at Herpetological Array
Included: Western Spadefoot Toad,
Coastal Western Whiptail, Orangethroated Whiptail,
Coronado Skink

Sensitive species detected at Herpetological Array
Included: Western Spadefoot Toad,
Coastal Western Whiptail, Coronado Skink

RCSP
RCSP
RCSP, WEBL
RCSP
RCSP, SAGS
RCSP
RCSP
COHA, RCSP, WTKI
COHA, RCSP
COHA, RCSP
RCSP

Bingo Rd
Barona Rd
Old Barona Rd
Wildcat Canyon Rd
Blue Sky Ranch Rd
Pala Rancho Rd
Pala View Dr
Mountain Valley Pl
El Monte Rd

Invasive Species
- Fountain Grass
- Pampas Grass

Sensitive Species
- Two Striped Garter Snake
- Rufous Crowned Sparrow
- Red Diamond Rattlesnake
- San Diego Horned Lizard
- Coastal Pachnose Snake
- Coronado Skink
- Moreno Currant
- Felt Leaved Monardella
- Lakeside Ceanothus
- Palmer's Grappling Hook
- Palmer's Sagebrush
- Ramona Horkelia
- San Diego Marsh Elder
- San Diego Sunflower
- Sensitive Species Detected during Avian Point Count Surveys
- Sensitive Species Detected during Herp Array Sampling
- El Capitan Preserve Boundary
- Lakeside Ceanothus
- Engleman Oak
- Felt Leaved Monardella

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SOURCE: ESRI Imagery

ICF Jones & Stokes
an ICF International Company

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Figure 10
Special Status Plant & Wildlife Species
El Capitan Preserve

Felt-Leaved Monardella (*Monardella hypoleuca* ssp. *lanata*)

CNPS List 1B, San Diego County Group A, MSCP Covered Species

Felt-leaved monardella is typically found within the understory of mature chaparral. Felt-leaved monardella was primarily found in dark, semi-friable soils within the northeastern portion of the Preserve. Although this species was only documented within the northeastern portion of the Preserve, given the extensive amount of suitable habitat and the wide distribution of documented individuals, it is estimated that over 1,000 individuals occur within the Preserve.

Ramona Horkelia (*Horkelia truncata*)

CNPS List 1B, San Diego County Group A

Ramona horkelia is typically associated with chamise chaparral. Approximately 1,000 individuals of Ramona horkelia were found within the northeastern portion of the Preserve. Specifically, these plants were found associated with wet areas adjacent to the existing trails system.

Moreno Currant (*Ribes canthariforme*)

CNPS List 1B, San Diego County Group A

Moreno currant is typically found in rocky mixed chaparral. Approximately 20 individuals of this species were observed in the northeastern portion of the Preserve. Given the extensive amount of suitable habitat present on site, it is likely that the Preserve supports additional populations not documented in this survey effort.

Palmer's Sagewort (also known as San Diego sagewort) (*Artemisia palmeri*)

CNPS List 4, San Diego County Group D

Palmer's sagewort is typically found along creeks and drainages near the coast and within inland chaparral. Within the Preserve this species is found primarily along the western portion of the Preserve; a single location was also documented within the northeastern portion of the Preserve.

Engelmann Oak (*Quercus engelmannii*)

CNPS List 4, San Diego County Group D

Engelmann oak is commonly found in the foothills between 500 and 4,000 feet (152 and 1,219 meters) AMSL. Growing up to 40 feet (12 meters) tall, this tree has flat, grey-blue-green leaves and tolerates less water than coast live oak.

Larger Engelmann oaks are sometimes found growing in savannah grasslands, but this species may also occur as a shrubby element within chaparral. Engelmann oaks are still relatively abundant throughout their range in southern California. All Engelmann oaks on the Preserve were found within the open coast live oak woodland located along the southeast portion of the Preserve.

San Diego Marsh Elder (*Iva hayesiana*)

CNPS List 2, San Diego County Group B

San Diego marsh elder is associated with intermittent streambeds, seeps and sandy alluvial embankments. This species was found along a tributary to the San Diego River in the southeastern portion of the Preserve.

Palmer's Grappling Hook (*Harpagonella palmeri*)

CNPS List 4, San Diego County Group D

Palmer's grappling hook is associated with clay soils within coastal sage scrub. On site this species is found on clay soils atop the mesa within the eastern central portion of the Preserve.

3.2.3 Rare, Threatened or Endangered Plants with High Potential to Occur

Four special status plants have a high potential to occur within the Preserve including: Gander's ragwort (*Packera ganderi*), San Diego thorn-mint (*Acanthomintha ilicifolia*), San Diego goldenstar (*Bloomeria [Muilla] clevelandii*), and delicate clarkia (*Clarkia delicata*). Additional information on these species can be found in the Baseline Biological Resources Evaluation (Appendix A).

Gander's Ragwort (*Packera ganderi*)

State-Listed Rare, CNPS List 1B, San Diego County Group A

This species was not observed within the Preserve, but the California Natural Diversity Database (CNDDB) (CDFG 2008) reports an account of this species along the eastern slope of El Cajon Mountain.

San Diego Thorn-Mint (*Acanthomintha ilicifolia*)

Federally Threatened, State Endangered, CNPS List 1B, San Diego County Group A, MSCP Covered Species

This species was not observed during the 2008 surveys, but it is considered to have a high potential to occur as suitable habitat and soils occur within the southern portion of the Preserve. Furthermore, access constraints along the

southern portion of the Preserve may have contributed to the current negative survey results.

San Diego Goldenstar (*Bloomeria [Muilla] clevelandii*)

CNPS List 1B, San Diego County Group A, MSCP Covered Species

This species was not observed during the 2008 surveys, but is still considered to have a high potential to occur as suitable habitat and soils occur on the Preserve. Furthermore, access constraints along the southern portion of the Preserve likely contributed to the current negative survey results.

Delicate Clarkia (also known as Campo Clarkia) (*Clarkia delicata*)

CNPS List 1B, San Diego County Group A

This species was not observed within the Preserve, but was documented just south of the Preserve boundary within the San Diego River.

3.2.4 Non-native and/or Invasive Plant Species

In general, the upland areas within the Preserve are dominated primarily by native or naturalized plant species. However, large clumps of pampas grass (*Cortaderia selloana*) occur along the Trans-County Trail within the northeastern portion of the Preserve. Fountain grass (*Pennisetum setaceum*) was also detected in several areas along the Trans-County Trail with the majority occurring in the north central portion of the Preserve (Figure 10). These invasive, non-native species are considered California Invasive Plant Council (Cal-IPC) listed plants with overall ratings of “high” and “moderate”.

Pampas grass is a large perennial grass that was introduced as an ornamental plant and for erosion control. Each plume produces up to 100,000 seeds that are widely dispersed by wind and develop without fertilization. This species quickly colonizes bare ground, but establishment is generally poor where the seedlings must compete with other grasses or sedges (Cal-IPC 2009). The Cal-IPC inventory categorizes pampas grass as having an overall rating of “high”. A “high” rating signifies species that have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Fountain grass is a perennial grass which primarily grows along the southern California coast. This species is well adapted to fire, and plants can recover to pre-burn density, even increase in density, following a burn (Cal-IPC 2009). It is categorized by the Cal-IPC inventory as having an overall rating of “moderate”. A “moderate” rating signifies species that have substantial and apparent, but generally not severe, ecological impacts on physical processes, plant and animal

communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance.

3.3 Wildlife Species

3.3.1 Wildlife Species Present

Invertebrates

A complete list of invertebrate species identified on the Preserve below the level of family is included in the faunal list of the Baseline Biological Resources Evaluation (Appendix A). No special-status butterfly species or other invertebrate species were detected during the 2008 surveys and no special-status invertebrate species are reported within the Preserve by the CNDDB (CDFG 2008).

Butterflies

Butterfly species observed during the 2008 surveys include: desert orangetip (*Anthocharis cethura*), Sara's orangetip (*Anthocaris sara*), Behr's metalmark (*Apodemia mormo virgulti*), perplexing hairstreak (*Callophrys affinis perplexa*), brown elfin (*Callophyrys augustinus*), orange sulfur (*Colias eurytheme*), funereal duskywing (*Erynnis funeralis*), southern blue (*Glaucopsyche lygdamus australis*), Acmon blue (*Icaricia acmon*), common buckeye (*Junonia coenia*), pale swallowtail (*Papillo eurymedon*), western tiger swallowtail (*Papillo rutulus*), anise swallowtail (*Papillo zelicaon*), cabbage white (*Pieris rapae*), checkered/common white (*Pontia protodice*), spring white (*Pontia sisymbrii*), white checkered skipper (*Pyrgus albescens*), west coast lady (*Vanessa annabella*), red admiral (*Vanessa atalanta*), and painted lady (*Vanessa cardui*). While not detected, both Quino checkerspot and Hermes copper (*Lycaena hermes*) have potential to occur within the Preserve based on the presence of their primary host plants, dwarf plantain (*Plantago erecta*) and spiny redberry (*Rhamnus crocea*), respectively.

Other Invertebrates

Twelve other invertebrate species were captured in the pitfall traps associated with the herpetological arrays or observed during other fieldwork. These species were identified in the field or photographed and provided to a local entomologist to identify. No invertebrate species were collected.

Amphibians

The following three amphibian species were captured in the pitfall traps during the 2008 sampling at the Preserve: western spadefoot (*Spea hammondii*), a special-status species; Pacific chorus frog (*Pseudacris regilla*); and western toad (*Bufo boreas*). One other native amphibian species, California chorus frog

(*Pseudacris cadaverina*), was detected during active searches. A complete list of herpetofauna observed within the Preserve during the 2008 herpetological surveys is included in the faunal list of the Baseline Biological Resources Evaluation (Appendix A).

Reptiles

During the 2008 sampling at the Preserve, 20 reptile species were detected. Ten lizard and ten snake species were detected with eight species having special status. Sensitive species detected include: San Diego horned lizard (*Phrynosoma coronatum blainvillii*), Coronado skink (*Eumeces skiltonianus interparietalis*), orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*), coastal western whiptail (*Cnemidophorus tigris stejnegeri*), coastal rosy boa (*Charina trivirgata roseofusca*), coast patch-nosed snake (*Salvadora hexalepis vigultea*), two-striped garter snake (*Thamnophis hammondii*), and red diamond rattlesnake (*Crotalus ruber*). A complete list of herpetofauna observed within the Preserve during the 2008 herpetological surveys is included in the faunal list of the Baseline Biological Resources Evaluation (Appendix A).

Birds

Avian species richness (total species detected) was found to be moderate at the Preserve. In total, 56 bird species were detected including 53 species during the point counts and three during other fieldwork. These included year-round residents, winter-only species, breeding species that migrate to the Neotropics, and species that are strictly migratory through the Preserve, neither breeding nor wintering there. A complete list of avian species observed within the Preserve during the 2008 surveys is included in the faunal list of the Baseline Biological Resources Evaluation (Appendix A).

The Preserve's avifauna is a mixture of species that are closely associated with chaparral recovering from fire, boulder and rock outcrops, and intermittent oak woodlands. These species include: California quail (*Callipepla californica*), black-chinned hummingbird (*Archilochus alexandri*), Costa's hummingbird (*Calypte costae*), Anna's hummingbird (*Calypte anna*), ash-throated flycatcher (*Myiarchus cinerascens*), bushtit (*Psaltriparus minimus*), rock wren (*Salpinctes obsoletus*), canyon wren (*Catherpes mexicanus*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), spotted towhee (*Pipilo maculates*), California towhee (*Pipilo crissalis*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), black-chinned sparrow (*Spizella atrogularis*), lazuli bunting (*Passerina amoena*), house finch (*Carpodacus mexicanus*), and lesser goldfinch (*Carduelis psaltria*).

The Preserve has a good diversity of raptors (birds of prey), including five raptor species observed: turkey vulture (*Cathartes aura*), white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo*

jamaicensis), and barn owl (*Tyto alba*). These birds are using the Preserve for foraging and some species have potential to breed on site; however, no active raptor nests were observed. In addition, golden eagle (*Aquila chrysaetos*) was not directly observed during the 2008 surveys; however, local residents and two park rangers informed biologists of sightings and there is known breeding on the cliff face near El Capitan Reservoir.

The nocturnal bird surveys documented two nocturnal species using the Preserve, barn owl and common poorwill (*Phalaenoptilus nuttallii*). There are other areas of the Preserve that have potential to support these and other nocturnal species, but due to lack of access and safety of travel at night, these areas were not surveyed. The Preserve provides high potential for three additional nocturnal species: great horned owl (*Bubo virginianus*), western screech-owl (*Megascops kennicottii*) and lesser nighthawk (*Chordeiles acutipennis*). These species could be present in small numbers, though they were not detected during the surveys. Great horned owl and western screech-owl may be absent from the Preserve due to the open, fragmentary structure of the woodlands due to the 2003 fire, drought, or other factors.

The Preserve supports several areas of oak woodland, but there is no reasonable potential for southwestern willow flycatcher (*Empidonax traillii extimus*) or least Bell's vireo (*Vireo bellii pusillus*) to occur at the Preserve beyond rare and brief visits due to lack of suitable habitat. It is likely that other subspecies of willow flycatcher pass through the Preserve in spring and fall, though they were not recorded during the current work.

As most of the Preserve supports southern mixed chaparral, there is low potential for coastal California gnatcatchers (*Polioptila californica californica*) to breed on site. Historically, the species has been found in the vicinity, so there is potential for the species to occur at the Preserve during rare and brief visits. Any area of coastal sage scrub found at the Preserve currently is not appropriate for this species.

Mammals

A complete list of mammal species observed within the Preserve during the 2008 surveys is included in the faunal list of the Baseline Biological Resources Evaluation (Appendix A).

Small Mammals

In total, eleven small mammal species were recorded at the Preserve during small mammal trapping and other surveys. The trapping results indicate that the Preserve has good abundance and species diversity in small mammals with 117 captures from seven species. The species detected are commonly found in the habitats found on the Preserve. Sensitive species captured include: Dulzura

pocket mouse (*Chaetodipus californicus femoralis*) and San Diego desert woodrat (*Neotoma lepida intermedia*).

Medium to Large Mammals

A total of eight medium and large mammals were detected in the Preserve through direct observation, tracks, sign, and nocturnal surveys including: desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), common raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), bobcat (*Lynx rufus*), southern mule deer (*Odocoileus hemionus fuliginata*), domestic dog (*Canis familiaris*), and domestic horse (*Equus caballus*).

Bats

A total of 13 bat species were detected during the three seasons of monitoring in 2008. The most active bat species detected were the California myotis (*Myotis californicus*), canyon bat (*Parastrellus hesperus*), and pocketed free-tailed bat (*Nyctinomops femorosaccus*). Species detected infrequently included the western red bat (*Lasiurus blossevillii*), pallid bat (*Antrozous pallidus*), and big free-tailed bat (*Nyctinomops macrotis*). There were a number of bats detected during all three monitoring sessions including the small-footed myotis (*Myotis ciliolabrum*), canyon bat, Townsend's big-eared bat (*Corynorhinus townsendii*), Mexican free-tailed bat (*Tadrida brasiliensis*), pocketed free-tailed bat, and western mastiff bat (*Eumops perotis*). The western red bat, hoary bat (*Lasiurus cinereus*), and big free-tailed bat were only detected during the spring, and the pallid bat only during the summer. There are no additional special-status bat species with high potential to occur at the Preserve.

3.3.2 Rare, Threatened or Endangered Wildlife Present

This section discusses special-status wildlife species observed at the Preserve (Figure 10). A special-status wildlife species is one listed by federal or state agencies as threatened or endangered; is included on the County's Sensitive Animal List (Group 1 or 2 Species); or is covered under the MSCP. Twenty-seven special-status wildlife species were detected at the Preserve. Each of these 27 species is addressed below in more detail.

<u>Western Spadefoot (*Scaphiopus* [=*Spea*] *hammondii*)</u>

State Species of Special Concern, San Diego County Group II

The western spadefoot range covers the central portion of northern California, the Great Valley, and Coast Ranges from San Francisco to Baja California (Lemm 2006). Although they spend the great majority of their life outside water, they require temporary rain pools with water temperatures between 48° and 86°F (9° and 30°C) lasting upwards of three weeks. These pools must also lack predators of eggs and tadpoles such as introduced fishes, bullfrogs, and

crayfishes (Jennings and Hayes 1994). Vernal pools are sometimes occupied, but in all cases the species must have access to soils suitable for digging to allow aestivation during the dry season. Tolerance of disturbance is high where conditions are otherwise suitable, and the species is sometimes found in pools resulting from landscape modification by man, even adjacent to roads. Western spadefoot individuals were captured in three of the four herpetological arrays in March, April, May and June. Although no tadpoles of this species were observed, they are presumed to be breeding in pools or streams within the Preserve or near the Preserve boundary.

San Diego Horned Lizard *(Phyrnosoma coronatum blainvillii*)

State Species of Special Concern, San Diego County Group II, MSCP Covered Species

The San Diego horned lizard is a large lizard that historically was found in Kern, Los Angeles, Santa Barbara, and Ventura counties southward to Baja California, Mexico. Horned lizards inhabit a variety of vegetation communities including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest (Stebbins 2003). Loose, fine soils with a high sand content, an abundance of prey and open areas with limited overstory typify suitable habitat for this species (Jennings and Hayes 1994). The San Diego horned lizard's insectivorous diet consists mostly of native harvester ants (*Pogonmyrmex* sp.) which make up over 90% of their prey items, but it is an opportunistic feeder that will take other insects including termites, beetles, flies, wasps, and grasshoppers (Stebbins 2003, Jennings and Hayes 1994). This species has disappeared from about 45% of its former range and a number of factors have led to this decline including habitat fragmentation and degradation, loss of native prey to exotic species, and extensive collection for the curio trade (Jennings and Hayes 1994). The specialized diet of harvester ants has made horned lizards especially vulnerable to extirpation since the introduction of Argentine ants (*Linepithema humile)*. San Diego horned lizards were captured in three of the four herpetological arrays in March, April and May.

Coronado Skink (*Eumeces skiltonianus interparietalis*)

State Species of Special Concern, San Diego County Group II

The Coronado skink is a medium-sized secretive lizard that is typically found in the moister areas of coastal sage scrub, chaparral, oak woodlands, pinon-juniper, riparian woodlands and pine forests (Jennings and Hayes 1994). Their prey includes small invertebrates found in leaf litter or dense vegetation at the edges of rocks and logs. The Coronado skink is found along the coastal plain and Peninsular Ranges west of the deserts from approximately San Gorgonio Pass in Riverside County south to San Quentin, Mexico (Jennings and Hayes

1994). This species was captured in one of the four herpetological arrays in April.

Orange-Throated Whiptail (*Cnemidophorus hyperythrus beldingi*)

State Species of Special Concern, San Diego County Group II, MSCP Covered Species

The orange-throated whiptail is a medium-sized lizard that ranges from southern California (specifically Corona del Mar in Orange County and Colton in San Bernardino County) southward to the tip of Baja California, Mexico. Historically, most populations of the orange-throated whiptail were found on floodplains or terraces along streams in brushy areas with loose soil and rocks (McGurty 1980). Habitat types they are known to use include chaparral, non-native grassland, coastal sage scrub, juniper woodland, and oak woodland. California buckwheat is an important indicator of appropriate habitat for orange-throated whiptails (Dudek 2000). This plant species is a colonizer of disturbed, sandy soils and usually indicates open shrub spacing that is required for foraging and thermoregulatory behavior. Orange-throated whiptails appear to be dietary specialists with most (> 85%) of its prey being comprised of termites (Dudek 2000). The decline of orange-throated whiptails is likely due to loss of habitat to agriculture and urban development. This species was captured in two of the four herpetological arrays in May, June and July.

Coastal Western Whiptail (*Cnemidophorus tigris multiscutatus*)

San Diego County Group II

Coastal western whiptail is a medium-sized slender lizard that is found in arid and semiarid desert to open woodlands where the vegetation is sparse so running is easy (Stebbins 2003). Its range includes coastal southern California and western Baja California. The decline of coastal western whiptails is likely due to loss of habitat to agriculture and urban development. This species was captured numerous times throughout the trapping program in all four herpetological arrays and was captured during all five months of sampling.

Coastal Rosy Boa (*Charina trivirgata roseofusca*)

San Diego County Group II

Coastal rosy boas are heavy-bodied snakes that inhabit arid scrublands, semi-arid and rocky shrublands, rocky deserts, canyons, and other rocky areas (Stebbins 2003). This species eats rodents, small birds, lizards, small snakes, and amphibians and kills its prey by constriction. Coastal rosy boas occur in southwestern California from the coastal slopes of the San Gabriel and San Bernardino mountains, and across the peninsular ranges into the desert in San

Diego County (Stebbins 2003). Threats to this species include habitat degradation and fragmentation from urban development. This species was observed in October along the access road from Blue Sky Ranch Road.

Coast Patch-Nosed Snake (*Salvadora hexalepis virgultea*)

State Species of Special Concern, San Diego County Group II

The coast patch-nosed snake is a medium-sized, slender snake that is a habitat generalist that makes use of whatever vegetative cover is available and thrives in most environments. It is also a generalist in its diet, opportunistically feeding on anything it can overpower including small mammals, lizards, and the eggs of lizards and snakes. The species ranges from Creston in San Luis Obispo County southward into Baja California (Stebbins 2003). The decline of this species is likely due to conversion of habitat to development, agriculture or non-native plant species. This species was observed during surveys of the Preserve.

Two-Striped Garter Snake (*Thamnophis hammondii)*

State Species of Special Concern, San Diego County Group I

Two-striped garter snake occurs west of the deserts and Central Valley from Salinas, Monterey County, south into Baja California, and at elevations from sea level up to about 8,000 feet (2,438 meters) AMSL in the San Jacinto Mountains (Jennings and Hayes 1994). It is often in water and rarely found far from it, though it is also known to inhabit intermittent streams having rocky beds bordered by willow thickets or other dense vegetation (Jennings and Hayes 1994). They will also inhabit large riverbeds such as those of the Santa Ana and Santa Clara rivers if riparian vegetation is available, and even occur in artificial impoundments if both aquatic vegetation and suitable prey items (small amphibians and fish) are present (Jennings and Hayes 1994). Declines are attributable directly to loss of riparian habitats. This species was observed during surveys of the Preserve.

Red Diamond Rattlesnake (*Crotalus ruber ruber*)

State Species of Special Concern, San Diego County Group II

The red diamond rattlesnake is a large, heavy-bodied rattlesnake that has a wide tolerance for varying environments and can be found in a variety of vegetation types, but it is most commonly seen in areas with heavy brush and cactus, rocks or boulders (Stebbins 2003). The known range extends from San Bernardino County along the coastal and desert slopes southward to Baja California. Adult red diamond rattlesnakes eat mostly squirrels and rabbits, but lizards, specifically the western whiptail, are a significant food source for juveniles (Jennings and Hayes 1994). Urban development and the trend towards planting orchards on

the steeper rocky hillsides have significantly decreased the amount of appropriate habitat for this species (Jennings and Hayes 1994). This species was observed during surveys of the Preserve.

Turkey Vulture (*Cathartes aura*)

San Diego County Group I

Turkey vultures are often seen foraging over woodlands and nearby open country (Unitt 2004). They prefer dry, open country, ranch lands and often occur along roadsides where carrion is common. They nest in crevices among granite boulders (Unitt 2004). The turkey vulture's range has been retracting from the coast due to human disturbance, loss of foraging habitat and pesticide contamination (Unitt 2004). Turkey vultures were observed foraging over the Preserve.

White-Tailed Kite (*Elanus leucurus)*

State Fully Protected Species, San Diego County Group I

The white-tailed kite is found in lower elevations in open grasslands, agricultural areas, wetlands, and oak woodlands. Their primary source of food is the California vole (*Microtus californicus sanctidiegi*) (Unitt 2004). The white-tailed kite typically forages in open undisturbed habitats and nests in the top of a dense oak, willow or other large tree (Unitt 2004). The decline of this species is mostly due to urban sprawl; however, this species is still considered fairly widespread throughout the foothills of San Diego County (Unitt 2004). A white-tailed kite was observed foraging over the Preserve.

Cooper's Hawk (*Accipiter cooperii*)

San Diego County Group I, MSCP Covered Species

The Cooper's hawk is a resident of riparian deciduous habitats and oak woodlands, but in recent times has become adapted to urban park environments (Unitt 2004). They hunt their primary source of food, passerines, in broken woodlands and forest margins, and they are also known to take fish and mammals. The Cooper's hawk population declined due to hunting and loss of habitat; however, this species is making a comeback through its adaptation to the urban environment (Unitt 2004). Cooper's hawk was detected along the three point count stations adjacent to Pata Ranch Road in April, June and July. The Preserve provides suitable foraging and breeding habitat even though breeding was not confirmed.

Barn Owl (*Tyto alba*)

San Diego County Group II

The barn owl is the owl species that is most tolerant to urban development (Unitt 2004). It will nest in buildings, nest boxes, at the base of the leaves in palm trees, and in cavities in native trees. Even though this species is tolerant of human development, dense housing communities do not provide suitable nesting habitat and increased traffic has had a negative effect on the species (Unitt 2004). The barn owl was not detected at the Preserve until August in the oak woodland in the central portion of the property. This bird was most likely transitory.

Western Bluebird (*Sialia mexicana*)

San Diego County Group II, MSCP Covered Species

The western bluebird is a stocky blue bird with a chestnut chest and is considered common in the foothills and mountains of San Diego County. This species can usually be found in montane coniferous and oak woodlands (Unitt 2004). It can also occur in areas with scattered trees, open forests, scrubs and during the winter in the desert. Western bluebirds breed in western North America from southern British Columbia south to central Mexico, east to western Montana and west Texas, but are absent from the Great Basin (Guinan et al. 2000). This species may also winter outside its breeding range in central California and along the lower Colorado River (Guinan et al. 2000). Western bluebird numbers are declining due to loss of nesting cavities to logging, fire suppression, and competition with non-native species such as European starling and house sparrow (*Passer domesticus*) (Unitt 2004). One western bluebird was observed in May. This bird may have been moving through the area as the species was not detected during other sampling periods.

Southern California Rufous-Crowned Sparrow (*Aimophila ruficeps canescens*)

San Diego County Group I, MSCP Covered Species

The southern California rufous-crowned sparrow is a resident species that is closely associated with coastal sage scrub, steep rocky hillsides, burned chaparral, and openings in mature chaparral (Unitt 2004). Preferring open habitat with approximately 50% shrub cover, this species seeks cover in shrubs, rocks, grass, and forb patches (Dudek 2000, Unitt 2004). The southern California subspecies is restricted to semiarid coastal sage scrub and sparse chaparral from Santa Barbara south to the northwestern corner of Baja California (Dudek 2000). Rufous-crowned Sparrows are declining due to loss of appropriate habitat and are sensitive to habitat fragmentation (Unitt 2004).

Southern California rufous-crowned sparrows were detected throughout the recovering chaparral at the Preserve.

Bell's Sage Sparrow (*Amphispiza belli belli*)

San Diego County Group I

The Bell's sage sparrow is a resident species that is usually found in chaparral and coastal sage scrub in southern California into Baja California. This mostly ground-dwelling species prefers open chaparral and sage scrub and is one of the first species to inhabit recently burned habitat (Unitt 2004). This subspecies occurs along the coastal lowlands, inland valleys, and in the lower foothills of the local mountains in southern California into Baja California (Dudek 2000). The decline in this species can be attributed to fire suppression, invasion by exotic plant species, loss of habitat to agriculture and urban development, and population isolation due to habitat fragmentation (Unitt 2004, Dudek 2000). One Bell's sage sparrow was observed in May. This bird may have been moving through the area as the species was not detected during other sampling periods.

Golden Eagle (*Aquila chrysaetos*)

State Fully Protected Species, MSCP Covered Species, San Diego County Group I

Golden eagles nest on cliff ledges or trees on steep slopes and forage in grasslands, sage scrub, or broken chaparral (Unitt 2004). Development of the grasslands they forage over has taken a toll on the numbers of this species present in San Diego County. A territory averages 36 square miles, so removal of foraging habitat will have significant impacts on this species (Unitt 2004). Golden eagle nests are considered "perennial", that is, once they are built, the birds return to them repeatedly over time. Golden eagle was not directly observed during the 2008 surveys; however, El Cajon Mountain has been documented as a historical nesting site by the U.S. Forest Service, and nesting activity was confirmed in January 2009 (U.S. Forest Service 2009).

Dulzura Pocket Mouse (*Chaetodipus californicus femoralis*)

State Species of Special Concern, San Diego County Group II

Dulzura pocket mouse is mainly active on the ground, but also climbs shrubs and small trees when feeding (CDFG 2005). This species can become torpid by day at any time of the year, and is inactive in cold wet weather. It breeds in spring to early summer and occurs from sea level to approximately 7,900 feet (2, 408 meters) AMSL (CDFG 2005). This species prefers dense chaparral and is less common in dry grassland and desert scrub. During the 2008 trapping program on the Preserve, eight of the 117 animals captured were Dulzura pocket mouse.

San Diego Desert Woodrat (*Neotoma lepida intermedia*)

State Species of Special Concern, San Diego County Group II

San Diego desert woodrat requires large amounts of water, which it obtains from fleshy plants such as *Yucca* species and prickly pear cactus (*Opuntia* sp.). It usually makes a stick house under one of these food plants, or may den among rocks (CDFG 2005). House materials include cacti, sticks, bones and a variety of debris. Houses provide insulation against excessive heat as well as protection from predators. This species breeds in late winter or spring, occurs from sea level to approximately 8,500 feet (2,591 meters) AMSL in deserts and coastal sage scrub, and prefers areas with rocky outcrops and plentiful succulents (CDFG 2005). During the 2008 trapping program on the Preserve, six of the 117 animals captured were San Diego desert woodrat.

Southern Mule Deer (*Odocoileus hemionus fuliginata*)

San Diego County Group II, MSCP Covered Species

Southern mule deer are common across the western U.S. in a variety of habitats from forest edges to mountains and foothills (Whitaker 1996). Southern mule deer prefer edge habitats, rarely travel or forage far from water and are most active around dawn and dusk. Southern mule deer individuals were observed and also photographed by the camera stations.

Small-footed Myotis (*Myotis ciliolabrum*)

San Diego County Group II

The small-footed myotis is found throughout most of western North America, from southwestern Canada south into Mexico (BCI 2008). There is not much information on the habitat requirements of this species, but it has been documented under rock slabs and in crevices, mine tunnels, under loose tree bark, and in buildings (BCI 2008). This species hibernates in caves, typically in small groups. Reasons for decline are poorly understood as there has been little research conducted on this species. Both suitable roosting and foraging habitat for the small-footed myotis occur in the Preserve. This species was detected during all three seasons of bat monitoring.

Yuma Myotis (*Myotis yumanensis*)

San Diego County Group II

The Yuma myotis is found throughout much of the western U.S. and up into Canada (BCI 2008). The species is always found near lakes, creeks or ponds

where the species forages over the water. Typically, individuals skim low over the water and snatch up flying insects, but they can forage in other mesic areas. The species roosts by day usually in buildings or bridges but has also been documented using mines or caves (BCI 2008). Yuma myotis are threatened by loss of riparian habitat and the decline in permanent water sources in the southwest. Both suitable roosting and foraging habitat for the Yuma myotis occur in the Preserve. This species was detected during the spring and fall bat monitoring sessions

Western Red Bat (*Lasiurus blossevillii*)

State Species of Special Concern, San Diego County Group II

Western red bats are found from southern Canada, throughout the U.S., all the way down to South America (BCI 2008). Several species in the genus *Lasiurus* are commonly referred to as "tree bats" because they roost only in tree foliage. The western red bat is a typical tree bat with a close association with cottonwoods (*Populus* sp.) and riparian areas (BCI 2008). Like all tree bats, this species is solitary, coming together only to mate and to migrate. Western red bats typically forage along forest edges, in small clearings, or around street-lights where they prefer moths (BCI 2008). Although largely undocumented, this species' decline appears to be in part due to the loss of lowland riparian forests in the Southwest. Both suitable roosting and foraging habitat for the western red bat occur in the Preserve. This species was only detected during the spring bat monitoring session.

Townsend's Big-eared Bat (*Corynorhinus townsendii*)

State Species of Special Concern, San Diego County Group II

Townsend's big-eared bat occurs throughout the drier portions of California (Zeiner et al. 1990). It is non-migratory and hibernates from approximately October through April. A wide variety of natural communities are occupied, but mesic sites are preferred. They capture a variety of prey while in flight, which is slow and maneuverable, and they are capable of hovering (Zeiner et al. 1990). The species is known to roost predominantly in caves, but will use lava tubes, mines, tunnels, buildings, and other man-made structures (BCI 2008). They are extremely sensitive to disturbance at their roosting sites and have suffered severe population declines throughout much of the U.S. (BCI 2008). This species was detected during all three seasons of bat monitoring. The Townsend's big-eared bat is likely roosting in the mines at the Preserve. The species also forages over the Preserve.

Pallid Bat (*Antrozous pallidus*)

State Species of Special Concern, San Diego County Group II

Pallid bats are widely distributed in the southwestern U.S. and northern Mexico (BCI 2008). They are locally common across most of California except in the far northwest and in higher portions of the Sierra Nevada. Habitats utilized include a wide variety of grasslands, shrublands, woodlands, and forests, including mixed conifer forest (Zeiner et al. 1990). They appear to be most common in open, dry, rocky lowlands and they roost in caves, mines, as well as crevices in rocks, buildings and trees. This is a colonial species that forages low over open ground, often picking up beetles and other species of prey off the ground (Zeiner et al. 1990). Flight is slow and maneuverable, and they are able to take a wide variety of prey, including large, hard-shelled insects (Zeiner et al. 1990). They have separate night and day roosts, hibernate in winter, and the sexes segregate in summer. Both suitable roosting and foraging habitat for the Pallid Bat occur in the Preserve. This species was only detected during the summer bat monitoring session.

Pocketed Free-Tailed Bat (*Nyctinomops femorosaccus*)

State Species of Special Concern, San Diego County Group II

Pocketed free-tailed bats are rarely found in southwestern California. These bats live in arid desert areas and roost in crevices high on cliff faces in rugged canyons (BCI 2008). Nursery colonies are relatively small and usually include fewer than 100 individuals. This species primarily forages on large moths, especially over water. The regional status and species trends are unclear, but it is likely vulnerable to disturbance, especially at roosts, and perhaps also to threats to food supply from man-made toxins. This species was detected during all three seasons of bat monitoring. The pocketed free-tailed bat is likely roosting in the mines at the Preserve. The species also forages over the Preserve.

Big Free-Tailed Bat (*Nyctinomops macrotis*)

State Species of Special Concern, San Diego County Group II

Big free-tailed bats are typically found in desert and arid grasslands with rocky out-crops, canyons, or cliffs (BCI 2008). This species roosts on cliffs and occasionally in buildings. Isolated populations can be found throughout the southwestern U.S. into Mexico. The regional status and species trends are unclear, but it is likely vulnerable to disturbance, especially at roosts, and perhaps also to threats to food supply from man-made toxins. This species was only detected during the spring bat monitoring session. The big free-tailed bat is likely roosting on the cliffs and foraging over the Preserve.

Western Mastiff Bat *(Eumops perotis)*

State Species of Special Concern, San Diego County Group II

Western mastiff bats are the largest native bats in the U.S. This subspecies occurs from the western foothills of the Sierra Nevada and the coastal ranges (south of San Francisco Bay) southward into Mexico (BCI 2008). In southern California, they are found throughout the coastal lowlands up to drier mid-elevation mountains, but avoid the Mohave and Colorado deserts (Zeiner et al. 1990). Habitats include dry woodlands, shrublands, grasslands, and occasionally even developed areas. This big bat forages in flight and most prey species are relatively small, low to the ground, and weak-flying. For roosting, western mastiff bats appear to favor rocky, rugged areas in lowlands where abundant suitable crevices are available for day roosts (BCI 2008). Roost sites may be in natural rock or in tall buildings, large trees or elsewhere. The reasons for this species' decline are poorly understood but probably are related to disturbance, habitat loss, and perhaps widespread use of pesticides. This species was detected during all three seasons of bat monitoring. The western mastiff bat is likely roosting in the mines at the Preserve. The species also forages over the Preserve.

3.3.3 Rare, Threatened or Endangered Wildlife with High Potential to Occur

Additional information on the species listed below can be found in the Baseline Biological Resources Evaluation (Appendix A).

Quino Checkerspot Butterfly (*Euphydryas editha quino*)

Federally Endangered, San Diego County Group 1

The Preserve is within the USFWS Quino checkerspot Survey Area 2. This species has a high potential to occur within the Preserve based on the presence of the Quino checkerspot's primary host plant, dwarf plantain (*Plantago erecta*).

Hermes Copper (*Lycaena hermes*)

San Diego County Group I

This species has a high potential to occur within the Preserve based on the presence of the Hermes copper's primary host plant, spiny redberry (*Rhamnus crocea*).

San Diego Ringneck Snake (*Diadophis punctatus similis*)

San Diego County Group II

This species has high potential to occur throughout the Preserve.

California Legless Lizard (*Anniella pulchra*)

State Species of Special Concern, San Diego County Group II

This species has a high potential to occur in areas of the Preserve associated with the existing stream channels.

Northern Harrier (Circus cyaneus)

State Species of Special Concern, MSCP Covered Species, San Diego County Group

Northern harriers have been documented foraging at the nearby Stelzer County Park (Jones and Stokes 2008c). As this species has been documented in the vicinity, and as the Preserve provides suitable foraging habitat, this species is considered to have high potential to forage within the Preserve. The Preserve provides minimal suitable breeding habitat for this species and if it were breeding at the Preserve in 2008, this would have been detected.

Loggerhead Shrike (*Lanius ludovicianus*)

State Species of Special Concern, San Diego County Group I

This species has high potential to occur as there is appropriate foraging and nesting habitat at the Preserve.

Prairie Falcon (*Falco mexicanus*)

San Diego County Group 1

Prairie Falcons have been documented breeding within the adjacent Cleveland National Forest (U.S. Forest Service 2009). This species has high potential to occur as there is appropriate foraging and nesting habitat at the Preserve.

Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*)

State Species of Special Concern, San Diego County Group II

One northwestern San Diego pocket mouse was captured at the nearby El Monte County Park. Due to the proximity of this occurrence and the suitability of the habitat within the Preserve, there is high potential for this species to occur at the Preserve.

San Diego Black-Tailed Jackrabbit (*Lepus californicus*)

State Species of Special Concern, San Diego County Group

The Preserve supports suitable habitat for this species.

Mountain Lion (*Puma [Felis] concolor*)

San Diego County Group II, MSCP Covered Species

The Preserve and the surrounding open space provide habitat for mountain lions to use for foraging and cover. As there is a large amount of open space surrounding the Preserve, potential for this species to move through the Preserve is high.

3.3.4 Non-native and/or Invasive Wildlife Species

Non-native species detected at the Preserve include: cabbage white butterfly (*Pieris rapae*), European starling (*Sturnus vulgaris*), and brown-headed cowbird (*Molothrus ater*). Cabbage white is an extremely common butterfly occurring throughout the year. The larvae of this species feed primarily on garden vegetables, such as cabbage and cauliflower, and are typically only considered a threat to agriculture growing these crops (Orsak 1977). European starlings potentially use the Preserve for foraging and nesting. This species will use woodpecker cavities for nests and can have negative effects on large cavity-nesting species (Unitt 2004).

Also detected on-site, brown-headed cowbirds have expanded their range in California and become common in recent decades by following agriculture uses and presence of livestock (Zeiner et al. 1990), both of which are common within the general vicinity of the Preserve. Brown-headed cowbirds are brood parasites that lay their eggs in nests of other birds and have the potential to lower the reproductive success of many passerine species, particularly warblers, vireos, flycatchers, and other sparrows and finches (Zeiner et al. 1990). They are known to parasitize ground nests as well as those in trees and shrubs, but not cavity nests.

3.4 Overall Biological and Conservation Value

The Preserve lies within the Lake Jennings/Wildcat Canyon-El Cajon Mountain MSCP designated Core Biological Resource Area. Sixteen core biological resource areas and associated habitat linkages were identified in the MSCP study area. According to the MSCP Plan, core biological resource areas are defined as generally supporting a high concentration of sensitive biological resources which, if lost or fragmented, could not be replaced or mitigated elsewhere.

The Lake Jennings/Wildcat Canyon-El Cajon Mountain Core Biological Resource Area is adjacent to two habitat linkages: Interstate 8 at Lakeside which provides a connection to habitat south of Interstate 8; and Dehesa to El Capitan Reservoir

which provides a connection to areas outside the South County MSCP boundary, and is an important corridor for species that occupy habitats other than coastal sage scrub.

To define the core and linkage areas, an extensive geographic information system database of vegetation communities, species locations, elevation, slope, soils, drainages, and other physical parameters were used to develop a habitat evaluation map for the study area. The habitat evaluation map ranks habitat areas as Very High, High, Moderate, or Low based on their potential to support priority gnatcatcher habitat, and wildlife corridors. According to the MSCP Habitat Evaluation Model, the habitat within the Preserve ranges from low to very high in value.

The native vegetation communities within the Preserve have a high ecological value. The most extensive habitat within the Preserve is southern mixed chaparral, which is considered MSCP Tier III habitat and supports a variety of sensitive plant and wildlife species. The other smaller habitat types within the Preserve are considered either MSCP Tier I habitat (oak and riparian woodlands, and wetlands) or MSCP Tier III habitat (non-native grasslands). In addition, the habitat features within the Preserve are highly supportive of a variety of rare and sensitive bat species.

A large number of bat species appear to be supported by the Preserve. The Preserve is fairly diverse and contains habitat features important to bats in the southern California landscape such as riparian vegetation, oak woodland, scrub vegetation, abandoned mines, and an extensive amount of exposed rock (Krutzsch 1948, Stokes et al. 2005). The occurrence of rare and sensitive species such as the Pallid Bat and Townsend's Big-eared Bat indicate the Preserve's importance to bat populations in this part of the County. The large amounts of rocky cliff habitat (El Cajon Mountain) provide numerous and extensive roosting opportunities for bats, particularly cliff-dwelling species such as the Western Mastiff Bat. The abandoned mines provide roosting opportunities for cave-dwelling species such as the Townsend's Big-eared Bat. The presence of these habitat features adjacent to a major river (San Diego River) make this Preserve one of the most important pieces of preserved land for bats in all of San Diego County.

3.4.1 Wildlife Linkages and Corridors

The Preserve is located in a relatively undeveloped area of San Diego County and abuts large preserve areas such as the Cleveland National Forest. The Preserve occurs just north of the east–west trending upper San Diego River valley which is a wildlife corridor and provides local movement for a wide range of wildlife including mule deer, coyote, bobcat, and potentially mountain lion. Consequently, the Preserve is considered to be within a core biological resource area and is adjacent to a regional biological linkage (Figure 3).

Movement of larger animals appeared to be concentrated along easily traveled routes with good visibility such as roads and ridges. Most signs of smaller animals were within natural communities with cover. No clear evidence of regular or important, larger-scale dispersal across the site was found, though such movement may well occur. Certainly it can be assumed that larger mammals regularly move on, off of, and across the Preserve, to and from adjacent open space.

4.0 CULTURAL RESOURCES

San Diego County is characterized by a rich and varied historical past. Cultural resources which reflect this history consist of archaeological remains, historic buildings, artifacts, photographs, oral histories, Native American memories and public documents. This RMP identifies the known cultural resources within El Capitan Preserve and describes areas of potential resources.

In 2008, an archaeological survey was completed for the Preserve in compliance with the California Environmental Quality Act (CEQA) and County environmental guidelines to assist in continued and future land use and resource protection planning. The results of this study can be found in the report entitled, *Cultural Resources Phase I Survey and Inventory of County of San Diego El Capitan and Oakoasis Preserves and El Monte and Louis A. Stelzer Regional Parks, San Diego County, California*, dated October 2008, and is attached as Appendix B (Jordan and Eckhardt 2008). This Phase I inventory involved site records searches, literature reviews, Native American consultation, historic map checks, field survey, and resource documentation. The survey and inventory results were used in the preparation of this RMP.

4.1 Site History

The El Capitan Preserve is composed of some of the steepest, most rugged territory anywhere in San Diego County. It is hardly surprising that modern civilization has had minimal impact on this tract of land. The severity of the terrain discouraged nineteenth and early twentieth century homesteaders, but was an inducement to prospectors seeking their fortunes. Mining in the area may have occurred as early as the mid-nineteenth century. Miguel de Pedrorena may have had an interest in mining within the vicinity of the Preserve, but no specific location or information is known. Pedrorena's daughter Ysabel married José Antonio Altamirano who, when he came to San Diego in 1849, also had an interest in mining (Smythe 1908).

The most notable of the prospectors was Wellington Isaac Hoover. Hoover's family had moved to Lakeside from Nebraska in 1893. As a young man in the early twentieth century, he was a contractor specializing in mineral exploration and quarrying. Initially using horse-drawn wagons and then trucks, he would haul ores and stone for processing. Wellington also worked his own claim at La Cresta extracting silica quartz. Like many of his contemporaries, he had a diversified portfolio that included skills as a road grader, mechanic, and carpenter as well as small-time farmer and cattleman. Some years later he moved his family from their longtime home in Lakeside to a 500-acre parcel within the current Preserve that he had filed a mining claim for. Subsequently, this mining claim and others were passed down to one of his sons, Wellington Aaron Hoover, who continued to reside on the parcel into the 1980s (Lakeside Historical Society 1985).

During the mid-1980s the federal Bureau of Land Management, legal owners of these various properties, challenged the validity of the claims. Their argument was based on the lack of proof for the existence of any economically important mineral resources. The Bureau declared the claims to be null and void. Hoover remained defiant, stating that there was a silver vein present that he would mine someday and furthermore, that he didn't "recognize the legal authority of the BLM to file such [null and void] complaints or even to manage public land" (Hudson 1985). Ultimately, the Bureau prevailed and the mining claims were vacated. El Capitan Preserve remains under the ownership of the U.S. Bureau of Land Management; the County began managing properties comprising today's Preserve in the early 1970's.

4.2 Native American Consultation

Native American participation and consultation in the current study was initiated at the onset of background research and continued through the documentation and review process. Correspondence with the California Native American Heritage Commission (NAHC) was initiated February 6, 2008. A response, dated February 11, 2008, indicated that NAHC research did not indicate the presence of any Sacred Lands for the affected area, and recommended continuing consultation with Native American contacts provided on an attached list.

On February 29, 2008, Mr. Clint Linton of Santa Ysabel Band of Diegueño Indians was contracted through his company, Red Tail Monitoring and Research, Inc., to provide Native American monitoring and archaeology services for this study. On May 14, 2008, correspondence was initiated with those listed Native American contacts provided by the NAHC. This letter identified the NAHC results and reiterated an invitation to comment, question, or review any portion of the preserves and parks included in this study.

4.3 Cultural Resource Descriptions

4.3.1 Prehistoric Resources

4.3.1.1 *Bedrock Milling Sites*

CA-SDI-19,202 (P-37-030137)

This resource consists of two bedrock milling features overlooking the San Diego River valley at the southwest base of El Cajon Mountain. The two milling features contain several slicks in good condition, one of which is deep enough to be a basin. The two features are present within 20 meters of each other. The boulders are granitic and some weathering exists. The slicks observed in this location are in very good condition and show evidence for heavy use.

This site is a small food processing site; it may be a temporary camp, but the heavy use of the milling elements suggests otherwise. A large habitation site

(CA-SDI-8251) is present just south of the site and may be associated with this site.

CA-SDI-19,204 (P-37-030139)

This resource consists of two bedrock milling features overlooking the San Diego River valley at the southwest base of El Cajon Mountain. The features are about 20 meters apart. The two milling features contain just two slicks that are in good condition. The boulders are weathered and other remnants of milled surfaces are also visible. A large habitation site is present just south and west of the site (CA-SDI-8251).

CA-SDI-19,205 (P-37-030140)

This resource consists of four bedrock milling features overlooking the San Diego River valley at the southwest base of El Cajon Mountain. The four milling features contain at least seven slicks that are in good condition. Remnants of milling features are present on surrounding boulders. A large habitation site is present just south and west of the site (CA-SDI-8251).

CA-SDI-19,206 (P-37-030141)

This resource consists of a single bedrock milling feature along an old trail (present in the 1988 revised version of the quadrangle map). The bedrock milling feature is a rounded-top boulder with two slicks in good condition and some remnants of other milling surfaces present.

CA-SDI-19,207 (P-37-030142)

This resource consists of two bedrock milling features overlooking the San Diego River valley at the southwest base of El Cajon Mountain. The two bedrock milling features are 38 meters apart and contain two slicks that are in good condition and some remnants of other milling elements. The bedrock is weathered. A large habitation site is present just west of the site (CA-SDI-8251).

CA-SDI-19,209 (P-37-030144)

Located east of Wildcat Canyon Road, with an elevation of approximately 1,900 feet AMSL, this resource consists of two small rock cairns and a bedrock milling feature atop a portion of exposed bedrock. The bedrock milling feature has two slicks in good condition. Heavy lichen growth on the stacked rock suggests that the rocks have not been moved in some time.

CA-SDI-19,210 (P-37-030145)

This site is located north of Pata Ranch Road (which runs along the western hills of El Cajon Mountain), and east of Wildcat Canyon Road, in a grassy flat terrace between the upper hill tops and the road. This resource is a food processing site comprised of five bedrock milling features with a total of at least ten slicks in varying conditions.

CA-SDI-19,211 (P-37-030146)

This resource is located north of Pata Ranch Road (which runs along the western hills of El Cajon Mountain), and east of Wildcat Canyon Road. The resource consists of a single bedrock milling feature with two deteriorated slicks.

CA-SDI-19,212 (P-37-030147)

This site, a single bedrock milling feature, is located north of Pata Ranch Road (which runs along the western hills of El Cajon Mountain), and east of Wildcat Canyon Road. There are many slicked surfaces on the bedrock milling feature that are heavily deteriorated, and it is difficult to determine how many slicks were originally located on the surface.

CA-SDI-19,214 (P-37-030149)

This resource lies in a drainage at the road edge, south of the Pata Ranch Road that cuts through the middle south portion of the survey area, and east along the road from Wildcat Canyon Road. This resource contains two bedrock milling features, with a combined total of about nine slicks and a single basin. This site is a small food processing site. The site may be a temporary camp, but the heavy use of the milling elements suggests otherwise.

CA-SDI-19,218 (P-37-030153)

This resource is located on a trail that originates east of Wildcat Canyon Road. It consists of a single bedrock milling feature and at least one flake near the edge of the bedrock. The bedrock milling feature contains the sparse, deteriorated remains of what appear to be two slicked surfaces. The flake is in a cleared area at the edge of the bedrock.

4.3.1.2 *Artifact Scatters*

CA-SDI-19,216 (P-37-030151)

This resource is located east of Wildcat Canyon Road, on a trail that runs south into a gulley that runs parallel to a drainage. This resource is a lithic scatter comprised

of at least 15 flakes of varying compositions. There are no other lithics or milling components visible at this site. No tools or features were observed in this location.

4.3.1.3 *Temporary Camps or Multi-Use Sites*

CA-SDI-19,213 (P-37-030148)

This site contains three bedrock milling features, each with a single slick, and a lithic scatter. This site contains a lithic scatter including two lithic flake tools, and a single hammerstone. The lithic scatter is comprised of over 20 flakes of varying composition. This site is a temporary camp site. The addition of the lithic scatter and intact tools indicate that perhaps this area was a more extensive habitation site than for the single purpose of food processing. Milling elements observed do not show heavy use that would indicate longer habitation.

CA-SDI-19,215 (P-37-030150)

This resource consists of a possible rock shelter and a single milling tool, a black and white granitic mano. The shelter is under at least three large boulders. This shelter overlooks a large habitation site to the south, CA-SDI-8251. The mano is unifacial, but is battered on one end and was likely a multi-use tool.

CA-SDI-19,217 (P-37-030152)

Located on a trail that originates from Pata Ranch Road and runs south, this resource consists of a potential rock shelter and a deteriorated possible or lightly utilized mortar. The possible mortar is debatably a natural formation of the rock, as no surface of the milling element remains. No associated artifacts were observed to support the possible prehistoric use of this location.

4.3.1.4 *Isolates*

Six isolates (P-37-030130, P-37-030131, P-37-030132, P-37-030133, P-37-030135, and P-37-030136) were identified. All isolates were lithic resources.

4.3.2 Historic Resources

P-37-030134

This resource is a mine with three horizontal shafts. The age of the mine is unknown, but at the base of El Cajon Mountain, south of this location, is the site of the Hoover family residence in Lakeside. The Hoover family was miners in La Cresta (Lakeside Historical Society 1985) and this site may have been owned by the family. What was mined here is unknown. Trails lead directly to this location and the mines are open and considered unsafe.

4.3.3 Multi-Component Resources

CA-SDI-8251

This resource was originally documented as a large milling and habitation site with rock shelters, a rock ring, a pitted boulder, and midden. The current survey work outlines the boundaries of the site within the Preserve boundaries. At least 93 bedrock milling features, seven rock shelters, a bead, several tools, and a dense scatter of habitation debris are recorded. This site also encompasses an adobe structure and the Hoover residence consisting of rock and mortar foundations, mining shafts and prospects, and a collection of cars, appliances, and other tools and household items.

On one of the high spots between drainages near the center east of the site is an adobe structure. The structure no longer has a roof and is missing at least one wall. It has two rooms, an entryway on the west side, and several windows. It is constructed of adobe, but the top of the walls are lined with a cement block or formed cement section and a fine wire mesh was observed at a window sill. A metal stove is present as well as other metal fragments and broken structural debris. Outside the adobe are stacked rock (mostly no mortar) retaining walls in which bedrock milling features are incorporated. Several other bedrock milling features surround this structure as well as a moderately dense midden including pottery, flakes, bone, and tool fragments.

South of the adobe is the majority of the midden deposit. Tizon brownware pottery sherds number at least 100 pieces across the site with the majority south of the adobe. At least three rimsherds were observed, none of them large enough to estimate the type of vessel. Flakes also numbered over 100 but did not appear to be in greater numbers than pottery in the midden area. Lithic material types include quartz, metavolcanic, chert, and one piece of obsidian was observed near rock shelter #2. A midsection portion of a non-serrated, brown and black banded chert point was also found. A chert core was observed.

Metate and mano fragments were present, more than five in the midden area and about another 20 across the site. A collection of milling tool fragments consisting of three mano fragments and three other milling tool fragments is present between bedrock milling feature 80 and the rock wall structure. Three water-eroded metavolcanic rocks, one showing removal scars prior to the weathering, are present in a clearing southeast of the olive trees; the association of these rocks with the site is unclear.

Shell was observed across the site, mostly in association with the rockshelters. One olivella shell bead that appears ground on the spire end despite the overall weathered and burned appearance is located on the slope up from the drainage.

The Hoover residence (the area was referred to by this name by County park rangers) is west across two drainages from the adobe and is at a higher elevation. The ridge containing the property is bound by two of the larger drainages in the site. The drainage on the east side contains most of the mining shafts that tunnel into the sides of the drainages and under the ridge tops. The main scatter of debris is on top of the ridge and consists of several cars (most visible from the roads down slope is the school bus) and car parts, household items and appliances such as stoves, typewriters, refrigerators and iceboxes, radios, and some furniture such as bed frames and mattresses, and all sorts of tools for mechanical, woodworking, and household needs. There are at least 14 vehicles on the ridge. Small refuse deposits appear to have been disturbed by collectors, but some identifiable items remain.

Several rock and mortar walls are present across the site. A foundation (cement) with rock and mortar walls that incorporates boulders sits on the east edge of the ridge above a road leading down into the drainage where the mining shafts are. The foundation includes few wooden posts, a plaster and chicken wire structure (probable shower) that measures four feet by four feet and is open on the east side facing two large boulders, and lots of debris. The structure was burned and some refuse including glass and ceramics are blackened. There is a motorcycle inside the remaining walls. An electrical distribution line that runs in from the east-southeast connects at the southeast corner. A school bus is near the southwest corner of the structure. Also, in the area north of the school bus is a large metal water tank, and west of the school bus is what appears to be a water catchment basin constructed of hand-formed cement walls of approximately six inches in height on a bedrock milling feature.

Landscape vegetation includes an olive orchard on the west side of the residence area, citrus trees in the center, several cacti including prickly pear, pepper trees, palo verde trees, and avocados. Tobacco, agave, and elderberry are scattered across the ridge. Water for the site appears to have been piped down the drainage on the east side. A well is located across the drainage to the northeast.

The mining activities are represented by dugout holes less than 10 feet deep with associated spoils piles the crew called pits, and deeper shafts more often without adjacent spoils piles, more skillfully shaped, greater than 10 feet deep or long, may be dug horizontally, vertically, or diagonally, and may have associated stacked rock. At least five pits were noted in the area. Ten horizontal shafts were observed: one with a metal door, concrete frame, and rock and mortar retaining walls; a few are rectangular, five feet to 5.5 feet in height and about 2.5 feet wide; and another has a space about 12 feet wide and seven feet tall near the entrance and then splits in two directions. There are at least five shafts that appear to lead diagonally or straight down. The depth or length or association (whether any of the tunnels meet) is unknown; all open shafts and the well are considered very dangerous and are in unsafe condition without warning signs.

Few non-diagnostic ceramic fragments were noted, mostly whiteware and simply painted patterns. Glass, some melted, is scattered throughout the Hoover property. Metal items, as noted above, are abundant including tools, car parts, machinery parts, furniture, and several appliances.

CA-SDI-19,203 (P-37-030138)

This resource consists of 11 bedrock milling features overlooking the San Diego River valley at the southwest base of El Cajon Mountain. The 11 milling features contain several slicks, one basin, and three mortars that are in good condition. The boulders are granitic and some weathering exists. Some slicks show heavy use and are well-defined, while portions of some features as well as some surrounding boulders are weathered and only remnants of milled surfaces remain. Generally, the slicks observed in this location are in very good condition and show evidence for heavy use.

Some modern refuse, possibly associated with the Hoover residence about 450 meters to the southwest, is present and includes a metal grill and box, and ceramic tableware fragments. A large habitation site is present just south and west of the site (CA-SDI-8251).

4.3.4 Resources of Unknown Age

CA-SDI-19,208 (P-37-030143)

This resource consists of a rock ring with a heavy lichen cover, located on a large bedrock outcrop east of Wildcat Canyon Road. The feature is composed of 12 rocks measuring approximately 10 to 30 centimeters. No associated artifacts were observed and the age of this resource is unknown.

4.4 Resource Significance

Within the boundaries of El Capitan Preserve dense, long-term indigenous occupation is represented, with evidence of intensive resource procurement and remote short-term camps or processing locations. Late Prehistoric period occupation is strongly evident in the prehistoric elements of site CA-SDI-8251, and its suite of satellite milling stations and work areas (CA-SDI-8251, CA-SDI-19,202, CA-SDI-19,203, CA-SDI-19,204, CA-SDI-19,205, CA-SDI-19,206, and CA-SDI-19,207) found upslope along the drainages that fall from the west side of El Cajon Mountain. Evidence of ceramics and small arrow points, the use of quartz and obsidian tool stone, and an intensive milling industry inclusive of mortars is found here, at elevations along and above the San Diego River drainage, in an environment with water sufficient to sustain and support a significant occupation. An isolated Cottonwood triangle arrow point found in the hills to the west of the mountain represents the movement of Late Prehistoric people through remote areas of higher elevation.

Other sites within the boundaries of El Capitan Preserve are representative of special-task or specific resource procurement activities, most of which contain no period-specific artifacts identified during this survey. Several small food processing sites (CA-SDI-19,209, CA-SDI-19,210, CA-SDI-19,211, CA-SDI-19,212, CA-SDI-19,214, and CA-SDI-19,218) consisting of five or less bedrock milling features may not represent a particular time period but do represent a series of temporary camp situations located on the western hills of El Cajon Mountain. Two other small sites containing potential shelters and evidence of milling activity (CA-SDI-19,215 and CA-SDI-19,217) are also representative of short-term use and movement through remote areas.

Two flake scatters located in the western hills of the Preserve appear to be representative of Archaic period sites. The lack of obsidian and quartz and the presence of metavolcanic scrapers support the possibility that sites CA-SDI-19,213 and CA-SDI-19,216 are of greater age than the large Late Prehistoric occupation site along the river.

CA-SDI-8251 encompasses an American period and potentially ethno-historic period elements. The Hoover residence represents twentieth century mining activities in remote San Diego County. The adobe structure has been altered during the twentieth century, but the original date is unknown. Considering the density of artifacts at the door step of the structure, it is possible that the adobe may have been occupied, potentially by Native Americans, during the late nineteenth century and into the twentieth century. Further research will need to be conducted. Overall, the sites at El Capitan Preserve are a significant representation of a pattern of intense continuous or reoccurring occupation and associated travel and specific-task activities occurring throughout the surrounding areas.

No site evaluations were conducted for the 2008 inventory. Indications from surface examinations and record documentation are that a number of the sites included in this inventory possess important scientific and cultural qualities. Many of these resources may well qualify for local and state registers; some may qualify for national listing. Under County guidelines cultural resources are considered significant until recommendations based on evaluation testing suggest otherwise (County of San Diego 2007).

5.0 RESOURCE MANAGEMENT

5.1 Management Goals and Objectives

Management of the natural and cultural resources within the Preserve will be guided by the general goals and objectives of both the County and the MSCP.

5.1.1 County-Specific

County-specific goals and objectives used to guide the management of resources within the Preserve can be found in the County Strategic Plan, the DPR Strategic Plan, as well as the Lakeside Community Plan. The County's overall goal or mission, as indicated in the 2009-2014 Strategic Plan, is to provide the residents of San Diego County with superior County services in terms of quality, timeliness and value in order to improve the region's quality of life. The Strategic Plan for Parks and Recreation is closely aligned with the County's strategic initiatives.

The DPR Strategic Plan 2008-2013, outlines the department's priorities for accomplishing its mission over a five-year period. The overall goal or mission of the DPR is to provide opportunities for high quality parks and recreation experiences and to preserve regionally significant natural and cultural resources. The DPR makes this mission a reality through programs that create healthy communities, protect valuable natural and cultural resources, provide recreation opportunities, reduce crime and vandalism, and foster economic development.

In addition, the Lakeside Community Plan provides goals and policies which are designed to fit the specific or unique circumstances existing within this community. Goals provided in this plan seek to preserve Lakeside's rural atmosphere and unique resources, and provide a wide variety of recreational activities and facilities which will meet the needs and enrich the lives of all residents of Lakeside. To this end, the plan provides policies and recommendations which are meant to guide the allocation of County resources towards prescribed outcomes consistent with the goals.

5.1.2 MSCP-Related

The MSCP Plan and the County's Subarea Plan provide both general and segment-specific goals and objectives. The Preserve is located within the Metro-Lakeside-Jamul Segment of the MSCP Subarea Plan and, as discussed in Section 3.4, lies between two habitat linkages within the Lake Jennings/Wildcat Canyon-El Cajon Mountain Core Biological Resource Area. The overall MSCP goal is to maintain and enhance biological diversity in the region and conserve viable populations of endangered, threatened, and key sensitive species and their habitat, thereby preventing local extirpation and ultimate extinction. This is intended to minimize the need for future listings, while enabling economic growth in the region.

In order to assure that the goal of the MSCP Preserve is attained and fulfilled, management objectives for the County of San Diego MSCP Preserve are as follows:

1. To ensure the long-term viability and sustainability of native ecosystem function and natural processes throughout the MSCP Preserve.
2. To protect the existing and restored biological resources from disturbance-causing or incompatible activities within and adjacent to the MSCP Preserve while accommodating compatible public recreational uses.
3. To enhance and restore, where feasible, the full range of native plant associations in strategic locations and functional wildlife connections to adjoining habitat in order to provide viable wildlife and sensitive species habitat.
4. To facilitate monitoring of selected target species, habitats, and linkages in order to ensure long-term persistence of viable populations of priority plant and animal species and to ensure functional habitats and linkages.
5. To provide for flexible management of the MSCP Preserve that can adapt to changing circumstances to achieve the above objectives.

5.1.3 Management Directives and Implementation Measures

Based on the above management goals and objectives, recommended management directives have been identified. In accordance with the Framework Management Plan, the ASMDs have been designated as Priority 1 or Priority 2. This designation recognizes the fact that many of the directives cannot be immediately implemented, but instead will occur over the life of the MSCP. The ability to implement and the timing of many of the management directives will be directly related to the availability of funding in any fiscal year and on the priority. The priorities are, therefore, intended to assist in decisions on where and how to spend limited funds. Priority designations are as follows:

Priority 1: Directives that protect the resources in the Preserve and the MSCP Preserve, including management actions that are necessary to ensure that sensitive species are adequately protected.

Priority 2: Directives other than those required for sensitive species status and other long-term items that may be implemented during the life of the MSCP as funding becomes available.

The management directives provided in this RMP have been divided into five elements: A) Biological Resources, B) Vegetation Management, C) Public Use, Trails, and Recreation, D) Operations and Facility Maintenance, and E) Cultural Resources.

5.2 Biological Resources Element (A)

5.2.1 Biological Monitoring

Biological monitoring will be performed onsite to gather information that will assist DPR in making land management decisions to conform to MSCP goals and objectives, as well as DPR and BLM objectives. The biological monitoring that will occur will be designed to guide decisions at the individual preserve level. The first year of monitoring has been conducted (baseline surveys) and the results are included as Appendix A. Additional monitoring results will be incorporated into stand alone monitoring reports. These reports may recommend revisions to the management directives contained within this RMP.

It is recognized that subregional monitoring has been designed to answer concerns and objectives on a larger scale. No subregional monitoring is occurring at El Capitan Preserve. While objectives of individual preserve and subregional monitoring may be different, subregional monitoring methods that have been developed, or are under development, may assist monitoring methods and decisions at the preserve level for particular species and habitats.

The key to successful monitoring at the individual preserve level, such that data gathered is not duplicative and meets individual preserve level objectives, is close coordination with stakeholder groups that are performing subregional monitoring, sharing of data, future plans and schedules and keeping abreast of monitoring methods as they are developed. To ensure uniformity in the gathering and treatment of data, a (SANDAG) land management working group has been formed and will designate a land manager who will assist jurisdictions in coordinating monitoring programs, analyzing data, and providing other information and technical assistance. The DPR will work closely with this group.

MSCP covered species have been prioritized for monitoring in the 2006 report prepared by San Diego State University (SDSU) entitled *San Diego Multiple Species Conservation Program Covered Species Prioritization* (Regan et al. 2006). Subregional monitoring methods have been developed for rare plants (McEachern et al. 2007) and animals (USFWS 2008). These references will assist DPR in developing monitoring methods at the preserve level, as well as the management directives that are identified for specific species in this document.

Management Directive A.1 – Conduct habitat monitoring to ensure MSCP goals and DPR/BLM objectives are met (*Priority 1*)

> ***Implementation Measure A.1.1*:** DPR will conduct habitat monitoring at five-year intervals. Habitat monitoring will address both temporary and permanent habitat changes as well as habitat value. The main product of this monitoring will be a report which will include a discussion of monitoring objectives, monitoring methods to meet those objectives, and an updated vegetation community map.

***Implementation Measure A.1.2*:** DPR will conduct general wildlife and rare plant surveys at five-year intervals utilizing and refining baseline monitoring methods to facilitate trend and distribution status analysis. This information will be included in the habitat monitoring report.

***Implementation Measure A.1.3*:** DPR will conduct monitoring for invasive plant species at five-year intervals to assess invasion or re-invasion by exotic plant species within the Preserve. These surveys will focus on areas where invasive, non-native plants have been detected in the past, but also look for new occurrences in the Preserve. This information will be included in the habitat monitoring report.

Management Directive A.2 – Conduct corridor monitoring to ensure MSCP goals are met (*Priority 2*)

As discussed in Section 3.4, even though the Preserve does not lie within a primary linkage, it is located within the Lake Jennings/Wildcat Canyon-El Cajon Mountain Core Biological Resource Area, which is adjacent to two biological linkages. Additionally, the Preserve is located just north of the San Diego River Valley which is a wildlife corridor for local wildlife movement. While corridor monitoring within the Preserve will take place at the preserve-level, it anticipated that it will provide data for better understanding movement on a regional scale.

***Implementation Measure A.2.1*:** The DPR will conduct corridor monitoring at five-year intervals in conjunction with habitat monitoring and general wildlife and rare plant surveys (as described in implementation measures A.1.1 and A.1.2). The main product of this monitoring will be a report documenting the results of the current assessment of habitat linkage function including a list of species detected.

5.2.2 MSCP Covered Species-Specific Monitoring and Management Conditions

Not all species occurring within the Preserve are expected to require species-specific management. It is expected, rather, that other management directives and implementation measures outlined under the Biological Resources and Vegetation Management elements should be sufficient to protect and manage optimal habitat conditions for most, if not all, species to maintain and/or thrive within the Preserve. However, there are some species listed as MSCP Covered Species in the County's Subarea Plan which require additional management measures, particularly if monitoring indicates that the general guidelines are not sufficient to maintain acceptable population levels.

Table 3-5 of the Final MSCP Plan (City of San Diego 1998) provides management and/or monitoring measures for specific MSCP Covered Species. In addition, the

SDSU Prioritization Report (Regan et al. 2006) classifies MSCP Covered Species as Risk Group 1 (most endangered), Risk Group 2 (moderately endangered), and Risk Group 3 (less endangered). The SDSU report also identifies the threats/risk factors facing these species and ranks these factors as high, moderate, or low degree of threat. This RMP will only discuss management conditions addressing high and moderate threats for Risk Group 1 species, none of which currently occur within the Preserve.

Management Directive A.3 - Comply with applicable conditions of coverage for MSCP Covered Species (*Priority 1*)

***Implementation Measure A.3.1*:** Implement the species-specific monitoring and management conditions as listed in Table 3-5 of the MSCP (City of San Diego 1998) and the SDSU Prioritization Report (Regan et al. 2006) for all MSCP Covered Species detected within the Preserve.

The conditions of coverage for those species currently known to occur in the Preserve are listed below followed by an explanation of how monitoring and/or management activities in the Preserve will comply.

Lakeside Ceanothus (*Ceanothus cyaneus*)

Monitoring: Table 3-5 - Habitat Based and Management Plan/Directives; SDSU – Risk Group 2

Management Conditions: Area-specific management directives must include specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire. Management measures to accomplish this may include prescribed fire.

Management measures to reduce the risk of catastrophic fire are addressed through vegetation management implementation measure B.4.3.

Felt-Leaved Monardella (*Monardella hypoleuca* ssp. *lanata*)

Monitoring: Table 3-5 - Habitat Based and Photo Plot and Management Plans/Directives; SDSU – Risk Group 3

Management Conditions: Area-specific management directives must also include measures to protect against detrimental edge effects and uncontrolled access.

Edge effects and uncontrolled access are addressed through multiple implementation measures under management directives C.2, C.4, D.7, and D.8, and implementation measure B.4.1.

San Diego Horned Lizard *(Phyrnosoma coronatum blainvillii*)

Monitoring: Table 3-5 - Site Specific Monitoring Plan; SDSU – Risk Group 3

Management Conditions: Area-specific management directives must include specific measures to maintain native ant species, discourage the Argentine ant, and protect against detrimental edge effects to this species.

No Argentine ants were observed within the Preserve, and edge effects are addressed through multiple implementation measures under management directives D.7 and D.8, and implementation measure B.4.1.

Orange-Throated Whiptail (*Cnemidophorus hyperythrus beldingi*)

Monitoring: Table 3-5 - Site Specific Monitoring Plan; SDSU – Risk Group 3

Management Conditions: Area-specific management directives must address edge effects.

Edge effects are addressed through multiple implementation measures under management directives D.7 and D.8, and implementation measure B.4.1.

Cooper's Hawk (*Accipiter cooperii*)

Monitoring: Table 3-5 - Habitat Based Monitoring Plan and Management Plan/Directives (site-specific nest territories); SDSU – Risk Group 3

Management Conditions: In the design of future projects within the Metro-Lakeside-Jamul segment, preserve areas shall conserve patches of oak woodland and oak riparian forest of adequate size for nesting and foraging habitat. Area-specific management directives must include 300-foot impact avoidance areas around active nests and minimization of disturbance in oak woodlands and oak riparian forests.

No nesting territories were observed within the Preserve during the 2008 surveys; however future detection will be addressed through general wildlife surveys (as described in implementation measure A.1.2). Any potential impacts from future projects will be analyzed and mitigation proposed, as necessary, through environmental review pursuant to the California Environmental Quality Act (CEQA) and will be subject to approval by the wildlife agencies.

Western Bluebird (*Sialia mexicana*)

Monitoring: Table 3-5 - Habitat Based; SDSU - Excluded

Management Conditions: None

Southern California Rufous-Crowned Sparrow (*Aimophila ruficeps canescens*)

Monitoring: Table 3-5 - Habitat Based; SDSU – Risk Group 3

Management Conditions: Area-specific management directives must include maintenance of dynamic processes, such as fire, to perpetuate some open phases of coastal sage scrub with herbaceous components.

No coastal sage scrub habitat occurs within the Preserve, but dynamic processes, such as fire, will be maintained through vegetation management implementation measure B.4.3.

Golden Eagle (*Aquila chrysaetos*)

Monitoring: Table 3-5 - Habitat Based and Management Plans/Directives (site-specific nest territories): SDSU – Risk Group 2

Management Conditions: Area-specific management directives for areas with nest sites must include measures to avoid human disturbance while the nest is active, including establishing a 4,000-foot disturbance avoidance area within preserve lands. Area-specific management directives must also include monitoring of nest sites to determine use/success.

A collaborative management group has been formed to ensure that raptors and their habitat across the Cleveland National Forest and adjacent lands is proactively managed. There are five historical nesting sites that the group is discussing, one of which occurs within the Preserve (El Cajon Mountain). DPR will coordinate with this group regarding monitoring (as described in implementation measure D.7.2) and is conducting the following management actions to avoid disturbance of nesting areas: posting of signs; monitoring of illegal access and rock climbing activity; and increased ranger patrols during the breeding season (as described in implementation measures C.2.4, C.2.5 and C.5.2).

Southern Mule Deer (*Odocoileus hemionus*)

Monitoring: Table 3-5 - Habitat Based and Corridor Sites: SDSU – Risk Group 3

Management Conditions: None

5.2.3 Non-Native Invasive Wildlife Species Control

Management Directive A.4 – Reduce, control, or where feasible eradicate invasive, non-native fauna known to be detrimental to native species and/or the local ecosystem (*Priority 2*)

Invasive, non-native species detected within the Preserve during the 2008 surveys include European starling and brown-headed cowbirds. These species do not currently appear to be posing an immediate threat to native species and/or the local ecosystem and thus no management is proposed at this time. However, they have potential to outcompete native species for valuable resources.

***Implementation Measure A.4.1*:** Conduct surveys for the presence of invasive, non-native wildlife species of management concern, including European starling and cowbirds at five-year intervals in conjunction with habitat monitoring and general wildlife surveys (as described in implementation measures A.1.1 and A.1.2).

***Implementation Measure A.4.2*:** If an increase in the population of invasive, non-native wildlife species is noted and/or detrimental effects of these species are detected within the Preserve, preparation and implementation of a trapping and removal program, or other means of humane control will be initiated.

***Implementation Measure A.4.3*:** On a case-by-case basis, some limited trapping of non-native predators may be necessary at strategic locations, and where determined feasible to protect ground- and shrub-nesting birds, lizards, and other sensitive species from excessive predation. If implemented, the program would only be on a temporary basis and where significant problem has been identified and therefore needed to maintain balance of wildlife in El Capitan Preserve and the MSCP preserve. The program would be operated in a humane manner, providing adequate shade and water, and checking all traps twice daily. Signage at access points and noticing of adjacent residents will inform people that trapping occurs, and how to retrieve and contain their pets.

Implementation Measure A.4.4: Institute an equestrian education program regarding the potential negative impacts to native ecosystems from the accumulation of non-point source pollutants (e.g., increased potential for occurrence of cowbirds) in staging areas and on frequently used trails. This could be accomplished through implementation of a signage program and interaction between rangers and trail users. See also implementation measure B.3.2.

Implementation Measure A.4.5: Provide materials for clean up by equestrian users of staging areas to keep it free of non-point source pollutants that may attract cowbirds or other invasive, non-native species. See also implementation measure B.3.3.

5.2.4 Future Research

The MSCP preserve presents a rich array of research opportunities for the academic and professional communities, primarily in disciplines related to biology, ecology, and natural resources management, but also ranging to environmental design, sociology, and park use and administration. The County of San Diego encourages

research within the MSCP preserve in order to gain valuable information unavailable through other means.

There are a multitude of unanswered questions posed by the development of a multiple species and habitat system where little literature or previous research exists on the majority of species inhabiting the region. In addition, research on vegetation associations and habitats, natural regeneration, restoration, fragmentation, edge effects, genetics, viability, predation, wildlife movement, and much more, would be useful to provide information on the health and dynamics of an urbanized open space system as well as how to improve conditions.

Management Directive A.5 – Allow for future research opportunities for the Academic and Professional Scientific and Biologic Activities within the Preserve (*Priority 2*)

***Implementation Measure A.5.1*:** DPR will accept and review proposals for scientific research, monitoring, and habitat restoration and enhancement activities which are permitted within the MSCP preserve. Proposed research activities will be subject to approval by DPR. All such activities must obtain any necessary permits and shall be consistent with this RMP. Additionally, any person conducting research of any kind within the Preserve shall obtain a Right-of-Entry Permit from DPR, which will outline the precautions to be taken to preserve and protect sensitive biological and cultural resources within the Preserve and require results of any research to be made available to DPR.

5.3 Vegetation Management Element (B)

5.3.1 Habitat Restoration

Management Directive B.1 – Restore degraded habitats to protect and enhance populations of rare and sensitive species through stabilization of eroded lands and strategic revegetation (*Priority 1*)

***Implementation Measure B.1.1*:** DPR will assess and determine the need for restoration activities within the Preserve. The need for restoration activities will be determined based on the results of habitat monitoring (as described in implementation measure A.1.1) and trail maintenance activities (as described in implementation measure C.5.3). Any proposed restoration activities should utilize current, accepted techniques and avoid/minimize impacts to sensitive species or native habitats. Any proposed revegetation activities should use only local native species. No active restoration is currently needed. Passive restoration (recovery from fire) is ongoing. However, stabilization of eroded lands may be necessary. See also implementation measure D.4.1.

5.3.2 Non-Native Plant Species Removal and Control

Management Directive B.2 – Reduce, control, or where feasible eradicate invasive, non-native flora known to be detrimental to native species and/or the local ecosystem (*Priority 1*)

As described in Section 3.2.4 above, native and naturalized plant species primarily dominate the vegetation communities within the Preserve. However, patches of pampas grass and fountain grass were found dispersed along the Trans-County Trail within the northern portion of the Preserve.

***Implementation Measure B.2.1*:** DPR park rangers will routinely pull weeds or remove any non-native plant species in early stages of growth found along trails.

***Implementation Measure B.2.2*:** DPR will coordinate with other agencies, non-profit organizations, and/or volunteer groups in order to seek funding and implement removal of the patches of pampas grass and fountain grass, or other invasive non-native plants found during plant surveys and monitoring (as described in implementation measures A.1.2 and A.1.3) within the Preserve.

Management Directive B.3 – Manage and minimize the expansion of invasive, non-native flora within the Preserve (*Priority 2*)

***Implementation Measure B.3.1*:** DPR will implement an educational program for Preserve visitors and adjacent residents in order to discourage the introduction invasive, non-native plants into the Preserve. Provided information will discuss invasive plants harmful to the Preserve, and prevention methods. The program may also encourage residents to voluntarily remove invasive exotics from their landscaping. See also implementation measure D.8.1.

***Implementation Measure B.3.2*:** DPR will institute an equestrian education program regarding the potential negative impacts to native ecosystems from the accumulation of non-point source pollutants (e.g., spread of non-native seeds) in staging areas and on frequently used trails. This could be accomplished through implementation of a signage program and interaction between rangers and trail users. Specific signage should state, “Don’t Plant a Pest! Feeding horses weed-free feed for at least 72 hours prior to Preserve entry helps preserve our natural environment”. See also implementation measure A.4.4.

Implementation Measure B.3.3: DPR will provide materials for clean up by equestrian users of staging areas to keep it free of non-point source pollutants that may attract cowbirds or other invasive, non-native species. See also implementation measure A.4.5.

5.3.3 Fire prevention, control, and management

Current fire management activities within the Preserve include two fuel modification zones found within the southeast portion of the Preserve north of El Monte Road where the Preserve abuts two private residences along the southern boundary (see Figure 7). In the event of a fire, adequate access to the Preserve is provided by the existing dirt roads. There are no fire breaks within the Preserve.

Management Directive B.4 – Provide for necessary fire management activities that are sensitive to natural and cultural resources protection (*Priority 1*)

***Implementation Measure B.4.1*:** The County will maintain the established fuel modification zones on Preserve property adjacent to the existing residential structures that are within 100 feet of the Preserve property boundary. The intent of a fuel modification zone is to protect habitable structures adjacent to the Preserve from wildfires. It may further protect the resources within the Preserve by absorbing some of the "edge effects" that might otherwise occur within the Preserve.

Management of the fuel modification zones will adhere to CAL FIRE, Lakeside Fire Protection District, and/or San Diego Rural Fire Protection District requirements.

***Implementation Measure B.4.2*:** The existing dirt roads/trails within the Preserve acting as access roads will be maintained annually to keep them fuel free. In addition, DPR will continue to coordinate with CAL FIRE, the Lakeside Fire Protection District, and the San Diego Rural Fire Protection District to determine what improvements need to be made to make fire response feasible throughout the Preserve.

***Implementation Measure B.4.3*:** Vegetation management is not a current need within the Preserve to address wildfire issues as vegetation is continuing to recover after the 2003 Cedar and 2007 Witch fires and is anticipated to be fire-resistant for the next 10 to 15 years. The need for vegetation management will be assessed through implementation measure A.1.1. DPR will coordinate with CAL FIRE, the Lakeside Fire Protection District and/or the San Diego Rural Fire Protection District to assess the future need to develop an integrated Vegetation Management Plan that will allow environmental documentation for strategic fuels management to be conducted if, and when, needed. A Vegetation Management Plan will also identify likely locations for equipment staging areas and fire breaks, assisting fire fighting activities to avoid known cultural sites, if feasible.

5.4 Public Use, Trails, and Recreation Element (C)

5.4.1 Public Access

Management Directive C.1 – Limit types of public uses to those that are appropriate for the site (*Priority 1*)

***Implementation Measure C.1.1*:** The following public uses are prohibited in the Preserve. Park rangers are responsible for enforcing these restrictions and may call the sheriff for legal enforcement, as appropriate.

a. Off-road or cross-country vehicle and public off-highway recreational vehicle activity are considered incompatible uses in the MSCP preserve, and are therefore prohibited in the Preserve, except for law enforcement, Preserve management, and/or emergency purposes.

b. Hunting or discharge of firearms is an incompatible use in the MSCP preserve, and is therefore prohibited in the Preserve, except for law enforcement, and/or emergency purposes.

c. Poaching or collecting plant or animal species, archaeological or historical artifacts or fossils from the Preserve is generally prohibited; however, the County may authorize collecting upon approval for scientific research, revegetation or restoration purposes, or species recovery programs. In addition, impacts to historic features are prohibited except upon approval by the County.

d. Fishing, swimming, and wading in rivers, streams, or creeks

e. Camping (including homeless and itinerant worker camps)

f. Feeding wildlife

g. Domestic animals, except horses and leashed dogs

h. Smoking

i. Campfires/Open Flames

j. Off-trail biking, hiking or equestrian use

k. Littering

***Implementation Measure C.1.2*:** Prohibited uses will be clearly specified on kiosks, signage and/or trail maps.

Management Directive C.2 – Manage public access in sensitive biological and cultural resource areas within the Preserve (*Priority 1*)

***Implementation Measure C.2.1*:** DPR has identified and mapped narrow endemics and critical populations, and all covered species populations in the Preserve so that these areas can be avoided and/or monitored. Updated information on sensitive species in relation to public access points will be obtained during general wildlife and rare plant surveys in conjunction with habitat monitoring (as described in implementation measures A.1.1 and A.2.1).

***Implementation Measure C.2.2*:** DPR will ensure that any new public-use trails are designed and constructed to avoid and/or minimize impacts to sensitive biological and cultural resource areas. However, no new public use trails are anticipated at this time.

***Implementation Measure C.2.3*:** DPR will provide sufficient signage to clearly identify public access to the Preserve. Barriers such as vegetation, rocks/boulders or fencing may be necessary to protect highly sensitive areas. The appropriate types of barriers to be used will be determined based on location, setting and use.

***Implementation Measure C.2.4*:** DPR will post advisory signs in the Preserve at kiosks and at trailheads that provide access to areas adjacent to El Cajon Mountain, an area known to be frequented by rock climbers, to advise Preserve visitors about the need to protect golden eagle nesting sites within the vicinity. DPR is also in the process of posting "Stay on Trail" signs along portions of the Trans-County trail adjacent to these sensitive habitat areas.

***Implementation Measure C.2.5*:** DPR will monitor for and document any illegal access and use of the Preserve by rock climbers near known golden eagle nesting sites. Monitoring will be conducted in conjunction with routine ranger patrols as described in implementation measures C.5.1 and C.5.2. Information collected will be shared with the BLM and the U.S. Forest Service in order to guide and develop appropriate collaborative management actions for the protection of golden eagles. See also implementation measure D.6.2.

Management Directive C.3 – Provide appropriate interpretive and educational materials (*Priority 2*)

***Implementation Measure C.3.1*:** DPR will share outreach and educational information and notify the public of volunteer opportunities that advance the management, monitoring, and stewardship resources available, and objectives of this RMP. This information will be provided on the DPR website, www.sdparks.org.

***Implementation Measure C.3.2*:** Opportunities for educational trail-side signage and educational kiosks will be identified within the Preserve. In addition, signage provided at access points and on trails maps provides a form of education. See also implementation measures E.2.4 and E.3.1.

***Implementation Measure C.3.3*:** When possible, park rangers assigned to this Preserve should organize and conduct interpretative walks or programs within the Preserve. During these interpretative walks or programs the ranger should distribute the "Living Close to Nature" brochure. This brochure discusses how to live in harmony with wildlife. The interpretative walks and programs should be conducted in accordance with park ranger availability.

5.4.2 Fencing and Gates

Currently, the Preserve entrance is fenced along two sides and includes both a vehicle access gate for Preserve employees only, and an equestrian gate.

Management Directive C.4 – Install and maintain fencing and gates within the Preserve (*Priority 1*)

***Implementation Measure C.4.1*:** Ranger staff will install fencing and/or gates at points of unauthorized public access as appropriate. Points of unauthorized access will be identified in conjunction with trail monitoring activities (as described in implementation measure C.5.1).

***Implementation Measure C.4.2*:** Ranger staff will regularly inspect and maintain all fencing and gates within the Preserve. Fencing segments and gates will be repaired or replaced as necessary.

5.4.3 Trail and Access Road Maintenance

Currently, there is one road, Blue Sky Ranch Road, which provides access to the Preserve staging area and entrance. There is also a private residential road, Pata Ranch Road, which provides access through the western boundary of the Preserve, and an unnamed private road which provides access through the south central portion of the Preserve to private property as well as several private access roads that occur throughout the undeveloped portion of the Preserve. In addition, there are approximately 8.2 miles of trails within the Preserve that include both dirt roads and single track footpaths.

Management Directive C.5 – Properly maintain public access roads, staging areas and trails for user safety, to protect natural and cultural resources, and to provide high-quality user experiences (*Priority 1*)

***Implementation Measure C.5.1*:** Ranger staff will monitor public access roads, staging areas, and trails for degradation and off-trail access and use, and provide necessary repair/maintenance in accordance with the Community Trails Master Plan (County of San Diego 2005). See also implementation measure B.4.2.

***Implementation Measure C.5.2*:** During the golden eagle breeding season (January 1 to July 31), ranger staff will increase patrols of the areas adjacent to known nesting sites (El Cajon Mountain) to ensure Preserve visitors are utilizing authorized trails only, and to monitor for any off-trail access and unauthorized trail formation. See also implementation measures C.2.4 and C.5.5.

***Implementation Measure C.5.3*:** If temporary closure of a trail is deemed necessary for maintenance or remediation, temporary closure actions will be accompanied by educational support, and public notification through signs and

public meeting announcements. An implementation schedule should be written by DPR Operations staff when maintenance or remediation is deemed necessary.

The trail will be posted with signage that indicates temporary closure and the primary reason for the closure (e.g., erosion issues, and sensitive biological resource impacts). Finally, signs should provide contact information for anyone wishing to provide input on trail use or gain additional information regarding temporary closure of trails.

Once posted, the trails in need of maintenance should be blocked with A-frame barricades and/or caution tape. Enforcement of the temporary closure of a trail would require increased ranger patrols of these areas and investigations to determine if the barriers are effective.

***Implementation Measure C.5.4*:** DPR will restore degraded habitats, control non-native plant species along trails, and reduce detrimental edge effects through spot treatment of non-native plants, maintenance and stabilization of trails and strategic revegetation. Measures to counter the effects of trail erosion may include the use of stone or wood cross-joints, edge plantings of native grasses, and mulching of the trail in accordance with the Community Trails Master Plan (County of San Diego 2005). See also implementation measures B.1.1 and B.2.1.

***Implementation Measure C.5.5*:** If unauthorized trail formation is observed by ranger staff, those specific areas will be posted with clear signage reminding the public to remain on authorized trails.

5.4.4 Signage

Management Directive C.6 – Develop, install, and maintain appropriate signage to effectively communicate important information to Preserve visitors (*Priority 1*)

Signs educate, provide direction, and promote sensitive resources and enjoyment of natural areas. Types of signs within the Preserve may include those necessary to: protect sensitive biological and cultural resources (see A.4.4, B.3.2, C.2.4 and E.2.4); provide educational and interpretive information (see C.3.2 and E.3.1); explain rules of the Preserve (see C.1.2 and D.2.1); direct public access (see C.2.3 and C.5.5); and, provide Parks operations information (see A.4.3 and C.5.3).

Current posted signs include the following: Smoking is Prohibited at all County Parks; No Parking; Mountain Lion information; and interpretive wildfire signs. DPR will post protection of golden eagle nesting sites advisory signs in the Preserve at kiosks and at trailheads. DPR is also in the process of posting “Stay on Trail” signs along portions of the Trans-County trail adjacent to sensitive habitat areas.

***Implementation Measure C.6.1*:** Park ranger staff will regularly inspect and maintain all posted signs within the Preserve in good condition. Signs shall be kept free from vandalism and will be repaired or replaced as necessary.

5.5 Operations and Facility Maintenance Element (D)

5.5.1 Litter/Trash and Materials Storage

Management Directive D.1 – Maintain a safe and healthy environment for Preserve users (*Priority 1*)

***Implementation Measure D.1.1*:** Trash receptacles will be provided and maintained at all parking, staging, and picnic areas. Trash receptacles should be designed to be secure from intrusion by wildlife species. Ranger staff will regularly empty trash receptacles at least twice a week or more/less as deemed necessary.

***Implementation Measure D.1.2*:** The permanent storage of hazardous and toxic materials within the Preserve will be prohibited. Any temporary storage must be in accordance with applicable regulations, and otherwise designed to minimize any potential impacts.

Management Directive D.2 – Publicize and enforce regulations regarding littering/dumping (*Priority 1*)

***Implementation Measure D.2.1*:** Lists of regulations will be provided to Preserve users (e.g., posted on kiosks) clearly stating that littering within the Preserve is illegal, and will provide appropriate DPR contacts to report any littering observed.

***Implementation Measure D.2.2*:** Regulations regarding littering/dumping will be enforced by park rangers (County Code of Regulatory Ordinance Section 41.116). Penalties for littering and dumping will be imposed by law enforcement officers sufficient to prevent recurrence and reimburse costs to remove and dispose of debris, restore the area if needed, and pay for additional DPR staff time. Areas where dumping recurs will be evaluated for potential barrier placement. Additional monitoring and enforcement will be provided as needed.

5.5.2 Hydrological Management

Native habitats in the MSCP preserve have evolved, in part, on the distribution and flow characteristics of water. MSCP preserve property should be managed to maintain existing natural drainages and watershed and to restore or minimize changes to natural hydrological processes. Proposed structures and activities should be evaluated for effects on hydraulics, and remedial actions should be taken as needed. Best Management Practices (BMPs) should be used both within and outside the preserve system to maintain water quality.

Management Directive D.3 – Retain tributaries of the San Diego River and Padre Barona Creek in their natural condition (*Priority 1*)

***Implementation Measure D.3.1*:** Any proposed activities shall avoid the tributaries of the San Diego River and Padre Barona Creek located throughout the Preserve and maintain a minimum 100-foot buffer which will be managed in accordance with the MSCP. No future Preserve development is proposed within these buffer areas. Potential threats to jurisdictional waters from any activities shall be identified and impacts avoided or minimized to the maximum extent practicable.

Management Directive D.4 – Install BMPs to prevent further erosion of hillsides *(Priority 1)*

***Implementation Measure D.4.1*:** Monitor current eroded sites and potential sites that may erode through implementation measures A.1.1 and C.5.3. If deemed necessary, install BMPs to stabilize slopes.

5.5.3 Emergency, Safety and Police Services

The Framework Management Plan explains that the interface between current and future urban development and MSCP preserve areas requires increased coordination between the preserve managers and agencies responsible for public safety. The MSCP preserve system, including El Capitan Preserve, must accommodate access for emergency response and fire control and management. In the event that entry into the Preserve by law enforcement agencies is needed in the routine performance of their duties, use of existing roads and trails should be encouraged. In emergencies where there is a direct threat to public safety, the law enforcement agency should contact DPR whenever feasible.

Law enforcement and fire control agencies, the National Guard, the U.S. Citizenship and Immigration Service (USCIS), the Border Patrol, and organizations and agencies that respond to natural disasters shall be permitted to perform their activities within any preserve system subject to all applicable requirements of state and federal law.

Management Directive D.5 – Maintain or increase the ability of emergency response personnel to deal with emergencies within the Preserve or vicinity (*Priority 1*)

***Implementation Measure D.5.1*:** Law enforcement officials will be invited to access Preserve property as necessary to enforce the law. If it becomes apparent that extensive enforcement activities are necessary, DPR will coordinate with the applicable agencies to inform field personnel of how to minimize damage to particularly sensitive resources.

***Implementation Measure D.5.2*:** All medical, rescue, and other emergency agencies will be allowed to access Preserve property to carry out operations necessary to protect the health, safety, and welfare of the public. Access issues are further discussed in implementation measure B.4.2.

Management Directive D.6 – Provide for a safe recreational experience for Preserve visitors (*Priority 1*)

***Implementation Measure D.6.1*:** In the event of a natural disaster, such as a fire or flood, park ranger staff shall evacuate the Preserve and coordinate with the Emergency Operations Center. In addition, staff will coordinate with the local agency in charge of responding to the emergency and, if possible, assist where necessary.

***Implementation Measure D.6.2*:** DPR, in coordination with BLM, will assess and address any public safety concerns at the existing inactive mine sites within the Preserve through installation of fencing, interpretive signage, closure of mine entrances, or any other suitable method as deemed necessary.

5.5.4 Adjacency Management Issues

As described in Section 2.4.2, there is currently only limited development immediately contiguous to the Preserve. The establishment of the MSCP preserve system does not include regulatory authority on properties adjacent to the Preserve; however, the County will require adjacent property owners to follow guidelines when planning and implementing uses and activities that can be regulated when located immediately adjacent to the site.

Management Directive D.7 – Coordinate with adjacent landowners and open space land managers (*Priority 1*)

Implementation Measure D.7.1: DPR will coordinate with adjacent open space land managers on an annual basis, or more regularly as needed, to ensure the contiguous preserved land is managed consistently and in accordance with the MSCP. Adjacent land managers include: the San Diego Audubon Society (land manager for the Silverwood Wildlife Sanctuary) and the U.S. Forest Service (land manager for the Cleveland National Forest).

Implementation Measure D.7.2: DPR will continue to coordinate with the BLM and the U.S. Forest Service regarding implementation of monitoring and collaborative management actions for the protection of golden eagles and their nesting sites. Current golden eagle management activities within the Preserve include posting of signs, monitoring of illegal access and rock climbing activity, and increased ranger patrols during the breeding season (as described in implementation measures C.2.4, C.2.5 and C.5.2).

Management Directive D.8 - Enforce Preserve boundaries (*Priority 1*)

***Implementation Measure D.8.1*:** DPR will enforce, prevent, and remove illegal intrusions into the Preserve (e.g., orchards, decks) on an annual basis, in addition to a complaint basis.

Management Directive D.9 – Educate residents of surrounding areas regarding adjacency issues (*Priority 2*)

***Implementation Measure D.8.1*:** DPR will provide information on this RMP to residents adjacent to the Preserve to heighten environmental awareness, and inform residents of access, appropriate landscaping, construction or disturbance within the Preserve boundaries, pet intrusion, fire management, and other adjacency issues. This RMP will also be accessible on the DPR website and will thus be available to adjacent residents and to the general public.

5.6 Cultural Resources Element (E)

The goal of this section of the RMP is long-term preservation, public interpretation of the cultural resources, and interaction with the bands of Native Americans in whose traditional tribal territory this Preserve exists.

Management Directive E.1 – Identify, record, and assess the significance of all cultural resources within the Preserve (*Priority 2*)

***Implementation Measure E.1.1*:** Identify and record cultural resource sites in those areas of the Preserve that were not accessible during the 2008 survey due to time, terrain, and access constraints. Cultural resources include historic structures, features, and landscaping, as well as historic and prehistoric archaeological sites, features, and artifacts. Inventories shall include a record search at the South Coastal Information Center, SDSU, and on-foot field survey, as well as pertinent archival and historical research.

Any cultural materials collected from the Preserve will be curated at a qualified curation facility. No removal or modification of cultural resources shall occur without written approval by the Director of Parks and Recreation.

***Implementation Measure E.1.2*:** Conduct further documentation of site CA-SDI-8251 to include the expanded site boundaries (over 44 acres) identified in the 2008 cultural resource survey.

***Implementation Measure E.1.3*:** Assess each known cultural site within the Preserve for eligibility as a Historical Landmark, and to the California Resources Historic Register/National Register of Historic Places.

Management Directive E.2 – Preserve and protect significant cultural resources to ensure that sites are available for appropriate uses by present and future generations (*Priority 2*)

***Implementation Measure E.2.1*:** Threats to the cultural resources from natural (e.g., fire, erosion, floods) or human-caused events shall be identified, and impacts prevented, reduced, eliminated, or adverse effects mitigated. Safeguards against incompatible land and resource uses shall be identified to protect all cultural resources.

***Implementation Measure E.2.2*:** The condition and status of cultural resources shall be noted as part of routine monitoring activities conducted once a year and remedial measures shall be taken if damage is noted. Monitoring activities should also photo-document site conditions so that comparisons can be made over time. Any monitoring of the sites in the Preserve will follow the guidelines used by the Department of Public Works, which are found in the County of San Diego *Report Format and Content Requirements, Cultural Resources: Archaeological and Historical Resources* (2007).

All site location information will be kept strictly confidential, and will be available only for qualified cultural resource staff and land managers. Site locations will not be shown on maps or divulged to the public.

***Implementation Measure E.2.3*:** All management activities within the Preserve including, but not limited to, trail construction and maintenance, placement of fencing and gates, and restoration of habitat will take into consideration potential impacts to cultural resources and shall avoid adverse impacts to any cultural resources to the maximum extent possible. No ground disturbing activities will be allowed on or in any cultural resource site within the Preserve until the impacts have been assessed.

If avoidance is not feasible, appropriate mitigation measures will be established. Removal or disturbance of cultural resources shall not occur prior to completion of an approved mitigation program, such as data recovery or recordation. Preservation in place is the preferred mitigation measure.

***Implementation Measure E.2.4*:** Signs shall be posted at kiosks, trail heads and/or throughout the Preserve to notify users that sensitive cultural resources within the Preserve cannot be damaged and that removal of any archaeological material is prohibited by law. Protection and preservation of cultural resources will comply with County of San Diego ordinances (Title 4; Public Property, Division 1; Parks and Beaches, Article 2, Section 41.113), and applicable state and federal laws, which will be enforced by the appropriate law enforcement authorities.

The County will ensure that park ranger staff has sufficient training through the DPR Ranger Academy to actively protect archaeological sites from vandalism and other forms of human impact. If a Preserve user is suspected of vandalism to cultural resources, the appropriate law enforcement authorities shall be

notified. More aggressive measures may be needed if vandalism and damage continue or increase.

***Implementation Measure E.2.5*:** Install, and/or repair and maintain fencing along the boundaries of site CA-SDI-8251 as necessary to discourage trespassing. See also implementation measures C.2.3, C.4.1, and C.4.2.

Management Directive E.3 – Promote the beneficial uses of cultural resources through interpretation and educational programs (*Priority 2*)

***Implementation Measure E.3.1*:** Off-site, and when possible, on-site interpretive programs for Native American heritage, local and regional history, and prehistory will be developed for the Preserve. These may include lectures, walks, kiosks, signs, historic brochures, and displays, but will not include excavations, collecting of artifacts, or disclosure of confidential site locations unless an interpretive plan is developed and approved by the Director of Parks and Recreation. The plan will include supervision by a qualified archaeologist approved by the Director of Parks and Recreation.

Management Directive E.4 – Honor Native American Heritage and promote Native American ceremonies, gathering, and cultural practices (*Priority 2*)

***Implementation Measure E.4.1*:** Consultation with the Barona and Viejas Band of Mission Indians shall be conducted frequently in order to identify appropriate management of pre-contact and ethnographic cultural resources. The tribes will be encouraged to participate in evaluation, recordation, protection and preservation of cultural resources.

***Implementation Measure E.4.2*:** The County will open the Preserve to traditional uses by the Barona and Viejas Band of Mission Indians. All activities by Native Americans in the Preserve shall be conducted with a Right-of-Entry permit specifically designed for the Preserve.

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