Resource Management Plan
for
Escondido Creek Preserve
San Diego County





June 2011

PARKS AND RECREATION
COUNTY OF SAN DIEGO
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ESCONDIDO CREEK PRESERVE

RESOURCE MANAGEMENT PLAN

June 30, 2011

Approved by:

_____ _____

Brian Albright, Director
County of San Diego
Department of Parks and Recreation

Date

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Appendix B Archaeological Survey Report for the Escondido Creek Preserve, San Diego County, California (*Confidential*)

Appendix C Escondido Creek Preserve Vegetation Management Plan

1.0 INTRODUCTION

Escondido Creek Preserve (Preserve) is an approximately 346.59-acre[1] open space preserve located in the Elfin Forest community of unincorporated San Diego County, California (Figure 1). The Preserve is comprised of several different properties spread throughout the area surrounding Elfin Forest Road and Harmony Grove Road (Figure 2). The County of San Diego (County) Department of Parks and Recreation (DPR) began acquiring the properties that make up the Preserve beginning in 2001 with the most recent parcels added in 2010. Several of the Preserve parcels were purchased to provide mitigation for projects undertaken by the San Diego County Water Authority (Water Authority) and the San Diego Association of Governments (SANDAG). The Preserve is included in the County's draft North County Multiple Species Conservation Program (North County MSCP) preserve system and consists of habitat ranging from moderate to very high in value as well as designated critical habitat for coastal California gnatcatcher. Currently, the Preserve is not open to the public.

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 Draft North County MSCP Plan (North County MSCP Plan) and Draft Framework Resource Management Plan (Framework RMP) (County 2009b). In addition, this RMP serves as the long-term management plan required by the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) (collectively "Wildlife Agencies") for both the Water Authority and SANDAG mitigation lands.

Specifically, 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

[1] The assessor's parcel data list the Preserve to be 352.16 acres; however, calculations generated from GIS data show the Preserve as 346.59. Therefore, this RMP references the property as 346.59 acres.

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

Chapter 5 of this RMP includes ASMDs for Escondido Creek Preserve.

It is recognized that County-owned 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 subregional MSCP Plan (City of San Diego 1998) and North County MSCP Plan once it is finalized.

1.1.1 MSCP Background

The MSCP is a comprehensive habitat conservation planning program and one of three subregional habitat planning efforts in San Diego County which contribute to preservation of regional biodiversity through coordination with other habitat conservation planning efforts throughout southern California. Agencies participating in the MSCP include the County, other local jurisdictions, and the Wildlife Agencies. Local jurisdictions and special districts implement their respective portions of the subregional MSCP Plan 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). Escondido Creek Preserve is included within the North County MSCP Plan preserve system.

1.1.2 North County MSCP Plan

The County is preparing the North County MSCP Plan as a habitat conservation planning effort which will expand the County's MSCP into the northwestern unincorporated areas of the County. The North County MSCP Plan will help conserve habitat that benefits numerous species, including the 63 species planned for coverage. The North County MSCP Plan area encompasses approximately 489 square miles in and around the unincorporated communities of Bonsall, De Luz, Fallbrook, Harmony Grove, Lilac, Pala, Pauma Valley, Rainbow, Ramona, Rincon Springs, Twin Oaks Valley, and Valley Center.

1.1.3 Draft North County MSCP Framework RMP and ASMDs

According to Section 6.3.1 of the subregional MSCP Plan, the County is required to prepare a Framework RMP for the portion of the North County MSCP preserve within the North County MSCP Plan's boundaries. The North County MSCP Framework RMP is currently in draft form. The Framework RMP provides general direction for all preserve management and biological monitoring within the preserve system.

The Framework RMP also incorporates a requirement for the subsequent preparation and implementation of ASMDs to address management and monitoring issues at the site-specific level. ASMDs are to be developed in accordance with the Framework RMP using the information gained during the biological and cultural resources baseline surveys. Chapter 5 of this RMP includes ASMDs for Escondido Creek Preserve.

1.1.4 Water Authority and SANDAG Mitigation Lands

Water Authority

As part of its Capital Improvement Program, the Water Authority approved a project to construct and operate reservoir, pipeline and pump station facilities to store and distribute water as part of the Emergency Storage Project (ESP). The Biological Opinion for the ESP issued by the USFWS in 1997 (BO #1-6-97-F-13) required the Water Authority to mitigate for temporary and permanent loss of existing upland habitat associated with the project by acquiring upland habitat within the MSCP planning area. Three parcels were purchased by the Water Authority in 2001 and transferred to the County in 2002 for the purpose of obtaining upland mitigation credits from the USFWS for satisfaction of the upland habitat mitigation and preservation obligations of the ESP pursuant to an agreement signed by the Water Authority and the County on August 8, 2001.

In exchange for fee title, DPR assumed responsibility for the property as land manager and for funding the long-term management and monitoring efforts at the parcels because of the regional benefits associated with implementation of the North County MSCP Plan. Per the Agreement between the Water Authority and the County (2001), DPR shall meet all requirements of the USFWS to manage and maintain the property (referred to in the Agreement as "Escondido Creek Uplands") as an open space and wildlife conservation area, consistent with a long-term management plan, for the purpose of providing 37 acres of credit to the Water Authority for ESP mitigation as required by the ESP Biological Opinion. This RMP serves as the long-term management plan for the property and has been submitted to the Wildlife Agencies for review and approval, and for confirmation that the Water Authority has met a portion of its mitigation obligations for the ESP.

SANDAG

As part of SANDAG's TransNet Environmental Mitigation Program (EMP), SANDAG contributed funds to the County's 2010 purchase of the 39.44-acre Mendocino parcel in exchange for a conservation easement granted to SANDAG for use as mitigation for future local transportation projects. The acquisition of Mendocino served to (1) provide mitigation for projected upland impacts of local transportation projects funded by TransNet; (2) protect critical habitat (coastal sage scrub) for the California gnatcatcher; (3) further implement the CDFG NCCP efforts in North San Diego County; and (4) enhance a general wildlife corridor between larger habitat areas.

The Conservation Easement Deed recorded on the property requires that the County manage approximately 19.72 acres of the 39.44-acre parcel on behalf of SANDAG. Per the Mendocino Land Management Agreement, DPR has agreed to manage the property consistent with the terms and conditions of the Conservation Easement Deed, the Land Management Agreement, and a RMP developed for the parcel, so that the property's wildlife and habitat values, including its mitigation value to SANDAG, are maintained and protected (SANDAG and County 2010). Funding for DPR management of Mendocino is provided by SANDAG in the form of an endowment maintained and operated by SANDAG. This RMP was developed as a condition of the Land Management Agreement and has been submitted to the Wildlife Agencies for review and approval.

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 reviewed and 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 lands conserved as part of the MSCP preserve system. The Preserve is fully owned and operated by DPR and the DPR District Park Manager assigned to the Preserve is the land manager. The District Park Manager and Resource Management Division staff will be responsible for the implementation of the RMP.

The Preserve is located in the management district of one supervising park ranger, three park rangers, and three seasonal employees. Park rangers patrol the Preserve a minimum of three times a week and at times 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/preserves and enforce Preserve 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 Funding Mechanism

Implementation and timing of many of the management directives in this RMP will be based on the amount of available funding in any fiscal year and will be determined by the DPR Operations Division. The DPR Operations Division will prioritize Preserve needs in their work plan for the fiscal year based on the priority of the management directives as identified in this RMP.

The County allocates general funds for costs to implement the MSCP, including funding for land management, stewardship, and adaptive management and monitoring. The County Board of Supervisors approved approximately $4.7 million of General Fund allocations for implementation of the MSCP for fiscal years 2009-10 and 2010-11 (County 2010a). Base funding for land management costs will be maintained for baseline preserves owned by the County and will be increased as lands are acquired in the future.

The County estimates that current funding levels will provide for adaptive management and monitoring on all currently owned preserve lands. Future regional funding sources are also anticipated to fund adaptive management and monitoring activities throughout the preserve system. Funding for SANDAG mitigation lands was negotiated separately and is discussed in more detail below.

SANDAG

Per the Mendocino Land Management Agreement, SANDAG and the County have agreed that the ongoing costs to manage the Mendocino mitigation parcel in perpetuity (annual stewardship, and adaptive management and monitoring costs of approximately $2,960) will be funded through an endowment of $98,700 in an interest-bearing account held, maintained and operated by SANDAG at a rate of return intended to cover the annual stewardship, and adaptive management and monitoring costs. If additional management is required due to unforeseen events above and beyond the control of the County, SANDAG and the County will negotiate additional management costs necessary to maintain the habitat and mitigation value of the property.

2.0 PROPERTY DESCRIPTION

2.1 Property Location

The Escondido Creek Preserve is generally located in the unincorporated community of Elfin Forest in northwestern San Diego County. Elfin Forest is bordered to the north and northwest by the City of San Marcos; to the west by the City of Encinitas; to the south by the unincorporated community of Rancho Santa Fe; and to the east by the unincorporated communities of Harmony Grove and Del Dios. The Preserve is within the Rancho Santa Fe, California U.S. Geological Survey (USGS) 7.5-minute quadrangle and is located in: Township 12 South, Range 3 West, Section 36; and Township 13 South, Range 3 West, Sections 3 and 4 (Figures 1 and 2).

The properties that make up the Preserve are more specifically located to the north and south of Elfin Forest Road and Harmony Grove Road. The Assessor's Parcel Numbers (APNs) of the existing Preserve properties are provided in Table 1 below. Portions of the Preserve retain the original property owner name for ease of reference.

Table 1. Escondido Creek Preserve Property Names and APNs

Property Name	APNs	
Georgeson	264-031-33	
Meyerhoff/Yale	264-031-39	Water Authority Mitigation Parcel
	264-031-40	Water Authority Mitigation Parcel
Rohan	264-032-10	Water Authority Mitigation Parcel
Palomar Forum	264-041-30	
Hewitt	264-041-13	
Mendocino	264-042-87	SANDAG Mitigation Parcel
Fontanini	679-140-01	
TECC Acquisitions	679-140-06	
	679-140-12	
	679-140-13	
	679-140-14	
	679-140-15	
Family Stations	679-130-05	
Tunstall	679-130-12	

2.2 Geographical Setting

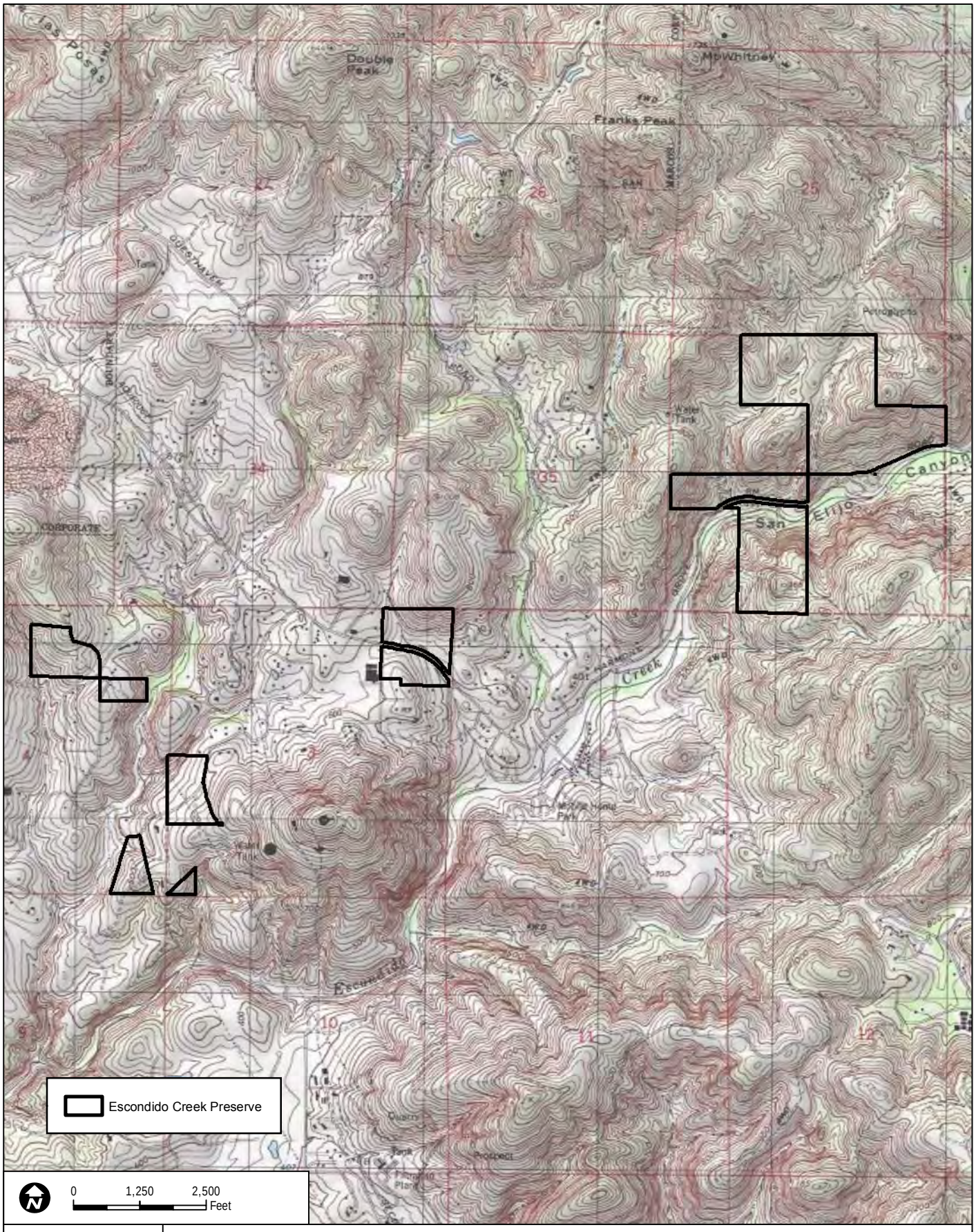
The Preserve is located in the lower chaparral biotic zone in the Peninsular Ranges of southern California. Elevations in the Preserve range from approximately 340 feet (100 meters) to 968 feet (295 meters) above mean sea level. Within the Preserve, 85 acres have slopes of 20 percent or less, while 263 acres have slopes greater



DUDEK

FIGURE 1

Regional Map



DUDEK

6680-01

SOURCE: USGS 7.5-Minute Series Quadrangle.

FIGURE 2
Vicinity Map

than 20 percent. The northeast section of the Preserve lies along Escondido Creek and San Elijo Canyon. The rest of the Preserve lies north of Escondido Creek and west of San Elijo Canyon. The project vicinity is bounded by the city of Escondido and the community of Harmony Grove to the north and east, Lake Hodges and the community of Del Dios to the south and east, unincorporated land to the west and south, the city of Carlsbad to the west, and the Elfin Forest Recreational Reserve and Olivenhain Reservoir to the east.

The Preserve is located along multiple ridgelines and valleys. In addition to Escondido Creek, several small unnamed seasonal drainages and intermittent creeks run through the Preserve.

2.2.1 Site Access

The Preserve is currently not open to the public; however, access for ranger patrol purposes is from several public and private roads off of Elfin Forest Road in the west and Harmony Grove Road in the east. The parcels in the western portion of the Preserve are accessible from Fortuna Del Sur and Fortuna Del Este, south of Elfin Forest Road. Elfin Forest Road bisects the Mendocino parcel in the central portion of the Preserve and access to the northern half of the parcel is from Colina Encantada Way while access to the southern half is from Elfin Forest Lane. The parcels in the eastern portion of the Preserve are accessible directly from Harmony Grove Road, except for Family Stations which is accessible via Wild Willow Hollow, north of Harmony Grove Road.

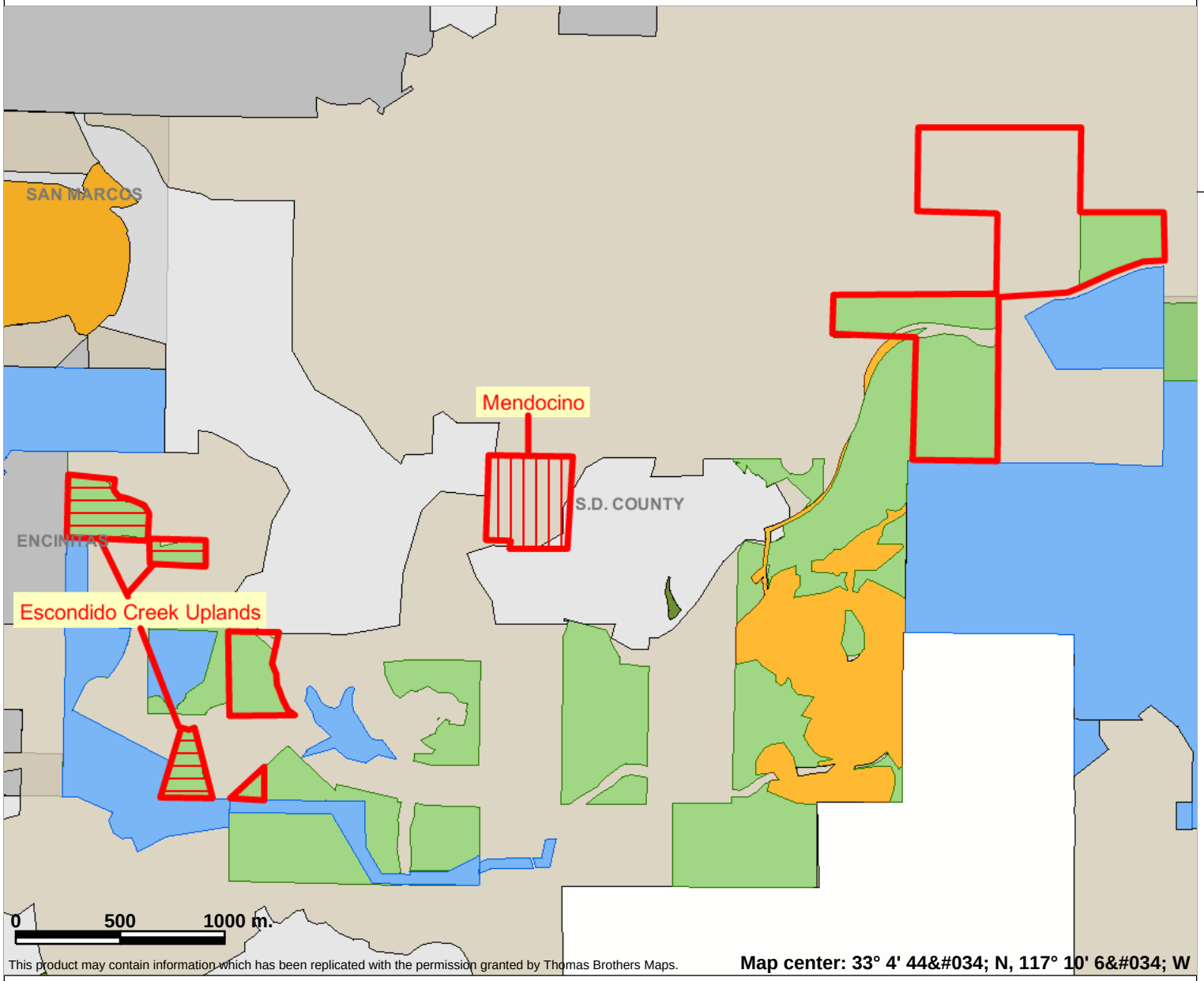
2.2.2 MSCP Context

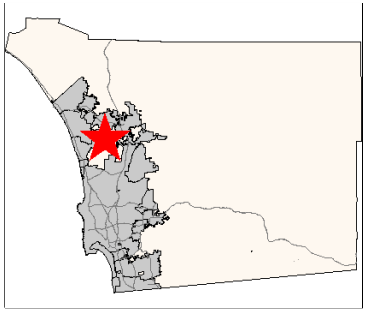
The Preserve parcels are spread across the Elfin Forest Core Area in the west and Harmony Grove Core Area in the east (Figure 3). The parcels in the western portion of the Preserve are designated as Baseline Preserve. These parcels are surrounded by scattered rural residences and vacant undeveloped land designated as Pre-Approved Mitigation Area (PAMA) as well as open space areas designated as Baseline Preserve. In addition, Olivenhain Municipal Water District (OMWD) and the Water Authority own surrounding open space preserve lands. Water Authority lands are identified as Managed Mitigation Area under the Water Authority's Subregional NCCP/HCP (Water Authority and USFWS 2010).

The Mendocino parcel located on Elfin Forest Road in the central portion of the Preserve is designated as PAMA, as is the vacant undeveloped land to the north and the agricultural land to the west. The adjacent rural residences to the east and south are located outside PAMA.

The parcels in the eastern portion of the Preserve are designated as Baseline Preserve, except for the Family Stations parcel north of Harmony Grove Road, which is designated as PAMA. The majority of the area surrounding these parcels is designated as PAMA and consists of vacant undeveloped land and open space

Figure 3. Proposed North County MSCP Designations





Legend

Public Version: DRAFT MSCP Designations - North

- Preserve Areas
- Pre-Approved Mitigation Area (PAMA)
- Open Space Easement outside PAMA
- Pre-negotiated (Hardlined) Take Authorized Areas
- Outside Pre-Approved Mitigation Area (PAMA)
- Tribal Lands
- US Forest Service
- Special Districts

Incorporated Areas

- S.D. COUNTY
- Other
- County Boundary2

N

Scale: 1:28,596

Map center: 33° 4' 44" N, 117° 10' 6" W

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preserve. OMWD and the Water Authority own open space preserve lands to the east and south; Water Authority lands are identified as Managed Mitigation Area under the Water Authority's Subregional NCCP/HCP (Water Authority and USFWS 2010).

2.3 Physical and Climatic Conditions

2.3.1 Geology and Soils

Geologically, the Preserve lies within the Southern California Batholith and the Peninsular Ranges. Mesozoic (245-65 million years ago [MYA]) granitic and gabbroic rock and Quaternary (1.6 MYA to present) sedimentary deposits (Wagner and Maldonado 2000; Rogers 1965) are present within the Preserve. The granitic and gabbroic rocks were formed in the Cretaceous Period during the later part of the Mesozoic Era. They are part of the western zone of the Peninsular Ranges Batholith. The designation for the area of the Preserve is mid-Cretaceous period *Klh* or Leucogranodiorite of Lake Hodges. It is "massive, coarse- and medium-grained biotitehornblende, leucogranodiorite" (Kennedy and Tan 2005).

The Preserve contains eight soil types (Figure 4) belonging to five soil series (USDA 1973). A brief description of each soil series and associated soil types that occur on the Preserve is provided below.

Cieneba Series

The Cieneba series consists of excessively drained, very shallow to shallow coarse sandy loams that form in material weathered in place from granitic rock. Cieneba soils exhibit rapid to very rapid runoff and a high to very high erosion hazard. Cieneba-Fallbrook rocky sandy loams (9% to 30% slopes, eroded) occupy the entire eastern portion of the Preserve and predominantly support southern mixed chaparral in this area. Cieneba-Fallbrook rocky sandy loams (30% to 65% slopes, eroded) occupy the northeastern corner of the central parcel. This soil type supports Diegan coastal sage scrub within the parcel.

Escondido Series

Escondido series soils are well-drained, moderately deep to deep very fine sandy loams formed in material weathered from metamorphosed sandstone. Escondido soils exhibit slow to medium runoff and a slight to moderate erosion hazard. Escondido very fine sandy loam (5% to 9% slopes) occurs in the northwestern portion of the central parcel on the Preserve. This soil type supports Diegan coastal sage scrub within the parcel.

Figure 4b

Figure 4c

Figure 4d

0 750 1,500 Feet

Escondido Creek Preserve

Soils

- Cieneba-Fallbrook rocky sandy loams
- Escondido very fine sandy loam
- Exchequer rocky silt loam
- Huerhuero loam
- San Miguel rocky silt loam
- San Miguel-Exchequer rocky silt loams

DUDEK

6680-01

SOURCE: NAIP 2009

FIGURE 4a

Soils - Index Map

Escondido Creek Preserve

Soils

Exchequer rocky silt loam

San Miguel rocky silt loam

San Miguel-Exchequer rocky silt loams

0 200 400 Feet

SOURCE: NAIP 2009

DUDEK

6680-01

FIGURE 4b

Soils Map

Escondido Creek Preserve

Soils

- Cieneba-Fallbrook rocky sandy loams
- Escondido very fine sandy loam
- Huerhuero loam
- San Miguel rocky silt loam
- San Miguel-Exchequer rocky silt loams

0 150 300 Feet

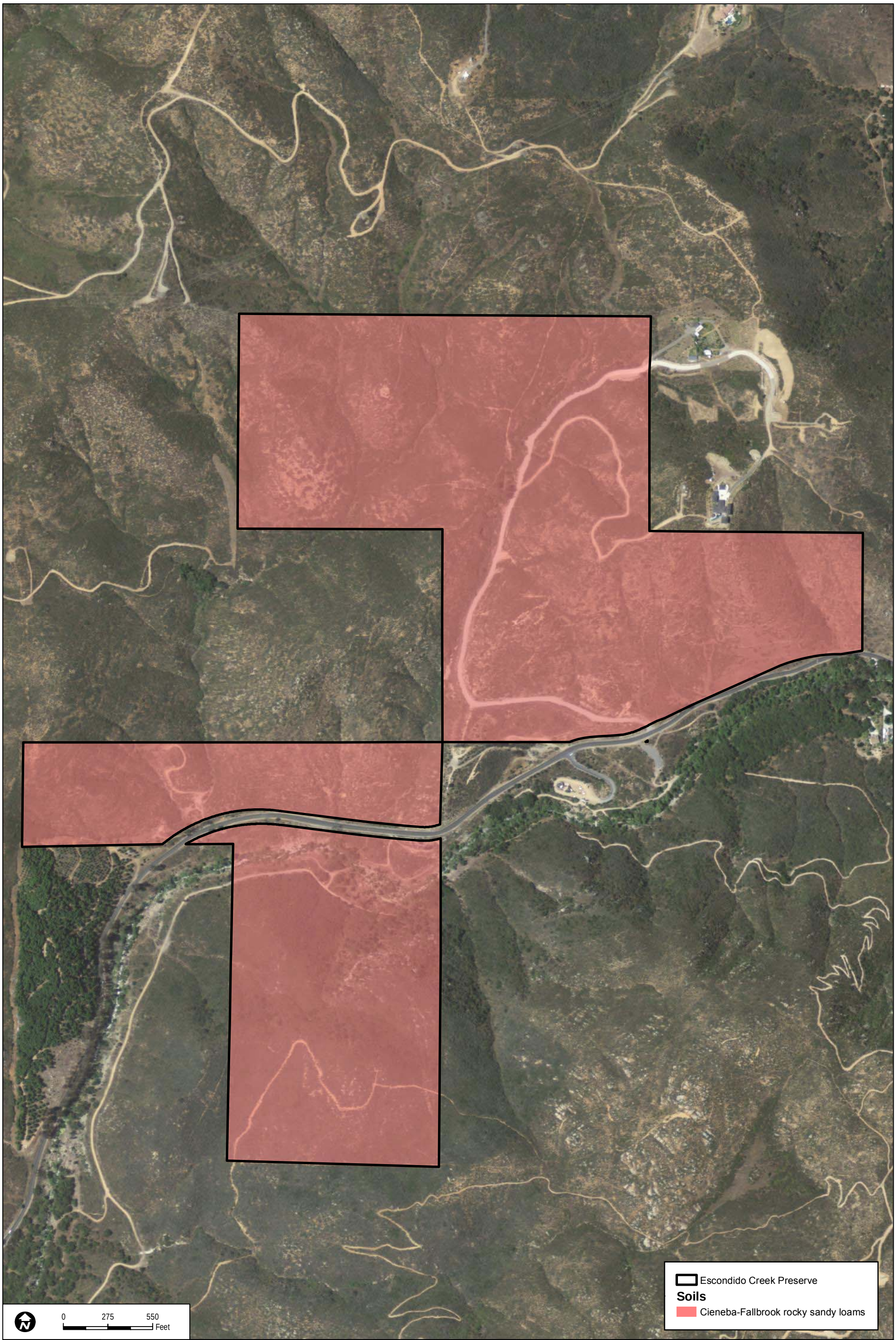
DUDEK

6680-01

SOURCE: NAIP 2009

FIGURE 4c

Soils Map



DUDEK

6680-01

SOURCE: NAIP 2009

FIGURE 4d

Soils Map

Exchequer Series

Exchequer series soils are well-drained, shallow to very shallow silt loams formed in material weathered from hard metabasic rock. Exchequer soils exhibit medium to rapid runoff and a moderate to high erosion hazard. Rock outcrop covers about 10% of the surface. Exchequer rocky silt loam (30% to 70% slopes) and Exchequer rocky silt loam (9% to 30% slopes) occupy much of the western parcels on the Preserve. These soil types primarily support Diegan coastal sage scrub and southern mixed chaparral in the western parcels.

Huerhuero Series

Huerhuero series soils are moderately well-drained loams that derived from sandy marine sediments. Huerhuero soils exhibit slow to medium runoff and a slight to moderate erosion hazard. Huerhuero loam (5% to 9% slopes, eroded) occurs along Elfin Forest Road in the central parcel of the Preserve and supports Diegan coastal sage scrub, southern coast like oak riparian forest, and valley needlegrass grassland in this area.

San Miguel Series

San Miguel series soils are well-drained, shallow to moderately deep silt loams with clay subsoil that are derived from metavolcanic rock. San Miguel soils exhibit medium to rapid runoff and a moderate to high erosion hazard. San Miguel soils are known to occur as a complex with Exchequer soil series. San Miguel rocky silt loam (9% to 30% slopes) and San Miguel-Exchequer rocky silt loams (9% to 70% slopes) occur within the central parcel of the Preserve and in portions of the western parcels. These soil types primarily support Diegan coastal sage scrub within these parcels.

2.3.2 Climate

As with most of southern California, the regional climate in the vicinity of the Preserve is influenced by the Pacific Ocean and is frequently under the influence of a seasonal, migratory subtropical high-pressure cell known as the Pacific High. Wet winters and dry summers, with mild seasonal changes, generally characterize the southern California climate. This climate pattern is occasionally interrupted by extreme periods of hot weather; winter storms; or dry, easterly Santa Ana winds.

However, there is some local variance to the typical southern California climate. The inland location of the Preserve affects the degree of influence of the Pacific Ocean, resulting in less-regulated temperatures. The average high temperature calculated from January 1900 to March 1979 for the Escondido area is approximately 75.9 degrees Fahrenheit (°F), with higher temperatures in summer and early fall (July through September) reaching up to 88.2°F (Western Regional Climate Center 2009). The mean precipitation for the area is 16.22 inches per year, with the most rainfall

concentrated in the months of December (2.67 inches), January (3.24 inches), and February (3.11 inches) (Western Regional Climate Center 2009).

2.3.3 Hydrology

The Preserve is within the Carlsbad Watershed (Figure 5). The Carlsbad Watershed generally drains via small sub-drainages, gullies, and draws towards Escondido Creek, which traverses the eastern portion of the Preserve and continues south of the Preserve farther west. Escondido Creek flows approximately 11.5 miles from the Preserve to the Pacific Ocean via San Elijo Lagoon.

Designated beneficial uses for the Escondido Creek in this area include: agricultural supply; municipal and domestic supply; contact and non-contact water recreation; warm and cold freshwater habitat; and wildlife habitat (California RWQCB 1994). According to the 2006 CWA Section 303(d) list, Escondido Creek is impaired for DDT, manganese, phosphate, selenium, sulfates, and total dissolved solids.

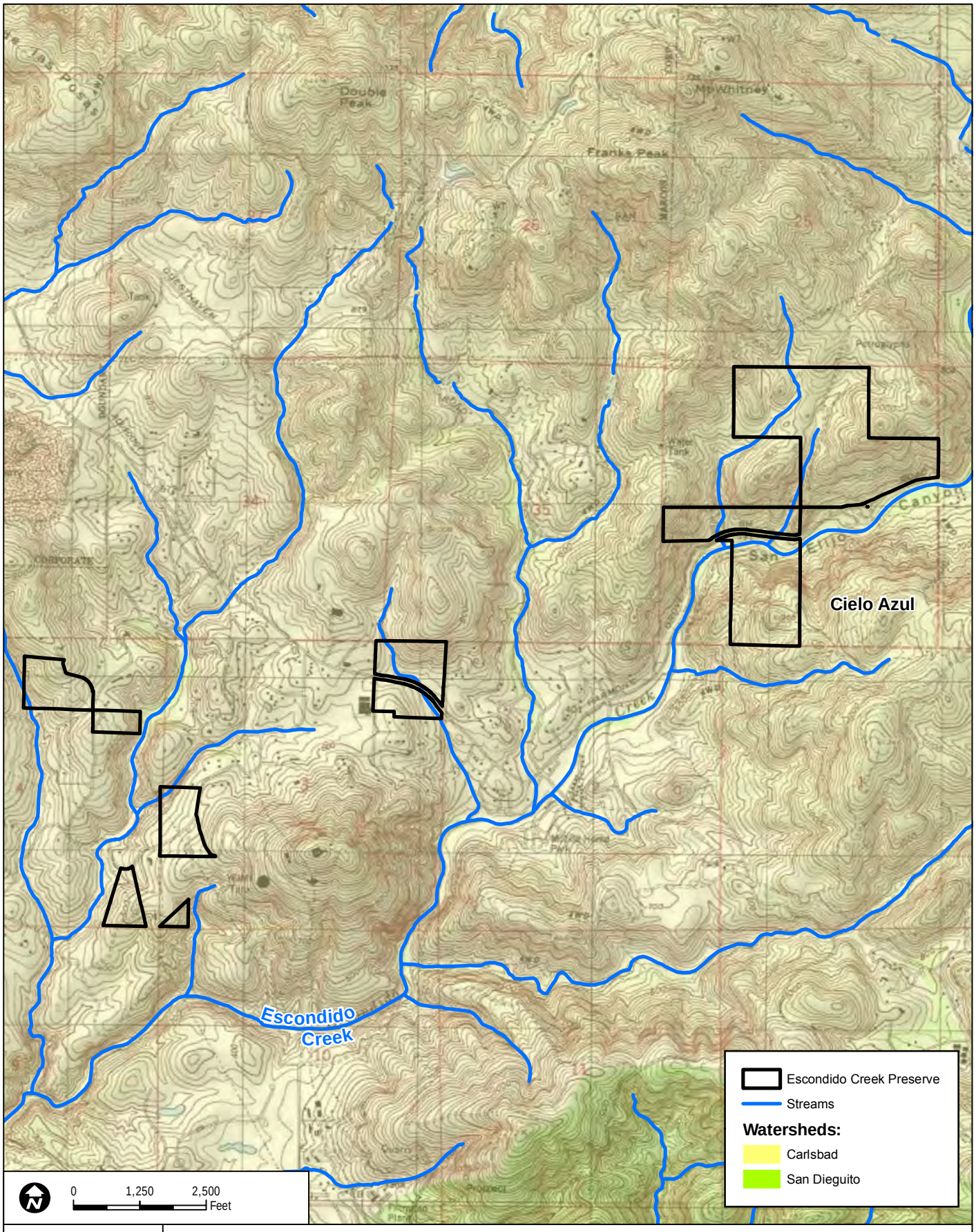
2.3.4 Fire History

Nearly all of the Preserve has burned at least once during the recorded data period, with fires occurring in 1943, 1986, 1989, and 1997 (Figure 6). The Preserve is classified as a Very High Fire Hazard Severity Zone by the California Department of Forestry and Fire Protection (CAL FIRE) (FRAP 2011) and is located within a fuel management priority area (Rancho Project Area) as identified by the Forest Area Safety Task Force (County 2009c). The Preserve is designated a state responsibility area (SRA), which means the financial responsibility of preventing and suppressing fires is primarily the responsibility of the State, and lies within the service area of the Elfin Forest/Harmony Grove Fire Department.

2.4 Land Use

2.4.1 On-Site Land Use

The Preserve is an approximately 346.59-acre open space preserve. It is currently not open to the public; however there are existing local community trails/pathways that run alongside the roadways adjacent to the western and central portions of the Preserve. The public is allowed to use the portion of the local trails that crosses through the Mendocino parcel, which is delineated with existing split rail fencing. In addition, there are several dirt trails/access roads throughout the Preserve which provide access for various public utility easements, as well as evidence of illegal, motorized use in some areas. There are several existing gates throughout the Preserve that control unauthorized access to the Rohan, Hewitt, TECC Acquisition, and Family Stations parcels (Figure 7).

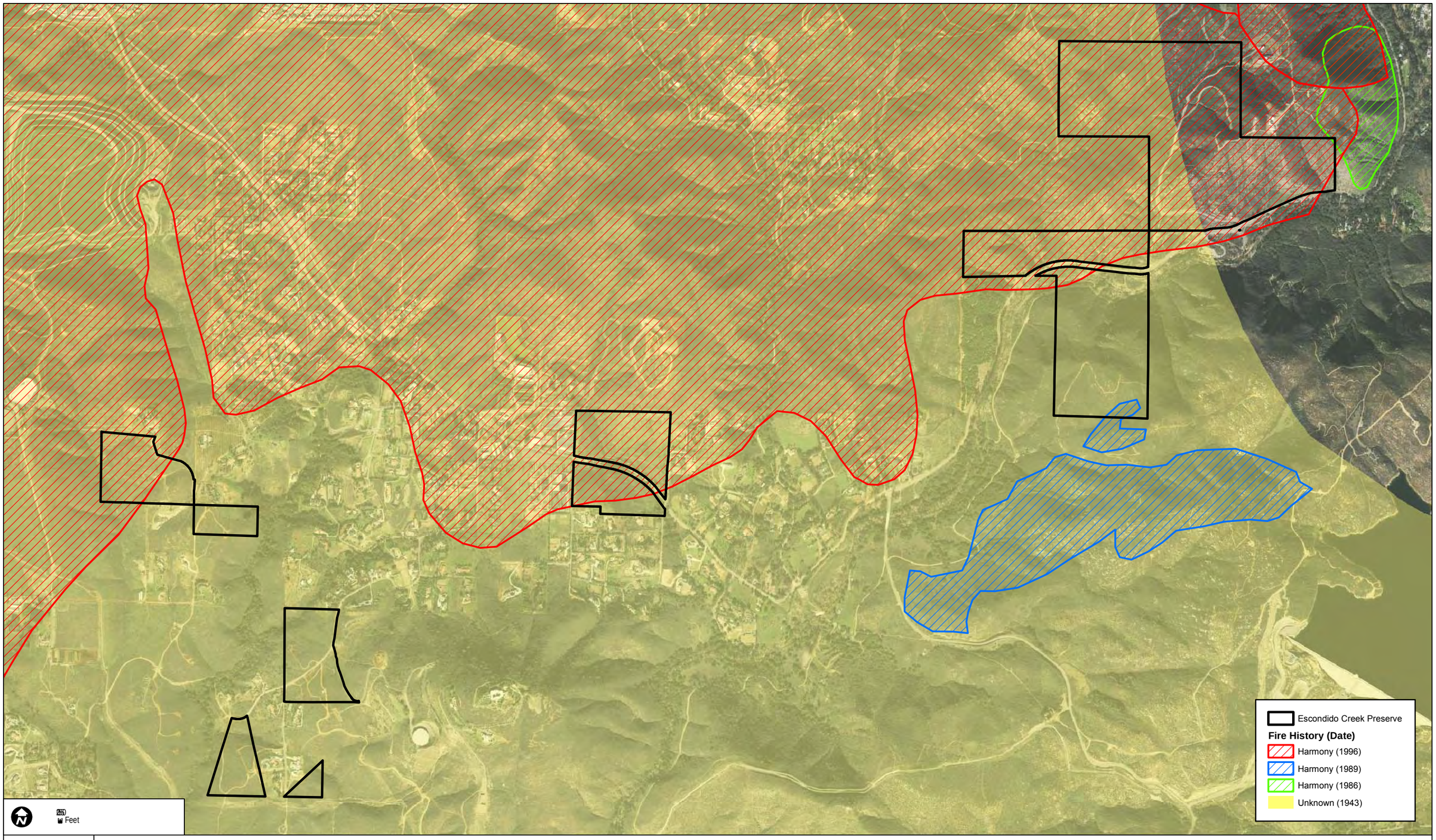


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SOURCE: USGS 7.5-Minute Series Quadrangle
SANGIS 2008
USGS NHD 2010

FIGURE 5
Hydrology Map



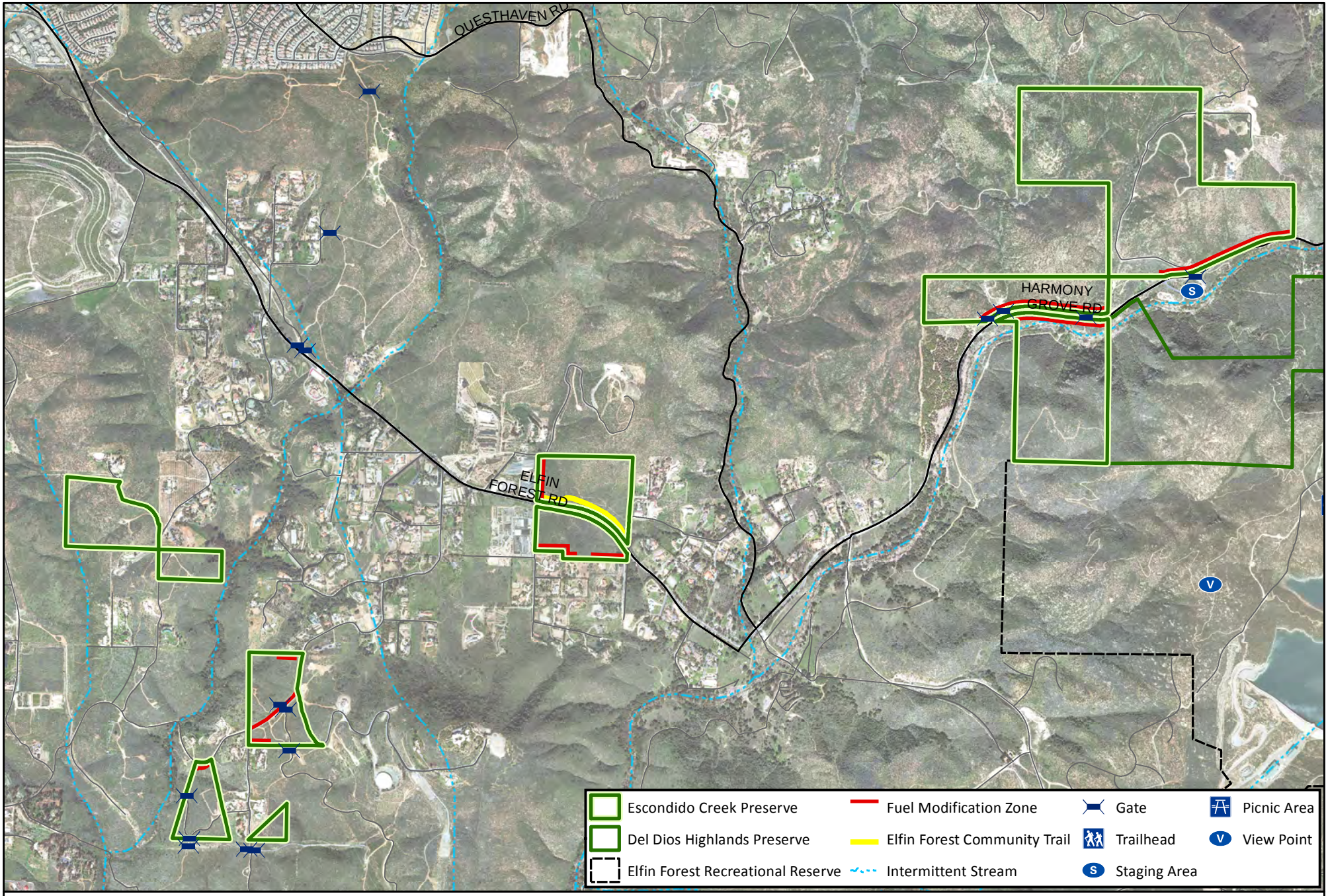
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SOURCE: Digital Globe 2008
FRAP 2009

FIGURE 6

Fire History



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N

1,000 500 0 1,000
Feet

Figure 7
Land Use Map
Escondido Creek

Path: E:\MXDs\11\11_06_EscondidoCreekLandUse.mxd, 06/02/11, mcasey

2.4.2 Adjacent Properties

The parcels in the western portion of the Preserve are immediately adjacent to vacant, undeveloped land and open space parcels as well as some spaced rural residences. The adjacent open space parcels include land owned and managed by OMWD and the Center for Natural Lands Management (CNLM).

The Mendocino parcel in the central portion of the Preserve is bordered by vacant undeveloped land to the north, field crops and intensive agriculture to the west, and spaced rural residences to the south and east.

The parcels in the eastern portion of the Preserve are immediately adjacent to spaced rural residences in the northeast, vacant undeveloped land in the north/northwest, orchards/vineyards to the west, and open space parcels to the south/southeast. The adjacent open space parcels include the County's Del Dios Highlands Preserve, and the Elfin Forest Recreational Reserve, which is owned by the Water Authority and managed by OMWD.

2.4.3 Easements, Rights or Restrictive Covenants

Multiple easements and/or right-of-ways are present within the Preserve properties. In addition, there are restrictive covenants on several of the parcels that were acquired using federal and state grant funds. The easements, right-of-ways and restrictive covenants for each affected Preserve property are described below.

Georgeson (APN 264-031-33)

SDG&E holds easements for public utilities, ingress and egress on the parcel. SDG&E conducts operation and maintenance activities for their facilities consistent with the SDG&E Subregional Natural Community Conservation Plan (NCCP) (SDG&E 1995). The SDG&E Subregional NCCP was approved by the Wildlife Agencies and is compatible with this RMP.

In addition, there are restrictive covenants on the parcel, which was acquired using grant funds associated with the Caltrans Environmental Enhancement and Mitigation Program. Prohibited uses of the property are outlined in Exhibit D of the TEA Program Agreement Declaring Restrictive Covenants.

Meyerhoff/Yale (APNs 264-031-39 & 264-031-40)

SDG&E holds 60-foot-wide easements and right-of-ways for ingress and egress for road and public utility purposes associated with the overhead power lines on this parcel. There is also a 40-foot-wide private road and utility easement for the paved road along the eastern boundary of the parcel.

Rohan (APN 264-032-10)

SDG&E holds 60-foot-wide easements and right-of-ways for ingress and egress for road and public utility purposes associated with the overhead power lines on this parcel.

Hewitt (APN 264-041-13)

SDG&E holds 60-foot-wide easements and right-of-ways for ingress and egress for road and public utility purposes associated with the overhead power lines on this parcel. There is also a private underground easement within Fortuna Del Este, which borders the parcel to the east.

In addition, there are restrictive covenants on these parcels, which were acquired using grant funds associated with the Caltrans Environmental Enhancement and Mitigation Program.

Mendocino (APN 264-042-87)

The County holds an easement and maintains a 60-foot right-of-way along Elfin Forest Road, which bisects the parcel, for provision of road improvements and other underground and overhead improvements. OMWD also holds a pipeline(s) easement along Elfin Forest Road for any and all purposes, together with their necessary fixtures and appurtenances including, but not limited to, conduits and cables for power transmission and communication purposes.

SDG&E holds easements within the parcel for public utilities, ingress and egress. There are also several private easements for road, sewer, water, gas, power and telephone lines for the adjacent residences. The private roads that border the parcel to the east and west are maintained by the residents.

In addition, SANDAG holds a conservation easement over the parcel. The Conservation Easement Deed requires that the County manage approximately 19.72 acres of the 39.44 acre parcel on behalf of SANDAG. Consistent with this Agreement, the County will manage the land to assure that the site retains its Conservation Values, including its value as mitigation for regional and local street transportation projects. The remaining 19.72 acres is available for use as mitigation by the County.

Fontanini (APN 679-140-01)

The County holds an easement and maintains a 60-foot right-of-way along Harmony Grove Road, which crosses through the southeast corner of the parcel, for provision of road improvements and other underground and overhead improvements.

TECC Acquisitions (APNs 679-140-06, -12, -13,-14 & 679-140-15)

In addition to the County highway easement along Harmony Grove Road, which bisects the TECC acquisition parcels, several other public agencies hold easements through the property. A flowage easement and a conservation easement, over 6.45 acres of Escondido Creek, are held by the San Diego County Flood Control District and OMWD, respectively. Along the south side of Escondido Creek the City of Escondido holds a 20-foot wide sewer outfall easement, which serves as an access road and informal trail. In addition, SDG&E holds a four-foot utility easement just south of Harmony Grove Road.

There is also a 2.78-acre mitigation site located along the entire portion of Escondido Creek which crosses through the parcels. The wetlands enhancement site serves as off-site mitigation for impacts associated with the Meadowbrook Village Development project in the City of Escondido. Following the initial five-year maintenance and monitoring period, TECC will be responsible for the long-term management of the mitigation site in perpetuity. The County has granted TECC right to enter the property to complete the work.

In addition, there are restrictive covenants on these parcels, which were acquired using grant funds associated with the Caltrans Environmental Enhancement and Mitigation Program.

Family Stations (APN 679-130-05)

In addition to the County highway easement along Harmony Grove Road, which runs along the southeast boundary of the preserve, several other private and public easements exist on site. A private dirt road, Wild Willow Hollow, crosses the property and provides access from Harmony Grove Road to privately-owned parcels northeast of the property. The adjacent landowners hold road and public utility easements along Wild Willow Hollow and are responsible for maintenance of this road. In addition, the San Diego County Sheriff's Department holds an easement for a second dirt road stemming off of Wild Willow Hollow, which provides access to a radio repeater station located atop a peak just east of the property.

Tunstall (APN 679-130-12)

The County highway easement along Harmony Grove Road runs along the southern boundary of the parcel.

2.5 Trails

The Preserve is currently not open to the public; however, there are existing local community trails/pathways that run alongside the roadways adjacent to the western and central portions of the Preserve. These equestrian and pedestrian trails extend 23 miles throughout Elfin Forest and constitute a key amenity in the community. The

portion of the local community trails that crosses through the central Mendocino parcel is maintained by DPR and is open for public use in order to facilitate the existing trail connections. The portion of the trail open for public use within the Preserve is located on the north side of Elfin Forest Road (Figure 7) and is clearly delineated on both sides by existing split rail fencing.

In addition, there are a number of disturbed areas throughout the Preserve that show evidence of previous use and clearing, potentially for the purpose of creating trails. The Preserve also contains several utility easements with regularly maintained dirt access roads, which may function as informal trails. These utility easement access roads are maintained by the easement holders.

3.0 BIOLOGICAL RESOURCES

Baseline biological surveys of the Preserve were conducted between August 2010 and March 2011. The results of these surveys can be found in the biological resources report entitled *Baseline Biodiversity Survey for the Escondido Creek Preserve*, dated May 2011, and attached as Appendix A. The survey results were used in the preparation of this RMP.

3.1 Vegetation Communities/Habitat

The predominant vegetation community within the Preserve is southern mixed chaparral; however, twelve other vegetation communities and land cover types have been mapped within the Preserve including: Diegan coastal sage scrub, non-native grassland, southern coast live oak riparian forest, southern willow scrub, coast live oak woodland, eucalyptus woodland, southern riparian woodland, valley needlegrass grassland, non-native vegetation, disturbed habitat, developed land, and orchard (Figure 8, Table 2).

Sensitive vegetation communities on site include those listed as Tier I through Tier III in the County's MSCP. In addition, native grassland, such as valley needlegrass grassland, is considered a sensitive habitat land under the County's Resource Protection Ordinance (RPO) and coast live oak woodland is provided protection under the California Oak Woodland Conservation Act.

Table 2. Vegetation Communities/Land Cover Types within the Preserve

Vegetation Community/Land Cover Type (Holland Code)	North County MSCP Habitat Tier[1]	Acres On Site[2]
Southern Mixed Chaparral (37120)	Tier III	223.7
Diegan Coastal Sage Scrub[3] (32500)	Tier II	85.6
Valley Needlegrass Grassland (42110)	Tier I	1.2
Non-Native Grassland (42200)	Tier III	3.3
Southern Coast Live Oak Riparian Forest (61310)	Tier I	1.9
Southern Riparian Woodland (62500)	Tier I	0.9
Southern Willow Scrub (63320)	Tier I	1.9
Coast Live Oak Woodland (71160)	Tier I	6.5
Eucalyptus Woodland (79100)	Tier IV	1.7
Non-native Vegetation (11000)	Tier IV	0.8
Orchard (18100)	Tier IV	0.01
Disturbed Habitat (11300)	Tier IV	12.0
Developed Land (12000)	Tier IV	6.9
	Total	346.6

[1] MSCP tier levels rank habitat sensitivity, with Tier I being most sensitive and Tier IV being least sensitive.
[2] Does not include 100-foot buffer acreage that was documented outside of County ownership
[3] Includes 6.3 acres of disturbed Diegan Coastal Sage Scrub

Figure 8b

Figure 8c

Figure 8d

Escondido Creek Preserve

Vegetation Types (Holland Code)

- CSS, Diegan Coastal Sage Scrub (32500)
- DEV, Developed Land (12000)
- DH, Disturbed Habitat (11300)
- EUC, Eucalyptus Woodland (79100)
- LOW, Coast Live Oak Woodland (71160)
- NNG, Non-native Grassland, 42200
- NNV, Non-native Vegetation, 11000
- ORC, Orchard (18100)
- SCLORF, Southern Coast Live Oak Riparian Forest (61310)
- SMX, Southern Mixed Chaparral (37120)
- SRW, Southern Riparian Woodland (62500)
- SWS, Southern Willow Scrub (63320)
- VGL, Valley Needlegrass Grassland (42110)
- dCSS, disturbed Diegan Coastal Sage Scrub (32500)

0 750 1,500 Feet

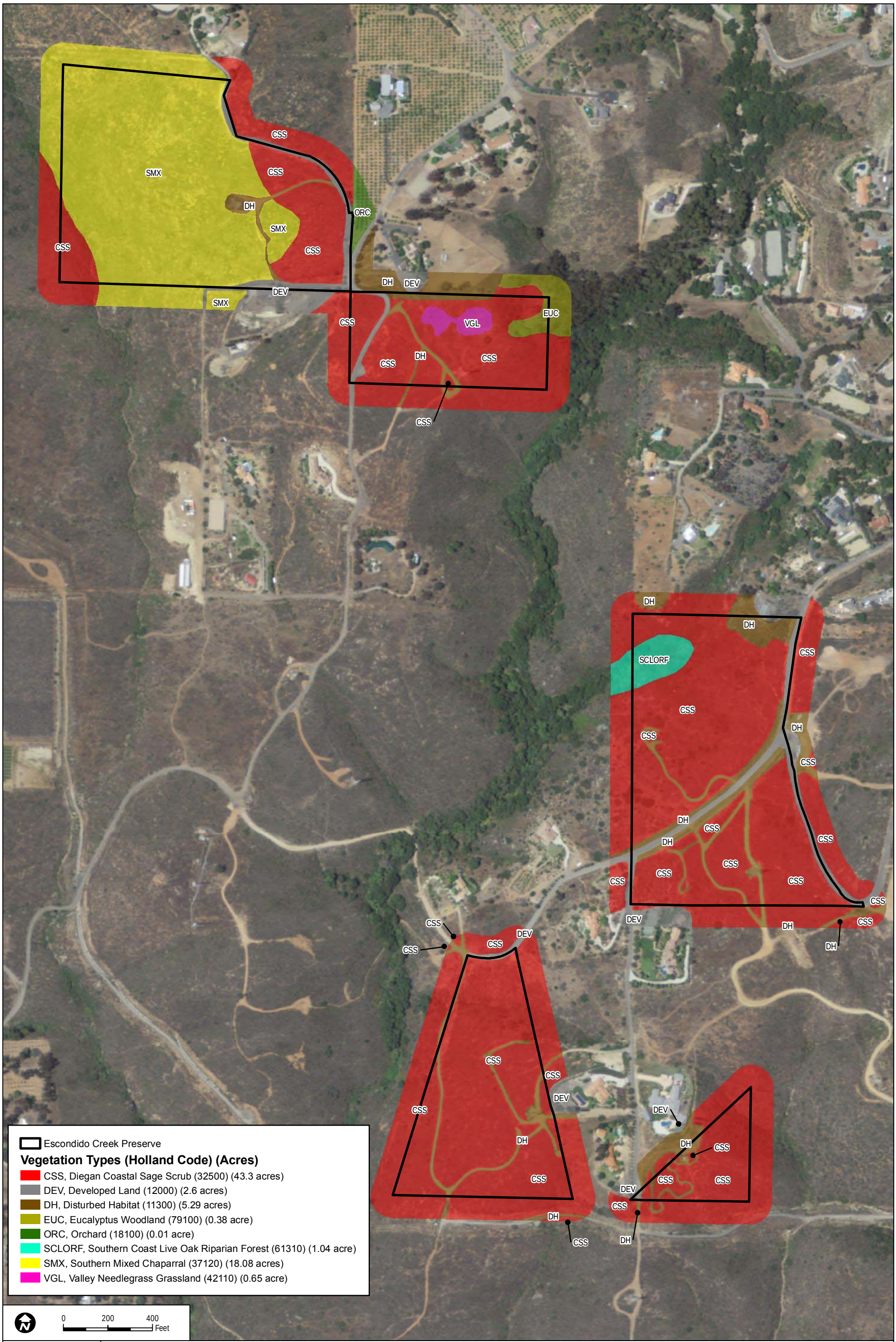
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SOURCE: NAIP 2009

FIGURE 8a

Vegetation Communities/Habitats - Index Map



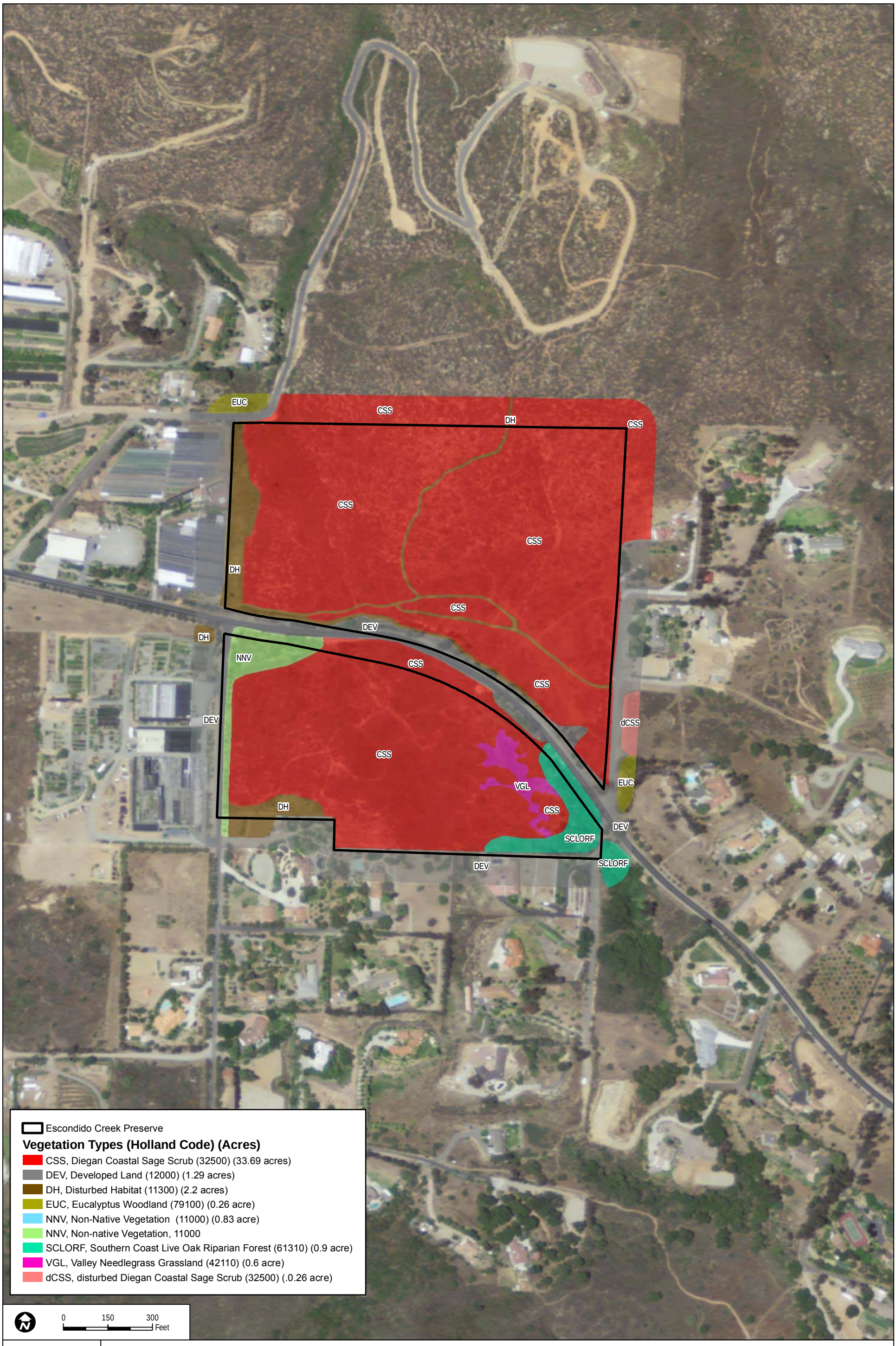
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SOURCE: NAIP 2009

FIGURE 8b

Vegetation Communities/Habitats



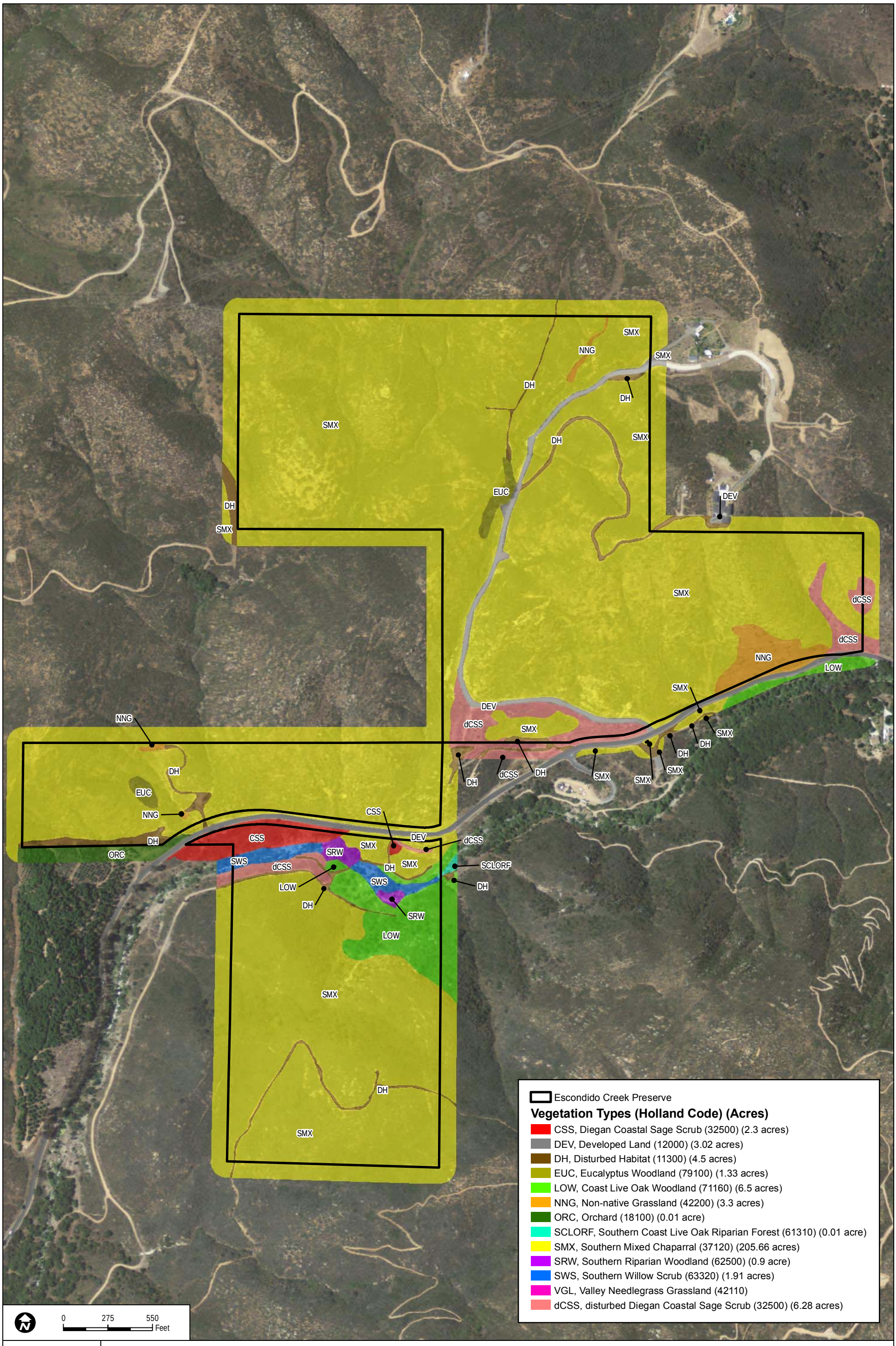
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SOURCE: NAIP 2009

FIGURE 8c

Vegetation Communities/Habitats



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SOURCE: NAIP 2009

FIGURE 8d

Vegetation Communities/Habitats

Southern Mixed Chaparral (Holland Code 37120)

Southern mixed chaparral is a drought- and fire-adapted community of woody shrubs, 1.5 to 3 meters (5 to 10 feet) tall, frequently forming dense, impenetrable stands. It develops primarily on mesic north-facing slopes and in canyons, and is characterized by crown- or stump-sprouting species that regenerate following burns or other ecological catastrophes. This community extends from the coastal foothills of San Diego County to northern Baja California, Mexico, generally below 3,000 feet (914 meters) AMSL.

There are 223.7 acres of southern mixed chaparral on the Preserve. Southern mixed chaparral occupies the majority of the eastern parcels and the northwestern parcel of the Preserve. The following species are dominant in the southern mixed chaparral in the Preserve: Ramona-lilac (*Ceanothus tomentosus*), chamise, laurel sumac, wart-stemmed ceanothus, California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), Our Lord's candle (*Yucca whipplei*), tocalote (*Centaurea melitensis*), California buckwheat (*Eriogonum fasciculatum*), mission manzanita (*Xylococcus bicolor*).

Diegan Coastal Sage Scrub (Holland Code 32500)

Diegan coastal sage scrub is composed of a variety of soft, low shrubs, characteristically dominated by drought-deciduous species, such as California sagebrush, California buckwheat, and sages (*Salvia* spp.), with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*) and laurel sumac. This vegetation community typically develops on xeric slopes. Diegan coastal sage scrub is widespread in coastal southern California from Los Angeles into Baja California, Mexico (Holland 1986).

There is a total of 85.6 acres of Diegan coastal sage scrub on the Preserve, of which 6.3 acres is considered disturbed. Diegan coastal sage scrub occurs primarily in the central and western Preserve parcels, making up the majority of the vegetation in this part of the Preserve. Species such as California sage brush, black sage, and California buckwheat, California brickellbush (*Brickellia californica*), and laurel sumac occur in the coastal sage scrub on site. The 6.3 acres of disturbed Diegan coastal sage scrub are located along Harmony Grove Road in the northeastern portion of the Preserve and are considered disturbed due to a prevalence of non-native plant species.

Valley Needlegrass Grassland (Holland Code 42110)

Valley needlegrass grassland is dominated by purple needlegrass (*Nassella pulchra*), a tussock-forming perennial grass that reaches about two feet in height. It usually occurs on fine-textured soils that are moist or wet in winter, becoming very dry in summer. On moister sites, it often occurs among oak woodlands. Native annuals and grasses, and nonnative grasses, such as bromes (*Bromus* spp.) and

wild oats (*Avena* spp.), occur between the bunchgrasses, often forming most of the vegetative cover (Holland 1986).

Valley needlegrass grassland occurs on 1.2 acres in two areas on the Preserve. It occurs in the southeastern portion of the central parcel and in the parcel east of Seaquest Trail. It contains at least 10% cover of needlegrass (*Nassella* spp.) and less than 30% cover of native shrubs. The valley needlegrass grassland on site includes purple needlegrass, tarplant (*Deinandra* sp.), and bromes.

Non-Native Grassland (Holland Code 42200)

Non-native grassland is characterized by a dense to sparse cover of annual grasses and wildflowers. Non-native grassland typically occurs in areas where disturbance (e.g., repetitive fire, agriculture) has altered soils and removed native seed sources from areas formerly supporting native vegetation. Non-native grassland may support special-status plant and animal species and provide valuable foraging habitat for raptors (birds of prey).

Non-native grassland occupies 3.3 acres on the Preserve and is located in the northeastern portion of the Preserve. Species dominant in this community on site include foxtail chess (*Bromus madritensis*), short-pod mustard (*Hirschfeldia incana*), and saw-toothed goldenbush (*Hazardia squarrosa*).

Southern Coast Live Oak Riparian Forest (Holland Code 61310)

Southern coast live oak riparian forest is an open to locally dense evergreen riparian woodland dominated by coast live oak (*Quercus agrifolia*). This community occurs on fine-grained, rich alluvium on bottomlands and outer floodplains along larger streams. Compared to other riparian communities, southern coast live oak riparian forest is generally richer in herbs and poorer in understory shrubs. This community occurs from the Transverse and Peninsular Ranges from Point Conception south into Baja California Norte, Mexico (Holland 1986).

There are 1.9 acres of southern coast live oak riparian forest that occur in the southeastern corner of the central parcel of the Preserve and in the western portion of the Preserve north of Canyon del Oro. Southern coast live oak riparian forest on site is dominated by coast live oak and arroyo willow (*Salix lasiolepis*).

Southern Riparian Woodland (Holland Code 62500)

Southern riparian woodland is a moderately dense riparian woodland dominated by small trees or shrubs. Scattered taller riparian trees may be present. This community occurs along major rivers and tributaries where flood scour occurs. Although the full distribution of this community is unknown, it occurs throughout San Diego County (Oberbauer et al. 2008).

There is 0.9 acre of southern riparian woodland associated with Escondido Creek south of Harmony Grove Road in the eastern portion of the Preserve.

Southern Willow Scrub (Holland Code 63320)

Southern willow scrub has been described as a dense, broad-leafed, winter-deciduous riparian thicket dominated by several species of willow, with scattered emergent Fremont's cottonwood (*Populus fremontii*) and California sycamore (Holland 1986). Most stands are too dense to allow much understory development. This habitat is considered seral due to repeated disturbance/flooding and is therefore unable to develop into the taller southern cottonwood–willow riparian forest.

There are approximately 1.9 acres of southern willow scrub in the northeastern portion of the Preserve along Escondido Creek. This community is dominated by arroyo willow.

Coast Live Oak Woodland (Holland Code 71160)

Coast live oak woodland is dominated by a single evergreen species, coast live oak. Canopy height reaches 10 to 25 meters (33 to 82 feet). This community typically occurs on north-facing slopes and ravines in San Diego County (Holland 1986). The shrub layer is poorly developed and the herb component is continuous, dominated by a variety of introduced species. Coast live oak woodland occurs in the outer South Coast Ranges, and coastally in the Transverse and Peninsular ranges, typically below 4,000 feet (1,219 meters) AMSL (Holland 1986).

There are 6.5 acres of coast live oak woodland in the northeastern portion of the Preserve south of Harmony Grove Road. The following species are associated with the coast live oak woodland on site: coast live oak, laurel sumac, and foxtail chess.

Eucalyptus Woodland (Holland Code 79100)

Eucalyptus woodland typically consists of monotypic stands of introduced Australian eucalyptus trees (*Eucalyptus* spp.). The understory is either depauperate or absent owing to shade and the possible allelopathic (toxic) properties of the eucalyptus leaf litter. Although eucalyptus woodlands are of limited value to most native plants and animals, they frequently provide nesting and perching sites for several raptor species.

There are 1.7 acres of eucalyptus woodland mapped in the northwestern portion of the Preserve east of Seaquest Trail, and in the northeastern portion of the Preserve both north of Harmony Grove Road and along Wild Willow Hollow.

Non-Native Vegetation (Holland Code 11000)

Non-native vegetation is nearly exclusively composed of non-native plant species, such as ornamentals or ruderal exotic forbs. There is 0.8 acre of non-native vegetation on site located along the western edge of the central parcel of the Preserve south of Elfin Forest Rd.

Orchard (Holland Code 18100)

Orchard refers to land that is set aside for cultivating nuts, fruits, or olives. There is 0.01 acre of orchard along the private road in northwestern portion of the Preserve and north of Harmony Grove Road in the northeastern portion of the Preserve.

Disturbed Habitat (Holland Code 11300)

Disturbed habitat refers to areas that are not developed yet lack native vegetation, and generally are the result of severe or repeated mechanical perturbation. Vegetation, if present, is nearly exclusively composed of non-native plant species, such as ornamentals or ruderal exotic forbs. Although some grass species may be present in disturbed habitat, most annual grass species are more typical of non-native grassland and do not dominate vegetative cover in disturbed habitat (Oberbauer et al. 2008). There are 12.8 acres of disturbed habitat on site, which consists primarily of dirt roads occurring throughout the Preserve parcels.

Developed (Holland Code 12000)

Developed land is generally subject to significant human disturbance associated with development. There are 6.9 acres of developed land on the Preserve. Harmony Grove Road, Elfin Forest Lane, Canyon Del Oro, Fortuna De Este, and other private paved roads make up the majority of the developed land on site.

3.2 Plant Species

3.2.1 Plant Species Present

A total of 184 plant species were documented within the Preserve during the 2010-11 baseline surveys. Appendix A provides a 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 (a) listed, or proposed for listing, as threatened or endangered, or otherwise designated as “listed”, “candidate”, “sensitive” or “species of concern” by federal and/or state agencies; (b) considered rare by the California Native Plant Society (CNPS); included on the County’s Sensitive Plant List (County 2010b); or (d) proposed for coverage under the North County MSCP.

Six (6) special-status plant species were observed within the Preserve during the baseline surveys (Figure 9). Information on each of these species is provided below.

San Diego (Palmer's) Sagewort (*Artemisia palmeri*)

CNPS List 4.2, County List D

San Diego sagewort (also known as Palmer's sagewort) is an aromatic herb typically located in perennial creeks and drainages near the coast (Reiser 1994). In California, San Diego sagewort is found only in San Diego County. This species is found in a wide range of habitat types including chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland in sandy, mesic conditions between 15 and 915 meters (50 to 3,000 feet) AMSL (CNPS 2010). San Diego sagewort grows within a shaded understory beneath willow, sycamore, or cottonwood canopy, and occasionally beneath coast live oak canopy, but in decidedly mesic circumstances (Reiser 1994). Several large populations (100s of individuals) and scattered individuals of San Diego sagewort were observed along Escondido Creek and its tributaries north and south of Harmony Grove Road. In addition, approximately 30 individuals occur south of Canyon de Oro Road.

Wart-stemmed Ceanothus (*Ceanothus verrucosus*)

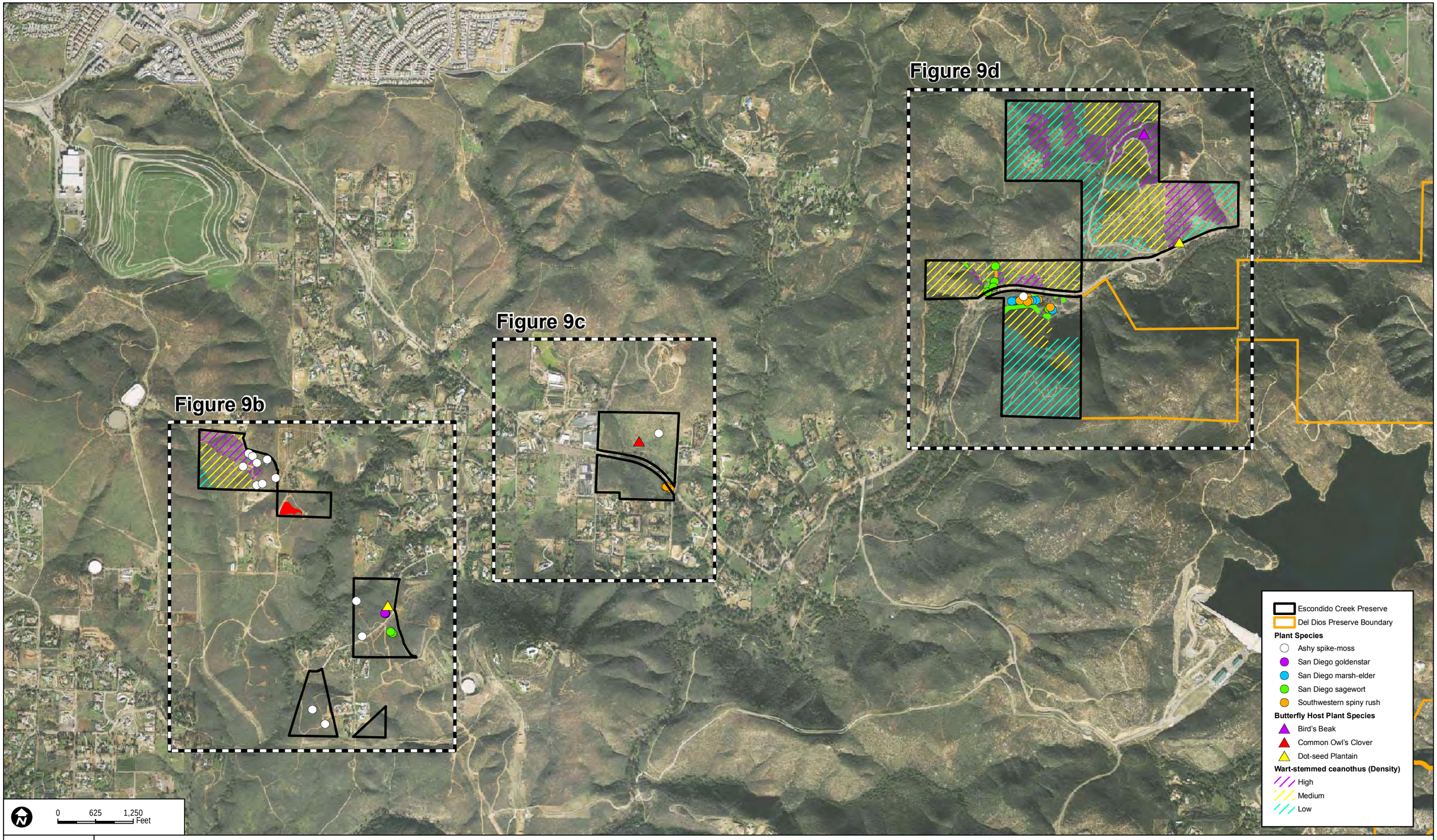
CNPS List 2.2, County List B, North County MSCP

Wart-stemmed ceanothus is a perennial evergreen shrub in the buckthorn family (*Rhamnaceae*) that grows up to 3 meters (10 feet) tall. It bears white flower clusters in December to May. Wart-stemmed ceanothus occurs in San Diego and Riverside counties and Baja California, Mexico. This species occurs in chaparral below 380 meters (1,247 feet) AMSL (CNPS 2010). Wart-stemmed ceanothus is declining locally on the margins of San Diego's coastal cities as a result of urban sprawl (Reiser 1994). Wart-stemmed ceanothus was noted throughout much of the Preserve as a common component of southern mixed chaparral and the population is relatively large and substantial in size, representing an important occurrence for the species in the region. Species associated with the population include chamise, black sage, and Ramona-lilac.

San Diego Marsh-elder (*Iva hayesiana*)

CNPS List 2.2, County List B

San Diego marsh-elder is a perennial shrub found in marshes and swamps and on playas between 10 and 500 meters (33 to 1,640 feet) AMSL. This species is usually found along creeks or intermittent streambeds and is endemic to San Diego County (Reiser 1994; CNPS 2010). San Diego marsh-elder is considered stable, but may be threatened by the modification or degradation of coastal drainages (Reiser 1994).



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SOURCE: Digital Globe 2008

FIGURE 9a

Special-Status and Butterfly Host Plant Species

Escondido Creek Preserve

Plant Species (# = population count)

- Ashy spike-moss
- San Diego goldenstar
- San Diego sagewort

Butterfly Host Plant Species

- Dot-seed Plantain
- Common Owl's Clover

Wart-stemmed ceanothus (Density)

- High
- Medium
- Low

0 200 400 Feet

DUDEK

6680-01

SOURCE: NAIP 2009

FIGURE 9b

Special-Status and Butterfly Host Plant Species

Escondido Creek Preserve

Plant Species (# = population count)

Ashy spike-moss

Southwestern spiny rush

Butterfly Host Plant Species

Common Owl's Clover

Wart-stemmed ceanothus (Density)

High

Medium

Low

0 150 300 Feet

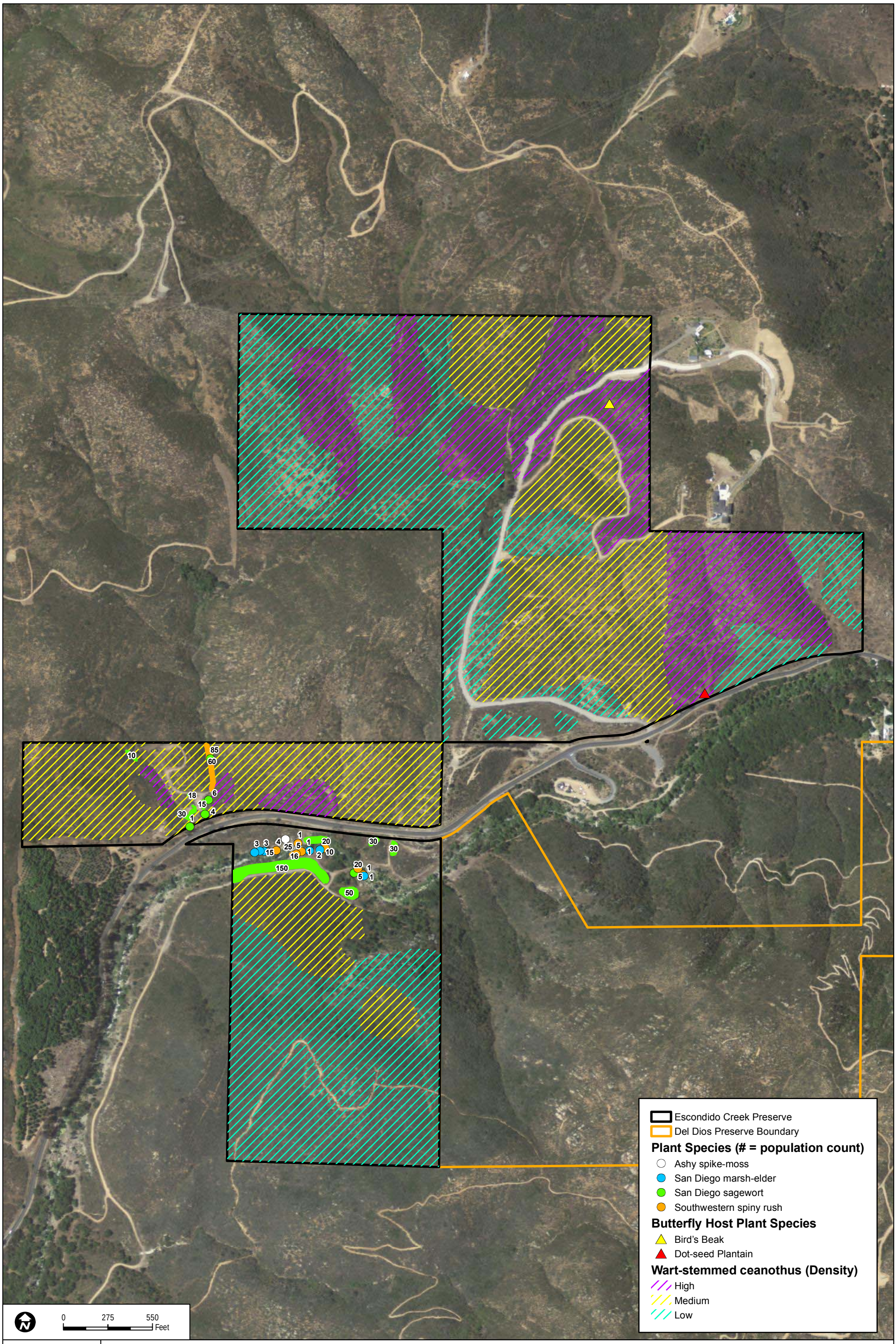
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SOURCE: NAIP 2009

FIGURE 9c

Special-Status and Butterfly Host Plant Species



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SOURCE: NAIP 2009

FIGURE 9d

Special-Status and Butterfly Host Plant Species

Approximately 60 San Diego marsh-elder individuals were observed along Escondido Creek on the Preserve.

Southwestern Spiny Rush (*Juncus acutus* spp. *leopoldii*)

CNPS List 4.2, County List D

Southwestern spiny rush is a rhizomatous herb in the rush family (*Juncaceae*) that grows up to 140 centimeters tall with sharp, ridged basal leaves (Jepson Flora Project 2011). In California, it is found in Imperial, Los Angeles, Orange, Santa Barbara, San Diego, San Luis Obispo, and Ventura counties. This species occurs on mesic coastal dunes, alkaline seeps, and coastal salt marsh and swamps, below 900 meters (2,953 feet) AMSL. Southwestern spiny rush is threatened by urbanization and flood control (CNPS 2010). Approximately 100 individuals of southwestern spiny rush were observed along Escondido Creek and its tributaries north and south of Harmony Grove Road. Approximately 10 individuals were observed within the central parcel of the Preserve south of Elfin Forest Road.

San Diego Goldenstar (*Muilla clevelandii*)

CNPS List 1B.1, County List A, North County MSCP

San Diego goldenstar is a perennial bulbiferous herb in the Brodiaea family (*Themidaceae*) that grows up to 15 centimeters tall with yellow green-striped flowers (Jepson Flora Project 2011). In California, San Diego goldenstar is found in San Diego and Riverside counties. This species occurs in clay soils in chaparral, coastal scrub, valley and foothill grassland, and vernal pools, between 50 and 465 meters (164 to 1,526 feet) AMSL. San Diego goldenstar is threatened by urbanization, road construction, vehicles, non-native plants, and illegal dumping (CNPS 2010). Five individuals of San Diego goldenstar were observed north of Canyon de Oro on the Preserve in Diegan coastal sage scrub with California sagebrush, California buckwheat, soft brome (*Bromus hordeaceus*), and tocalote (*Centaurea melitensis*) as associated species. Because surveys were conducted early in the typical blooming period (April to May), this population may be larger than that detected.

Ashy Spike-moss (*Selaginella cinerascens*)

CNPS List 4.1, County List D

Ashy spike-moss is a perennial rhizomatous herb found in chaparral and coastal scrub habitats between 20 and 640 meters (66 to 2,100 feet) AMSL (CNPS 2010). This groundcover species is a good indicator of site degradation because it is rarely found on disturbed soils (Reiser 1994). There are records for this species in San Diego, Orange, and possibly Riverside counties as well as Baja California, Mexico (CNPS 2010). Although ashy spike-moss is substantially declining due to urban expansion along the coast, it still occurs at several thousand locales (Reiser 1994).

Ashy spike-moss occurs in several locations across the Preserve, often in open or rocky areas.

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

Seven (7) special-status plant species have a high potential to occur within the Preserve as described below. Additional information on these species can be found in Appendix A.

Orcutt's Brodiaea (*Brodiaea orcuttii*)

CNPS List 1B.1, County List A, North County MSCP

Orcutt's brodiaea has been recorded within one mile of the Preserve and has potential to occur within the chaparral and grassland habitats on site.

Sticky Dudleya (*Dudleya viscida*)

CNPS List 1B.2, County List A, North County MSCP

Sticky dudleya has been recorded within one mile of the Preserve and has potential to occur within the chaparral and coastal scrub habitats on site.

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

CNPS List 1B.2, County List A, North County MSCP

Felt-leaved monardella (also known as felt-leaved rock mint) has been recorded within one mile of the Preserve and has potential to occur within the chaparral and coast live oak woodland habitats on site.

Brewer's Calandrinia (*Calandrinia breweri*)

CNPS List 4, County List D

Brewer's calandrinia has been recorded in the adjacent Del Dios Highlands Preserve and has potential to occur in the southern mixed chaparral and coastal sage scrub habitats within the eastern parcels of the Preserve.

Robinson's Pepper-grass (*Lepidium virginicum* var. *robinsonii*)

CNPS List 1B.2, County List A

Robinson's pepper-grass has been recorded in the adjacent Del Dios Highlands Preserve and has potential to occur in the chaparral and coastal scrub habitats within the eastern parcels of the Preserve.

Summer Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)

CNPS List 1B.2, County List A

Summer holly has been recorded in the adjacent Del Dios Highlands Preserve and has potential to occur in the chaparral and coast live oak woodland habitat within the eastern parcels of the Preserve.

Encinitas Baccharis (*Baccharis vanessae*)

Federally Threatened, State Endangered, CNPS List 1B.1, County List A, North County MSCP

Encinitas baccharis has been recorded in the adjacent Del Dios Highlands Preserve and has potential to occur in the chaparral and coast live oak woodland within the eastern parcels of the Preserve.

3.2.4 Non-Native and/or Invasive Plant Species

Ten (10) California Invasive Plant Council (Cal-IPC) rated plants were identified within the Preserve during the baseline surveys (Figure 10, Table 3).

Table 3. Non-native Invasive Plants within the Preserve

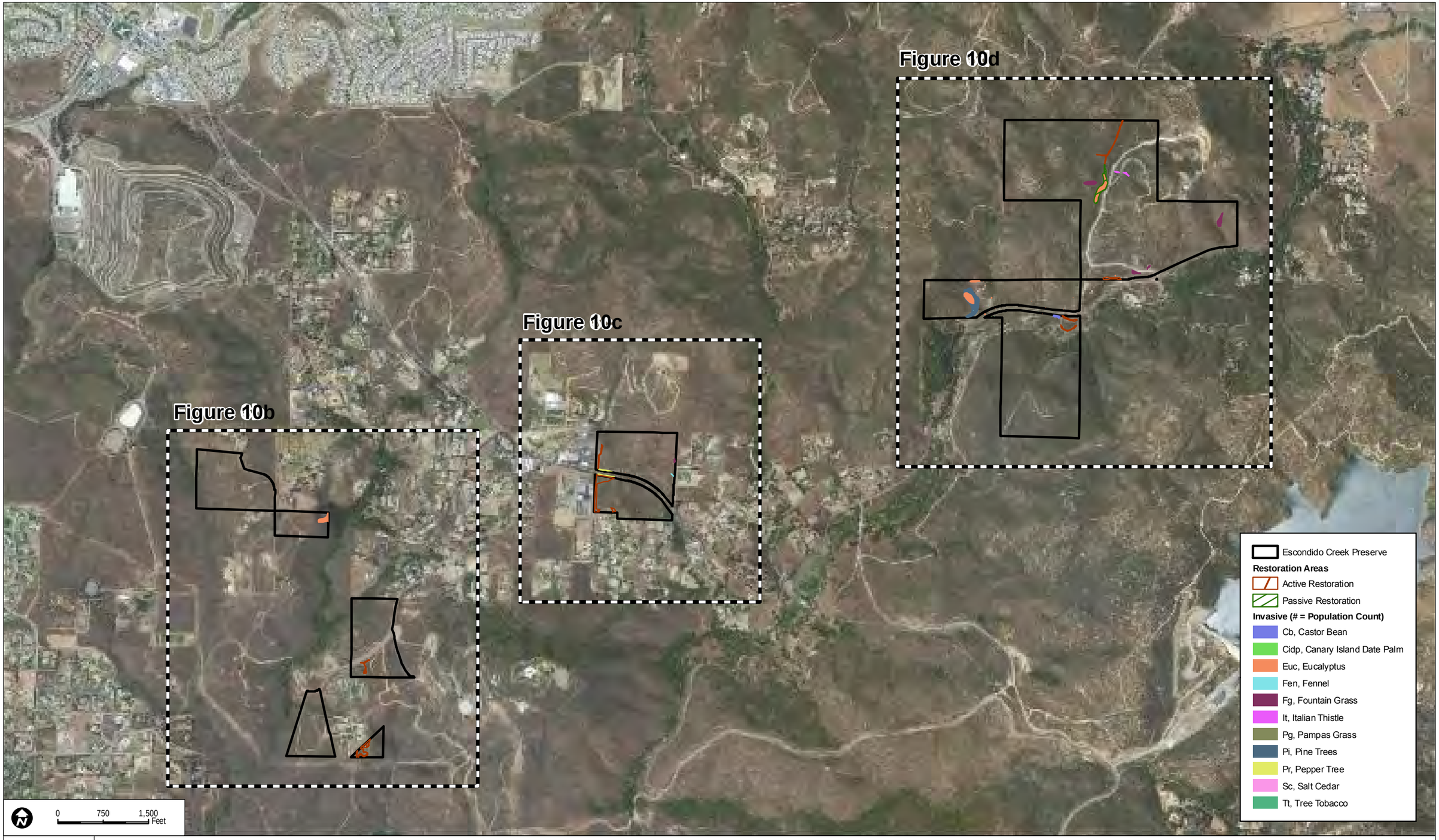
Common Name	Scientific Name	Cal-IPC Rating*
Canary Island date palm	*Phoenix canariensis*	Limited
Castor bean	*Ricinus communis*	Limited
Eucalyptus	*Eucalyptus* spp.	Limited/Moderate
Fennel	*Foeniculum vulgare*	High
Fountain grass	*Pennisetum setaceum*	Moderate
Italian thistle	*Carduus pycnocephalus*	Moderate
Pampas grass	*Cortaderia selloana*	High
Peruvian pepper tree	*Schinus molle*	Limited
Tamarisk (salt cedar)	*Tamarix ramosissima*	High
Tree tobacco	*Nicotiana glauca*	Moderate

* Cal-IPC Ratings

High: Species have severe ecological impacts, are conducive to moderate to high rates of dispersal/establishment, and most are widely spread.

Moderate: Species have substantial and apparent, but generally not severe, ecological impacts, are conducive to moderate to high rates of dispersal, although establishment is generally dependent on ecological disturbance, and distribution may range from limited to widespread.

Limited: Species are invasive, but their ecological impacts are minor on a statewide level (or there was not enough information to justify a higher score), they have low to moderate rates of invasiveness, and are generally limited but may be locally persistent and problematic.



DUDEK

6680-2D

SOURCE: NAIP 2009

FIGURE 10a

Target Invasive Non-Native Plant Species Locations and Potential Restoration Areas - Index Map



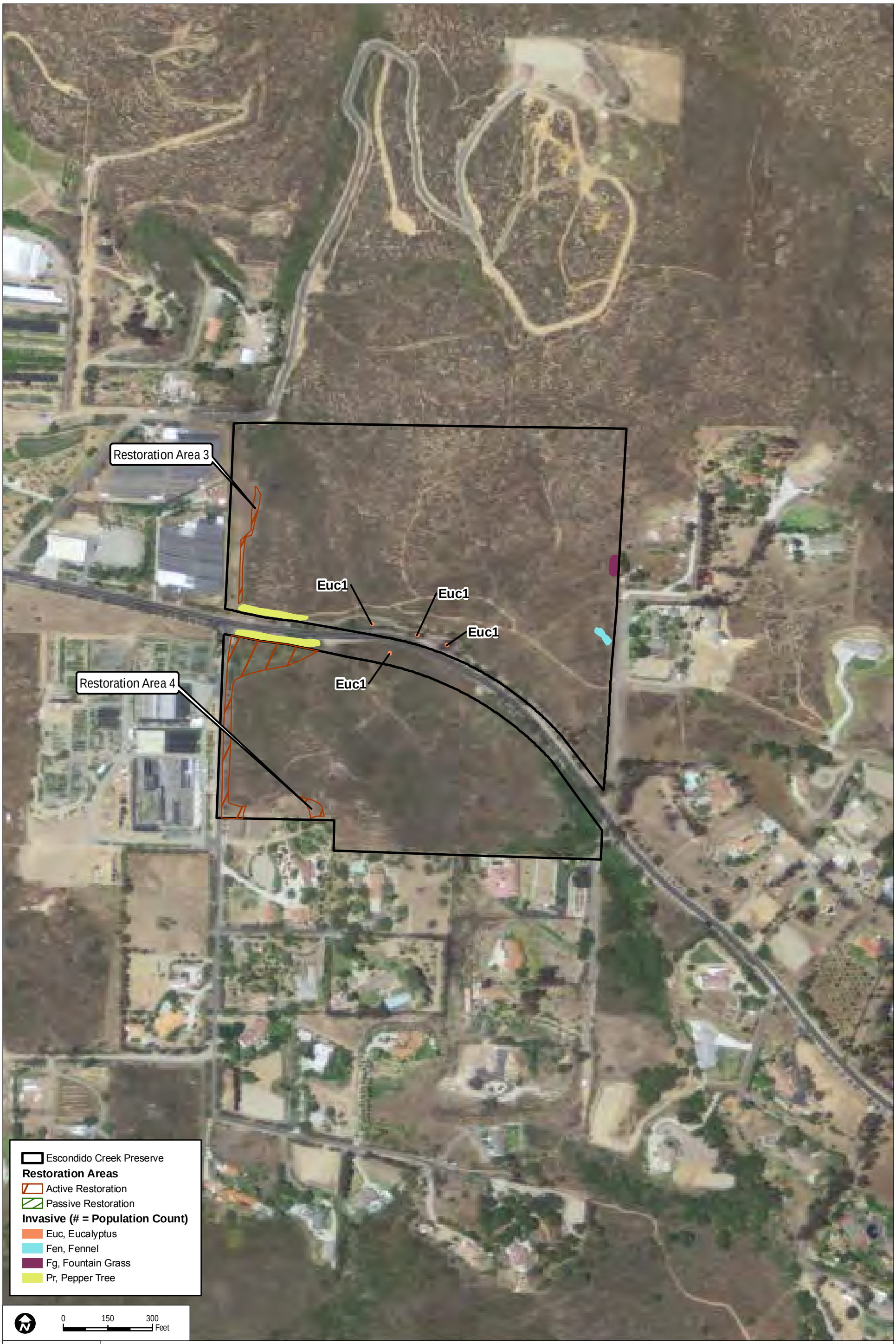
DUDEK

6680-2D

SOURCE: NAIP 2009

FIGURE 10b

Target Invasive Non-Native Plant Species Locations and Potential Restoration Areas



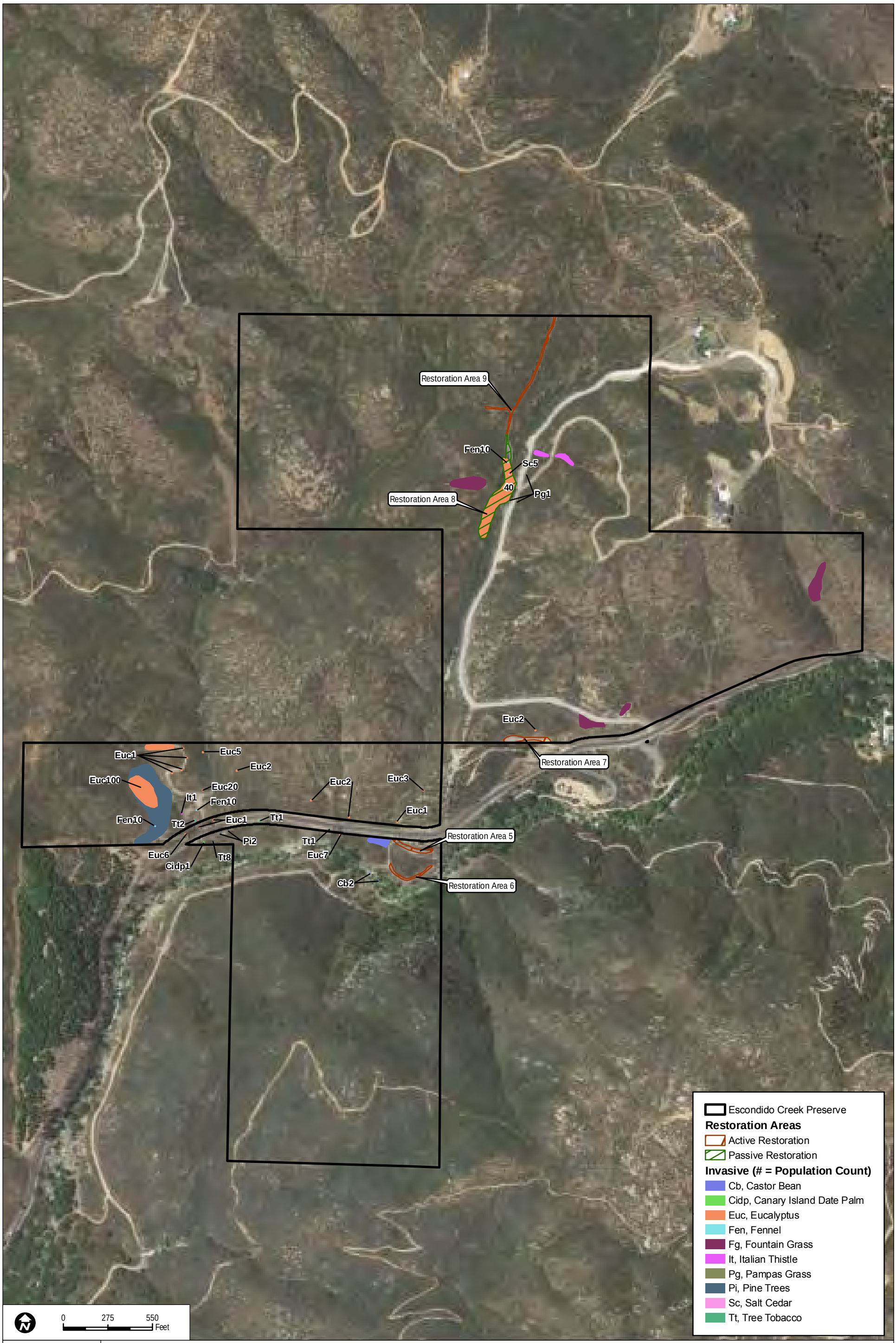
DUDEK

6680-2D

SOURCE: NAIP 2009

FIGURE 10c

Target Invasive Non-Native Plant Species Locations and Potential Restoration Areas



DUDEK

6680-2D

SOURCE: NAIP 2009

FIGURE 10d

Target Invasive Non-Native Plant Species Locations and Potential Restoration Areas

Canary Island Date Palm (*Phoenix canariensis*)

Canary Island date palm is a species of palm tree commonly used for landscaping in southern California that has the potential to establish in riparian areas and displace native trees. One occurrence of date palm was observed within the Preserve growing along the southern side of Harmony Grove Road.

Castor Bean (*Ricinus communis*)

Castor bean is a shrub-sized flowering plant that is used as an ornamental plant in southern California. This perennial non-native can become aggressive when proper growing conditions are present, creating monotypic stands, and displacing native vegetation along wetland margins, or moderately dry upland areas. Castor bean was observed in one location within the Preserve along the southern side of Harmony Grove Road, covering approximately 0.15 acre.

Eucalyptus (*Eucalyptus* spp.)

Eucalyptus trees are located in a small drainage in the northernmost region of the Preserve along sections of Harmony Grove Road, Elfin Forest Road, and a parcel south of Elfin Forest Road. Eucalyptus trees cover approximately 2.0 acres within the Preserve. The majority of the eucalyptus trees within the Preserve are red gum (*Eucalyptus camaldulensis*) and blue gum (*Eucalyptus globulus*). This species is a concern in the Preserve due to its potential to increase fire hazard and the observed propagation of new saplings.

Sweet Fennel (*Foeniculum vulgare*)

Sweet fennel is a common perennial herb that can drastically alter the composition and structure of many plant communities, including grasslands, coastal scrub, and riparian communities. In addition it can also alter fire regimes creating an intense, fast-moving fire. Sweet fennel was observed primarily adjacent to Harmony Grove Road, and in the northernmost portion of the Preserve. Approximately 0.05 acre of this species was observed in total.

Fountain Grass (*Pennisetum setaceum*)

Fountain grass is a small clumping grass that has spread in large part due to its popularity as an ornamental plant. This species possesses a low ability to displace well-established native upland vegetation communities and primarily colonizes disturbed areas or areas of naturally occurring sparse vegetation, such as rocky outcroppings on slopes. Fountain grass is well-adapted to fire, and can increase in density following a burn. Approximately 1.0 acre of fountain grass was observed within the Preserve along or near Harmony Grove Road and Elfin Forest road.

Italian Thistle (*Carduus pycnocephalus*)

Italian thistle is a winter annual thistle from the Mediterranean, which has become a noxious weed in California. This species has the ability to crowd out native forbs, grasses and other plants, and can serve as a fire ladder increasing fire frequency and movement into the overstory. Italian thistle is a designated California list C noxious weed. Approximately 0.16 acre of Italian thistle was observed in the northernmost area of the Preserve and along Harmony Grove Road.

Pampas Grass (*Cortaderia selloana*)

Pampas grass is an aggressive-spreading, ornamental grass that is extremely flammable and can increase the potential for fire ignition and/or spread. This species produces an abundance of seed, which can be wind-blown into surrounding areas. This species was observed within southern mixed chaparral in the northern portion of the Preserve, totaling approximately 175 square feet.

Peruvian Peppertree (*Schinus molle*)

Peruvian peppertree is a mildly invasive ornamental tree that can invade natural areas. Approximately 0.3 acre of peppertree is present within the Preserve along Elfin Forest Road. This area appears to have been planted as ornamental vegetation.

Tamarisk (*Tamarix ramosissima*)

Tamarisk (also known as salt cedar) is a shrub or tree typically found along waterways, drainages and riparian areas. It is associated with dramatic changes in geomorphology, groundwater availability, soil chemistry, fire frequency, plant community composition and native wildlife diversity. Tamarisk presents the greatest risk of reducing habitat quality of the riparian areas within the Preserve. Approximately 80 square feet of tamarisk was observed within drainages in the northernmost portion of the Preserve.

Tree Tobacco (*Nicotiana glauca*)

Tree tobacco is an introduced, invasive tree/shrub that frequently colonizes areas of soil disturbance in a variety of upland habitats. Approximately 400 square feet of tree tobacco was observed in the Preserve scattered along Harmony Grove Road, and in the southernmost parcel within the preserve.

3.3 Wildlife Species

3.3.1 Wildlife Species Present

A total of 145 wildlife species were documented within the Preserve during the 2010-11 baseline surveys, including 4 amphibians, 12 reptiles, 83 birds, 31 mammals and 15 butterflies. Appendix A provides a complete list of all wildlife species observed during the surveys.

3.3.2 Rare, Threatened or Endangered Wildlife Present

A special-status wildlife species is one (a) listed, or proposed for listing, as threatened or endangered, or otherwise designated as "listed", "candidate", "sensitive" or "species of concern" by federal and/or state agencies; (b) included on the County's Sensitive Animal List (County 2010b); or (d) proposed for coverage under the North County MSCP.

A total of 29 special-status wildlife species were observed or detected within the Preserve during the baseline surveys (Figure 11). Information on each of these species is provided below.

3.3.2.1 *Herpetofauna*

Western Spadefoot (*Spea hammondii*)

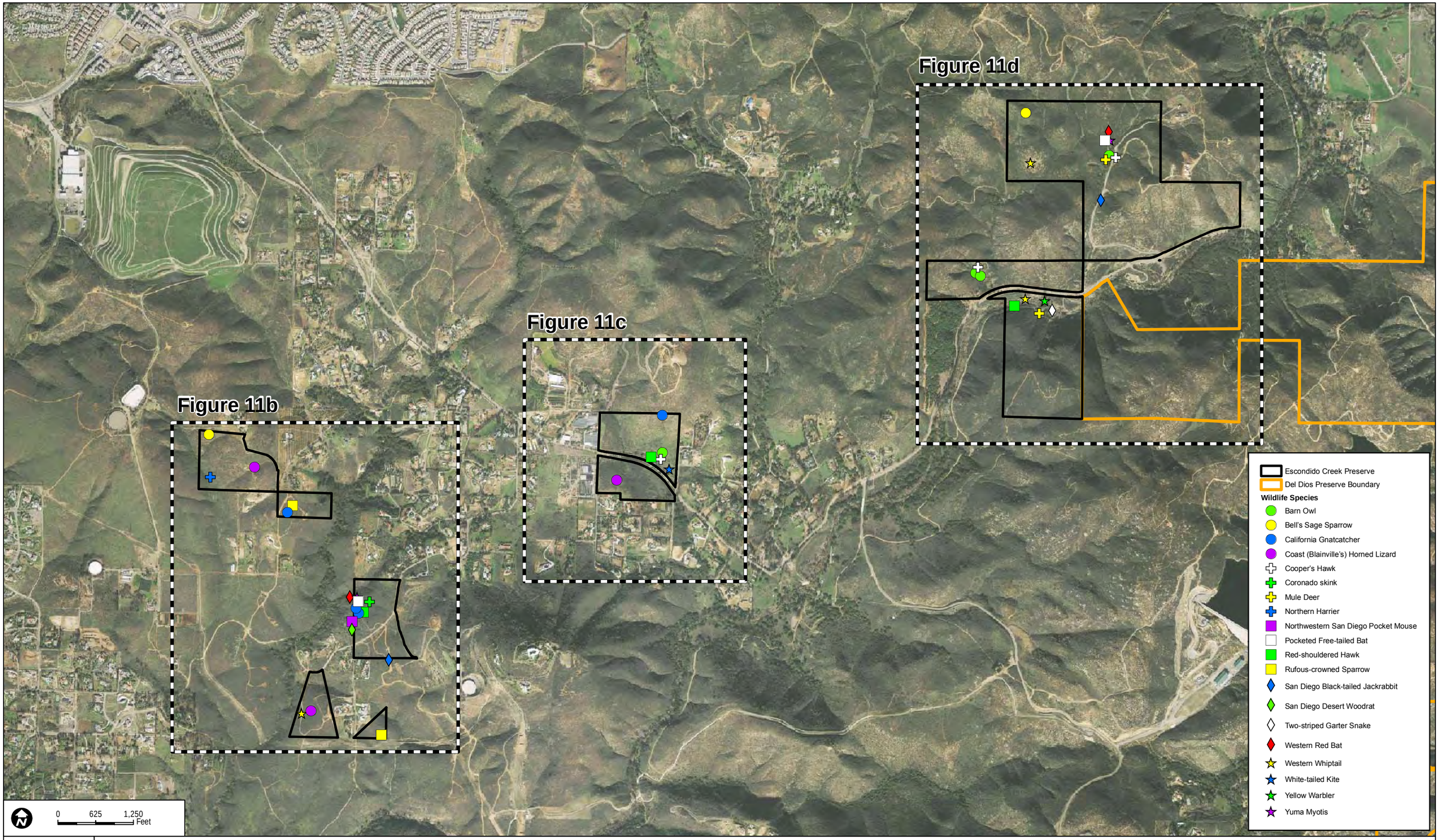
State Species of Special Concern, County Group 2, North County MSCP

Western spadefoot is found in the Coast Ranges from Santa Barbara County to the Mexican border. This species occurs in grasslands, but can also occur in valley-foothill hardwood woodlands. Breeding and egg-laying occur almost exclusively in shallow, temporary pools, such as vernal pools, formed by winter rain. The first rains of the fall and winter season initiate breeding activity of the western spadefoot, and breeding activity is normally completed by the end of March. After breeding, much of the year is spent in underground burrows, which the adults construct (Zeiner et al. 1988). The greatest threats to this species are loss and fragmentation of habitat due to urban and agricultural development, non-native predators, heavy grazing, off-road vehicles use, and contaminant runoff. Two male western spadefoot were detected during amphibian surveys conducted along Escondido Creek.

Coastal Western Whiptail (*Aspidoscelis tigris stejnegeri*)

County Group 2

Coastal western whiptail occurs primarily in hot, dry open areas with little vegetation, including chaparral, woodland, and riparian habitats (CaliforniaHerps 2009). The coastal western whiptail occurs in coastal southern California, ranging north into



DUDEK

6680-01

SOURCE: Digital Globe 2008

FIGURE 11a

Special Status Wildlife Species

Escondido Creek Preserve

Wildlife Species (# = population count)

- Bell's Sage Sparrow
- California Gnatcatcher
- Coast (Blainville's) Horned Lizard
- Coronado skink
- Northern Harrier
- Northwestern San Diego Pocket Mouse
- Pocketed Free-tailed Bat
- Red-shouldered Hawk
- Rufous-crowned Sparrow
- San Diego Black-tailed Jackrabbit
- San Diego Desert Woodrat
- Western Red Bat
- Western Whiptail
- Yuma Myotis

0 200 400 Feet

DUDEK

6680-01

SOURCE: NAIP 2009

FIGURE 11b

Special Status Wildlife Species

Escondido Creek Preserve

Wildlife Species (# = population count)

- Barn Owl
- California Gnatcatcher
- Cooper's Hawk
- Coast (Blainville's) Horned Lizard
- Red-shouldered Hawk
- White-tailed Kite

0 150 300 Feet

DUDEK

6680-01

SOURCE: NAIP 2009

FIGURE 11c

Special Status Wildlife Species

Escondido Creek Preserve
Del Dios Preserve Boundary

Wildlife Species (# = population count)

- Barn Owl
- Bell's Sage Sparrow
- Cooper's Hawk
- Mule Deer
- Pocketed Free-tailed Bat
- Red-shouldered Hawk
- San Diego Black-tailed Jackrabbit
- Two-striped Garter Snake
- Western Red Bat
- Western Whiptail
- Yellow Warbler
- Yuma Myotis
- San Diego Ringneck Snake
- Gadwall
- Great Blue Heron
- Northwestern San Diego Pocket Mouse
- Western Spadefoot Toad

0 275 550 Feet

DUDEK

6680-01

SOURCE: NAIP 2009

FIGURE 11d

Special Status Wildlife Species

Ventura County and south into Baja California. Coastal western whiptails forage on small lizards and invertebrates, especially spiders, scorpions, centipedes, and termites. Threats to this species include habitat loss due to development, widespread use of insecticides, off-road vehicle use, and genetic isolation. Coastal western whiptail was observed north and south of Harmony Grove Road.

San Diego Ringneck Snake (*Diadophis punctatus similis*)

County Group 2

San Diego ringneck snake is widespread from the coast to the mountains at elevations from sea level to 7,000 feet (2,133 meters) AMSL, and is frequently found in coastal sage, chaparral, oak woodlands, pinyon-juniper woodlands, riparian areas and grasslands. This species uses damp environments like rotting logs, leaf litter, burrows, and rocks to seek out prey such as salamanders, lizards, frogs, earthworms and small snakes (Lemm 2006). One female San Diego ringneck snake was observed during aquatic surveys conducted along Escondido Creek.

Coronado Skink (*Eumeces skiltonianus interparietalis*)

State Species of Special Concern, County Group 2

Coronado skink inhabits the coastal plain and Peninsular Ranges west of the deserts from Riverside County south to Baja California. It occurs in a variety of habitats including coastal sage, chaparral, oak woodlands, and riparian woodlands, but within these associations it is often restricted to more mesic pockets (Zeiner et al. 1988). This secretive lizard likely preys on many small invertebrates in leaf litter or dense vegetation at the edges of rocks and logs. Two (2) Coronado skink individuals were captured in pitfall trap arrays in the western portion of the Preserve.

Coast Horned Lizard (*Phrynosoma blainvillei*)

State Species of Special Concern, County Group 2, North County MSCP

Coast horned lizard occurs from northern California to the tip of Baja California, Mexico (SDNHM 2008) from sea level to approximately 8,000 feet (2,438 meters) AMSL. This lizard occupies open habitats such as grasslands, coastal sage scrub, and chaparral, with loose soils. Horned lizards forage on the ground in open areas, often between shrubs and near ant nests. They are also commonly found along dirt roads and trails. Current threats to the species include destruction of coastal habitat, introduction of non-native ant species, especially the Argentine ant (*Iridomyrmex humilis*), which displace its native ant food base, collection, and off-road activity. Coast horned lizard was observed at locations east of Sea Quest Trail, south of Canyon de Oro, and south of Elfin Forest Road.

Two-striped Garter Snake (*Thamnophis hammondii*)

State Species of Special Concern, County Group 1, North County MSCP

Two-striped garter snake occurs along the coast of California from Monterey County to San Diego County. Two-striped garter snake inhabits areas with sufficient water vegetation, such as pools, creeks, riparian areas, chaparral and coniferous forests. Two-striped garter snake occurs at elevations ranging from sea level to 8,000 feet (2,438 meters) AMSL. Two-striped garter snake has a diet that consists of frogs, salamanders, and fish and their eggs, and is able to climb trees up to nine feet tall (Lemm 2006). Threats to this species include habitat loss and increases in recreational use of riparian areas. Two male two-striped garter snake were observed during aquatic surveys conducted along Escondido Creek.

3.3.2.2 *Birds*

Cooper's Hawk (*Accipiter cooperii*)

State Watch List, County Group 1

Cooper's hawk is distributed throughout much of the U.S. from southern Canada to northern Mexico. It is a regular nesting species in San Diego County. This species has previously been closely associated with oak woodland, and the densely foliaged crowns of the coast live oak remain a favored site for Cooper's hawks to place their nests (Zeiner et al. 1990a). Recently, however, Cooper's hawks have adapted to the urban environment and often nest in eucalyptus trees. Additionally, they can be observed foraging in many types of upland and riparian habitats. Habitat loss, pesticide contamination, and human disturbance at the nest site limit this species population sizes (Remsen 1978). Cooper's hawk was observed during avian bird count surveys north of Elfin Forest Road, both north and south of Harmony Grove Road, and along Wild Willow Hollow. No nests were observed.

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

State Watch List, County Group 1, North County MSCP

Southern California rufous-crowned sparrow is a common resident of scrub habitats of the coastal plain and foothills of southern California and Baja California, Mexico. It is locally common in open coastal sage scrub in San Diego County, and often occurs on slopes that are steep, sparsely vegetated, and rocky or recently burned. Urban development is greatest threat to this species due to the loss, degradation, and fragmentation of coastal sage scrub habitat and associated edge effects (Zeiner et al. 1990a). Southern California rufous-crowned sparrow was recorded south of Canyon de Oro

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

State Watch List, County Group 1, North County MSCP

The sage sparrow is distributed in arid areas of the western U.S. and Mexico. Bell's sage sparrow, a dark colored subspecies, occurs year round in the western two thirds of San Diego County. This subspecies tends to forage on the ground, and as such, prefers open coastal sage scrub or chaparral habitat. It is often found in areas that are recovering from fire. Breeding activity generally occurs from late March through June. Nest building occurs low down in the brush, and sometimes on the ground. The greatest threat to Bell's sage sparrow is habitat fragmentation resulting from urban development. This subspecies may be the most sensitive shrubland bird to habitat fragmentation (Bolger et al. 1997, Lovio 1996). Bell's sage sparrow was observed west of Sea Quest Trail and north of Harmony Grove Road.

Gadwall (*Anas strepera)*

County Group 2

Gadwall is a duck found in interior valleys, wetlands, ponds, and streams throughout most of California. It may occur year-round in southern California. Gadwall uses freshwater lake and emergent habitats, and to a lesser extent, estuary and saltwater emergent habitats to forage and rest while nesting occurs in herbaceous and cropland habitats. Gadwalls glean the surface or subsurface waters for aquatic plants, such as grasses, sedges, pondweeds, and algae, and may also eat seeds and cultivated grains. Gadwall usually nests from April to July and will lay 8 to 12 eggs per clutch (Zeiner et al. 1990a). Gadwall was observed adjacent to Escondido Creek.

Great Blue Heron (*Ardea herodias)*

County Group 2

Great blue heron is found in estuaries, and both fresh and saltwater wetlands throughout most of California where they feed off mostly fish and sometimes amphibians, small rodents, lizards, and birds. Great blue heron nests at the top of tall groves of trees near feeding areas, where the most active feeding takes place yearlong around dawn and dusk (Zeiner et al. 1990a). Great blue heron does very little migrating, many depart eastern and northeastern areas during winter. Great blue heron was observed adjacent to Escondido Creek.

Canada Goose (*Branta canadensis)*

County Group 2

Canada goose is a widespread migrant and common to abundant winter resident throughout Central Valley, Salton Sea and northeastern California. Canada goose is found in freshwater emergent wetlands, and moist grasslands, croplands, pastures, and meadows. This species prefers to feed in fields near safe roosting areas on open water of lakes and ponds. Canada goose usually lays 4 to 6 eggs and typically nests March to June in northeastern California, and February to June on coastal slopes (Zeiner et al. 1990a). Canada goose was observed flying overhead during the 2010-11 surveys.

Red-Shouldered Hawk (*Buteo lineatus*)

County Group 1

Red-shouldered hawk inhabits riparian woodlands below 5,000 feet (1,524 meters) AMSL, particularly in areas with interspersed wetlands. Red-shouldered hawks forage primarily along wet meadow, swamp, and emergent wetland edges for a variety of prey including mammals, snakes, lizards, amphibians, small or young birds, and large insects. They nest in dense riparian habitats near permanent water (Zeiner et al. 1990a). Red-shouldered hawks are diurnally active and yearlong residents. Red-shouldered hawk was observed or detected on the western portion of the Preserve adjacent to Canyon de Oro and on the central parcel of the Preserve north of Elfin Forest Road.

Turkey Vulture (*Cathartes aura*)

County Group 1

Turkey vulture most regularly inhabits a wide variety of habitats including pastured rangeland, non-intensive agriculture, and wild areas, with rock outcrops suitable for nesting. Turkey vultures feed on a wide variety of carrion, consisting largely of mammals, ranging from rodents to large ungulates. Turkey vulture nests primarily on rocky cliffs or slopes. In California, this species occurs year-round in the Coast Ranges and inland and breeds in the eastern portion of the state (Kirk and Mossman 1998). Turkey vultures were often observed flying over the site; however, there is no suitable nesting habitat on site.

Northern Harrier (*Circus cyaneus*)

State Species of Special Concern, County Group 1, North County MSCP

Northern harrier inhabits meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands; this species is rarely found in wooded areas. Northern harriers nest in shrubby vegetation on the ground, usually at the edge of a marsh, and feed on voles and other small mammals, birds, frogs, small reptiles, crustaceans, and insects; northern harriers rarely feed on fish (Zeiner et al. 1990a). Northern harrier is a permanent resident in the northeastern plateau and coastal

areas of California and a less common resident of the Central Valley. This species is a widespread winter resident and migrant in suitable habitat. Northern harrier was observed east of Sea Quest Trail. However, there is no suitable nesting habitat present on site, so this species likely only uses the Preserve for foraging purposes.

Yellow Warbler (*Dendroica petechia brewsteri*)

State Species of Special Concern, County Group 2

Yellow warbler breeds throughout most of San Diego County (CDFG 2005). In southern California, yellow warblers breed in riparian woodlands in the lowlands and foothill canyons (Unitt 2004). They typically occur in riparian forests that contain cottonwoods, sycamores, willows, or alders (Stephenson and Calcarone 1999). The breeding season of yellow warbler generally begins in May and can last to August. Available data show a strong tendency for breeding- and wintering-site fidelity over successive years (Lowther et al. 1999). Nest parasitism by brown-headed cowbirds (*Molothrus ater*) has been strongly implicated as a cause of yellow warbler population declines in coastal lowland and foothill riparian areas of southern California (Unitt 2004). Male yellow warblers were detected along Escondido Creek.

White-tailed Kite (*Elanus leucurus caeruleus*)

State Fully Protected, County Group 1

White-tailed kites occur mainly in lowlands of southern and northwestern cismontane California in savanna, open woodland, marshes, cultivated fields and partially cleared lands. White-tailed kites hunt in the morning and late afternoon for voles and mice usually near farmlands. Peak breeding occurs from May to August and nests are made of piled sticks and twigs and placed near the tops of oak, willow or other trees near marshes and foraging areas (Zeiner et al. 1990a). White-tailed kite was observed at the same location within the central parcel of the Preserve north of Elfin Forest Road during botanical surveys conducted in January and March 2011.

White-faced Ibis (*Plegadis chihi*)

State Watch List, County Group 1, North County MSCP

White-faced ibis is an uncommon summer resident in sections of southern California, a rare visitor in the Central Valley, and is more widespread in migration. It prefers to feed in fresh emergent wetland, shallow lake waters, muddy ground of wet meadows, and irrigated or flooded pastures and croplands and nests in dense, fresh emergent wetland (CDFG 2005). This species roosts amidst dense, freshwater emergent vegetation such as bulrushes, cattails, reeds or low shrubs over water (Ryder and Manry 1994). White-faced ibis has declined in California and stopped breeding regularly, probably from destruction of extensive marshes required

for nesting (Remsen 1978). White-faced ibis was observed flying over the Preserve; however, suitable nesting, foraging, or roosting habitat is not present on site.

Coastal California Gnatcatcher (*Polioptila californica californica*)

Federally Threatened, State Species of Special Concern, County Group 1, North County MSCP

Coastal California gnatcatcher is a non-migratory bird endemic to the coastal slope of southern California and northwestern Baja California Norte, Mexico, from Ventura County southward to approximately El Rosario, Mexico. It is considered an obligate resident of coastal scrub habitat in arid washes, on mesas, and on slopes of coastal hills of which California buckwheat, coastal sagebrush, and prickly pear patches are especially preferred (Zeiner et al. 1990a). The breeding season extends from late February through July, with the peak of nest initiations occurring from mid-March through mid-May. Coastal California gnatcatcher is threatened by urban development and nest parasitism by brown-headed cowbird. The Preserve contains USFWS designated critical habitat for California gnatcatcher. This species was observed during avian point count surveys on the central parcel of the Preserve north of Elfin Forest Road. One individual was observed in January and two individuals were observed in February. California gnatcatcher was also observed in the far western portions of the Preserve north of Canyon de Oro and east of Sea Quest Trail.

Barn Owl (*Tyto alba*)

County Group 2

Barn owl inhabits a variety of open habitats. Barn owls nest in cavities, both natural and man-made, including trees, cliffs, caves, riverbanks, church steeples, barn lofts, haystacks, and artificial nest boxes. Barn owls feed at night and locate prey by sound. Their diet consists primarily of rodents, but also includes shrews, bats, and leporids (rabbits and hares) and less frequently includes birds, reptiles, amphibians, and arthropods (Marti et al. 2005). Barn owls breed and winter throughout lowlands and lightly forested foothills in California. Where climate permits, barn owls can breed year-round (Marti et al. 2005). Barn owl was observed during night-time avian bird counts adjacent to Canyon de Oro, north of Harmony Grove Road, and along Wild Willow Hollow.

Western Bluebird (*Siala mexicana*)

County Group 2

Western bluebird is a common cavity-nesting songbird of oak woodland and pine forests throughout the western U.S. It breeds in open oak woodlands, riparian deciduous trees, or conifers with herbaceous understory, and winters in a wide

variety of open habitats at elevations below 4,000 feet (1,200 meters) AMSL. Western bluebirds breed from the eastern reaches of lowland coastal valleys such as Lake Hodges, along the San Diego River east of Santee, and drainages east of Otay Reservoir, up through the foothills and montane areas where suitable habitat occurs. This species is vulnerable to competition with more aggressive introduced species (e.g., European starling, [*Sturnus vulgaris*]) for scarce nesting cavities (Patterson 1979). However, in San Diego County, this species appears to be extending its range, successfully colonizing urban areas and adapting to novel nest sites such as nest boxes and certain species of palms (Unitt 2004). Western bluebirds were observed along Escondido Creek during the winter and spring. Western bluebirds have not been recorded as breeding regularly in San Diego County until recently. Although this species could breed on site, based on the late winter/early spring season observation, it may only be wintering on site.

California Gull (*Larus californicus*)

State Watch List, County Group 2

California gull is a fairly common nester east of the Sierra Nevada and Cascades and an abundant visitor to coastal and interior lowlands during the non-breeding season. This species feeds on garbage, carrion, earthworms, adult insects, and larvae in winter, and also eat larval insects, brine shrimp, and young birds on breeding grounds. Inland, the California gull occupies lake, river, and cropland habitats, landfill dumps, and open lawns in cities. It nests in alkali and freshwater lacustrine habitats. Nests are scraps lined with grasses, feathers, or rubble (Zeiner et al. 1990a). California gull typically nests in colonies from mid-April through mid-August and produce clutches of 1 to 3 eggs (Zeiner et al. 1990a). California gull was observed within the Preserve during 2011 surveys on site; however, suitable nesting, foraging, or roosting habitat is not present within the Preserve.

3.3.2.3 *Mammals*

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

State Species of Special Concern, County Group 2

Northwestern San Diego pocket mouse occurs from the eastern San Gabriel Mountains to the coast and south into Baja California (Lackey 1996). It is found in a variety of habitats including coastal scrub, mixed chaparral, sagebrush, and annual grassland habitats (CDFG 2005). This species generally exhibits a strong microhabitat affinity for moderately gravelly and rocky substrates and appears to be sensitive to habitat fragmentation and degradation (Price and Waser 1984). Data suggests that isolated habitat patches must be at least 62 to 198 acres (25 to 80 hectares) to sustain native rodent populations (Bolger et al. 1997). Northwestern San Diego pocket mouse was detected during small mammal trapping near Canyon De Oro Road during both trapping sessions. A total of 25 individuals were caught

during surveys, 13 of which were recaptured individuals. Northwestern San Diego pocket mouse was also previously detected on the adjacent existing Del Dios Highlands Preserve (TAIC 2008).

San Diego Desert Woodrat (*Neotoma lepida intermedia*)

State Species of Special Concern, County Group 2

San Diego desert woodrat occurs in coastal California from San Luis Obispo south through the Transverse and Peninsular Ranges into Baja California. This species commonly inhabits mixed chaparral, Joshua tree woodlands, pinyon-juniper woodlands, sagebrush, and desert habitats (Zeiner et al. 1990b). Thompson (1982) observed desert woodrats actively avoiding open areas that did not provide adequate refuge sites. Nests are constructed with twigs, sticks, cactus parts, rocks and are usually built against a rock crevice, at the base of creosote or cactus, or in the lower branches of trees (CDFG 2005). Five (5) individual San Diego desert woodrats were captured adjacent to Canyon Del Oro.

Western Red Bat (*Lasiurus blossevillii*)

State Species of Special Concern, County Group 2

Western red bat occurs in California from Shasta County to the Mexican border and west of the Sierra Nevada/Cascade crest and deserts (Zeiner 1990b). There is little information on the distribution and relative abundance of this species in southern California (Stephenson and Calcarone 1999). This bat is associated with large deciduous trees in riparian habitat and often occurs in streamside habitats dominated by cottonwood, oaks, sycamore, and walnut. This primarily solitary species roosts in the foliage of trees and shrubs in habitats bordering forests, rivers, cultivated fields, and urban areas (Harvey et al. 1999). Western red bat forages over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands (CDFG 2005). The species does not form colonies and is difficult to find and census (USFS 2008). Western red bat was detected during both passes of bat surveys along Canyon de Oro and Wild Willow Hollow.

Yuma Myotis (*Myotis yumanensis*)

County Group 2

Yuma myotis occurs throughout California at elevations ranging from sea level to 11,000 feet (3,352 meters) AMSL, but is generally found below 8,000 feet (2,438 meters) AMSL. They can be found in many habitat types, but prefer open forests and woodlands with sources of water they can forage over. This species roosts in groups of several thousand in caves buildings, mines, and under bridges. Reproduction for Yuma myotis begins in the fall and single litter of one young is born

sometime between May and June (Zeiner et al. 1990b). Yuma myotis was observed during both passes of bat surveys at every survey location.

Pocketed Free-tailed Bat (*Nyctinomops femorosaccus*)

State Species of Special Concern, County Group 2

Pocketed free-tailed bat occurs in Riverside, San Diego, and Imperial counties and is more common in Mexico. Habitats frequently used by this species include pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Pocketed free-tailed bat prefers rock crevices in cliffs as roosting sites. The status of this species in California is poorly known, but it appears to be rare (CDFG 2005). Pocketed free-tailed bat was detected during both passes of bat surveys at every survey location.

Southern Mule Deer (*Odocoileus hemionus fuliginatus*)

County Group 2

Southern mule deer occur throughout California and much of the western U.S. Southern mule deer inhabit a broad range of habitats including agricultural and suburban areas, desert, woodlands and forests, grassland and herbaceous vegetation communities, savanna, shrubland, and chaparral. Mule deer are herbivorous and browse on a variety of woody plants, grasses, and forbs (NatureServe 2009). Wildlife cameras detected two individual mule deer along Wild Willow Hollow; however, it is likely that several individuals commonly traverse the area as pellets were routinely discovered throughout the Preserve.

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

Eleven (11) special-status wildlife species have a high potential to occur within the Preserve as described below. Additional information on these species can be found in Appendix A.

3.3.3.1 *Herpetofauna*

Orange-throated Whiptail (*Aspidoscelis hyperythra*)

State Species of Special Concern, County Group 2, North County MSCP

Orange-throated whiptail was previously recorded within the adjacent Del Dios Highlands Preserve (TAIC 2008) and has a high potential to occur in the southern mixed chaparral and coastal sage scrub on site.

Rosy Boa (*Charina trivirgata roseofusca*)

County Group 2

Rosy boa was recorded within the adjacent Del Dios Highlands Preserve (Dudek 2011b) and has a high potential to occur in the southern mixed chaparral and coastal sage scrub on site.

Northern Red-diamond Rattlesnake (*Crotalus ruber ruber*)

State Species of Special Concern, County Group 2, North County MSCP

Northern red-diamond rattlesnake was recorded within the adjacent Del Dios Highlands Preserve (Dudek 2011b) and has a high potential to occur within shrub habitats on site where there is heavy brush, larger rocks, or boulders.

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

State Species of Special Concern, County Group 2

Coast patch-nosed snake was previously recorded within the adjacent Del Dios Highlands Preserve (TAIC 2008) and has a high potential to occur within the southern mixed chaparral and coastal sage scrub on site.

3.3.3.2 *Mammals*

Dulzura (California) Pocket Mouse (*Chaetodipus californicus femoralis*)

State Species of Special Concern, County Group 2

Dulzura pocket mouse was previously recorded within the adjacent Del Dios Highlands Preserve (TAIC 2008) and has a high potential to occur within the coastal sage scrub, chaparral and riparian-scrub ecotones on site.

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

State Species of Special Concern, County Group 2, North County MSCP

Townsend's big-eared bat was recorded within the adjacent Del Dios Highlands Preserve (Dudek 2011b) and has a high potential to occur within the mesic habitats on site.

Greater Western Mastiff Bat (*Eumops perotis californicus*)

State Species of Special Concern, County Group 2

Greater western mastiff bat was previously recorded within the adjacent Del Dios Highlands Preserve (TAIC 2008) and has a high potential to occur within the woodlands, coastal scrub, chaparral and grasslands on site.

Western Yellow Bat (*Lasiurus xanthinus*)

State Species of Special Concern

Western yellow bat was recorded within the adjacent Del Dios Highlands Preserve (Dudek 2011b) and has a high potential to occur within the riparian and scrub habitats on site.

Big Free-tailed Bat (*Nyctinomops macrotis*)

State Species of Special Concern, County Group 2

Big free-tailed bat was recorded within the adjacent Del Dios Highlands Preserve (Dudek 2011b) and has a high potential to occur within the rugged, rocky terrain or forage over the water sources on site.

Mountain Lion (*Felis concolor*)

County Group 2, North County MSCP Covered Species

Mountain lion scat and tracks were observed within the adjacent Del Dios Highlands Preserve (Dudek 2011b) and this species has a high potential to occur on site given the presence of its main food source (mule deer) and suitable habitat within the Preserve.

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

State Species of Special Concern, County Group 2, North County MSCP

San Diego black-tailed jackrabbit was recorded within the adjacent Del Dios Highlands Preserve (Dudek 2011b) and has a high potential to occur within the coastal sage scrub, grassland and disturbed areas on site.

3.3.4 Non-native and/or Invasive Wildlife Species

Three (3) non-native and/or invasive wildlife species were detected within the Preserve during the baseline surveys.

Brown-headed Cowbird (*Molothrus ater*)

Brown-headed cowbird is a native North American species, but was absent from the coastal slope of San Diego County before 1913. This species is a brood parasite,

and is known to parasitize the nests of native songbirds including California gnatcatcher, Bell's sage sparrow and Rufous-crowned sparrow (Zeiner et al. 1990a). The entire Preserve provides suitable breeding resources for cowbirds and two individuals were detected along Escondido Creek in March 2011. Although only 2 cowbirds were observed, the data may understate the level of cowbird use in the Preserve as surveys were conducted before the primary cowbird breeding season, which typically occurs between April and May.

European Starling (*Sturnus vulgaris*)

European starlings are aggressive competitors for nest cavities, and can reduce the reproductive success of native bird species, such as woodpeckers, bluebirds, swallows and wrens, by outcompeting them for nest resources (Zeiner et al. 1990a). This species was observed within the eucalyptus trees located in the eastern portion of the Preserve during the 2007-08 surveys and throughout the newly acquired parcels during the 2010-11 surveys.

Virginia Opossum (*Didelphis viginiana*)

Introduced in 1910, Virginia opossum is an omnivorous, non-native species, which may eat native birds, reptiles and amphibians. This species occurs widely in western California and is typically only of concern in urban areas. Virginia opossum was detected along Escondido Creek during the 2010-11 surveys and is not likely to adversely affect the Preserve.

3.4 Overall Biological and Conservation Value

The Preserve parcels are located within the Elfin Forest and Harmony Grove core areas of the North County MSCP. The Elfin Forest Core Area consists of 2,823 acres south of San Marcos and north of Del Dios Highway. Approximately 84% of this core area contains natural vegetation communities, predominantly coastal sage scrub (MSCP Tier II habitat). Other than Camp Pendleton, this area contains the largest intact area of coastal sage scrub in northwest San Diego County with close proximity to the coast making this area an important location for coastal sage scrub dependent species, such as the coastal California gnatcatcher.

The Harmony Grove Core Area consists of 4,609 acres adjacent to Elfin Forest and northwest of Lake Hodges. Approximately 87% of this core area contains natural vegetation communities. The vast majority of the area supports chaparral (MSCP Tier III habitat) with riparian vegetation along Escondido Creek and other waterways. Encinitas baccharis occurs in a few locations and wart-stem lilac is abundant forming dense stands making this an important area for both species.

According to the MSCP Habitat Evaluation Model, the habitats within the Preserve range from low to very high in value. The North County MSCP species-specific habitat evaluation model for coastal California gnatcatcher designates habitat within

the western parcels of the Preserve as very high in value for this federally threatened species. In addition, these parcels are located within designated USFWS Critical Habitat for the coastal California gnatcatcher.

3.4.1 Wildlife Linkages and Corridors

The Preserve is an important part of a corridor connecting the coast to open space in the inland portions of north and east San Diego County. The corridor connects to the coast through Escondido Creek. This corridor is somewhat fragmented given the development of this region. The core area of this corridor is located west of Interstate 15 and comprises the Preserve, Del Dios Highlands Preserve, Elfin Forest Recreational Reserve, and the open space surrounding Olivenhain Reservoir and Lake Hodges.

The general area may function to convey large and small mammals within and through the Preserve because evidence is provided by the wildlife cameras of the presence of mule deer and coyote. Observation of mammal tracks and scat were documented anecdotally throughout the Preserve within no specific areas of concentrated activity. Deer and coyote may use the path of least resistance, which can include drainages, ridgelines, and the numerous dirt roads that are on site depending on time of day. Constraints to movement include the disjunct nature of the various Preserve parcels. Winged species such as birds and bats are not restricted to specific routes or linkage areas since these species are able to move freely over the entire site.

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 Escondido Creek Preserve and describes areas of potential resources.

In 2010, an archaeological survey and site inventory 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, *Archaeological Survey Report for the Escondido Creek Preserve, San Diego County, California* (ASM 2011) attached as Appendix B. 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

4.1.1 Pre-Contact

The area surrounding the Preserve was occupied and used by both the Ipai (also termed Diegueño and Kumeyaay) and the Luiseño (also termed Puyumkowitchum and Ataxum) Indians before European contact. The Preserve parcels are associated primarily with the San Pasqual Band of Ipai (presently known as the San Pasqual Band of Diegueño Mission Indians). San Pasqual Valley, to the east of the Preserve, was home to the San Pasqual Band of Ipai, and approximately three kilometers (1.9 miles) to the east of the Preserve is the site of a large San Pasqual village. The Preserve is located on the border between Ipai and the Luiseño ancestral lands. Therefore, the Preserve is located within a cultural transition or overlap area.

The Preserve lies between two major waterway and catchment areas for the Ipai and the Luiseño: Escondido Creek and the San Dieguito River. Many permanent settlements were maintained near these waterways, which produced a habitat that was rich in resources, including oak trees, which grow near the creeks and drainages. The Preserve vicinity provided the shortest passage between the two waterways.

4.1.2 Post-Contact

The Preserve is located in an area that has largely remained undeveloped due to its terrain. An 1858 General Land Office survey of the area (Township 12 South, Range 3 West) showed that mountainous peaks and ravines characterized the terrain. Homestead properties were scattered across land outside Rancho Los

Vallecitos de San Marcos, and a wood road extended northwesterly toward San Marcos, later known as Elfin Forest Road. Only the Escondido Creek traversed Section 36, which is part of the Preserve on Harmony Grove Road.

The Preserve parcels on and southwest of Elfin Forest Road were surveyed in 1854 as part of Township 13 South, Range 3 West in Sections 3 and 4. Only ravines and small creeks were noted between 1853 and 1875, which is largely due to the terrain in Section 3 being "impassable" mountains. Rancho San Diegito (*sic*) and Rancho Los Encenitos were located southwest of the parcels, and a ranch house existed in Section 6, outside the Preserve area. The Preserve parcels within Sections 3 and 4 of Township 13 South, Range 3 West were patented between 1890 and 1918 (General Land Office 1875; USDI Bureau of Land Management 1996, 2010).

Rancho Rincon del Diablo, now known as Escondido, was opened to settlement around 1886 as a new citrus-growing community. Soon after, nearby Harmony Grove was incorporated as the Harmony Grove Spiritualist Camp Meeting Association of San Diego County, where San Diegans and travelers from Los Angeles annually met to study spiritualism. By the late 1910s, Escondido had become one of the principal agricultural communities in the County. During the 1920s, the small annual spiritual camp meeting site became a spiritual community, following the purchase of 10 acres by pioneers who granted the land to the association.

Year-round residents began living in the area during its heyday in the 1920s and 1930s, and the Harmony Grove area developed into a valley of farms and ranches with orchards, although none existed within the Preserve parcels in 1929. A number of black granite quarries opened up in the early 1920s in the Escondido area, largely around Harmony Grove. Quarrying black granite in the County became an important postwar industry, with significant contributions made by Harmony Grove mines. However, no major operations took place on the Preserve parcels. A new spiritual community, Questhaven, was established along present-day Questhaven Road in 1942. Most of the buildings associated with the spiritual retreat were constructed in the 1950s. Otherwise, the areas between Elfin Forest Road and Harmony Grove Road, and southwest of Elfin Forest Road remained sparsely developed.

Over the years Harmony Grove remained a small spiritualist/agricultural/pastoral community, and the areas between Harmony Grove and Elfin Forest largely remained rural with scattered development until the late 1970s. Aerials show that the area between Elfin Forest Road and Harmony Grove Road remained relatively undeveloped, except for Harmony Grove and Questhaven, with enclaves of residential development between 1964 and 1980. Beginning in 1977, a number of large properties in the Elfin Forest area were listed for sale; therefore, a majority of the homes in the area were constructed after 1977. Harmony Grove Road was straightened near the Harmony Grove Road parcels between 1964 and 1980. Some secondary roads existed north of the parcels near Harmony Grove Road between 1953 and 1964, with secondary roads south of Harmony Road graded between 1964

and 1980. Despite efforts in the 1980s and thereafter to develop areas between Harmony Grove and Elfin Forest, the area between Elfin Forest Road and Harmony Grove road has largely remained undeveloped.

4.2 Native American Consultation

The Native American Heritage Commission (NAHC) was contacted on September 29, 2010 requesting a Sacred Lands File search for any recorded Traditional Cultural Properties or Native American heritage sites. The NAHC responded that no Native American cultural resources were identified within or adjacent to the Preserve, but that Native American cultural resources were present in the vicinity. The response letter also provided a listing of all Native American tribal representatives who may have further knowledge of such sites. For this reason, and to ensure that all potential Native American resources are adequately addressed, letters were sent on October 7, 2010 to each of those tribal representatives to solicit further information. One response from the Pala Band of Mission Indians was received indicating that the Preserve is not within the boundaries of the recognized Pala Indian Reservation, but that it is within the boundaries of the territory that the tribe considers its Traditional Use Area. Therefore, the tribe has requested to be kept informed of activities within the Preserve and reporting. In addition, a representative of the San Luis Rey Band of Mission Indians participated as a Native American monitor throughout the field survey.

4.3 Cultural Resource Descriptions

Four cultural resources have been recorded within the Preserve, including one previously recorded prehistoric isolate, one previously recorded prehistoric site, and two newly recorded historic-period sites.

4.3.1 Prehistoric Resources

P-37-026990

This single prehistoric isolated flake was originally recorded in 2005. This resource was not relocated during the 2010 survey.

SDI-17,670 (P-37-026991)

This prehistoric site consists of a lithic scatter. It was originally recorded in 2005 and, at that time, it was noted that the site had been exposed to vehicle disturbance. A subsequent surface collection determined that SDI-17,760 was a shallow site interpreted as a lithic reduction station. The site was relocated in 2010 and the trace of the 2005 excavation unit was identified. However, due to the previous surface collection, no artifacts were visible on the ground surface. In addition, the area surrounding the site appeared to have been recently cleared of all vegetation and graded, possibly as a fire break.

4.3.2 Historic Resources

P-37-031723

This historic-period site consists of a foundation with a cinder block wall. The site also contains retaining rock walls, post foundations, and stairs leading down slope from the entry way. The northern portion of the site is scattered with clear and brown colored bottle fragments. No bottle bottoms were found to date the glass artifacts. However, evidence from USGS maps and aerial photographs indicates the roadway, retaining wall and structure were constructed between 1968 and 1980.

P-37-031724

This historic-period site consists of a tiled foundation and a portion of a wall in the northeast corner of the foundation. No artifacts were observed at the site. Evidence from USGS maps and aerial photographs indicates the building was constructed between 1968 and 1980.

4.4 Resource Significance

The chronology of prehistoric activity within the Preserve remains largely undefined, based on the scarcity of recorded sites. During the testing of the lithic scatter site (SDI-17,760) in 2005, the site was interpreted as a lithic reduction station and the site forms state that "based on limited technological, material selection, patination, and weathering factors, this site may date to the Paleoindian period, but additional data to confirm this is not present at the site" (Pigniolo and Roy 2005).

Functionally, prehistoric uses of the area encompassed by the Preserve probably played a subordinate role to more substantial settlements located in the Escondido and San Pasqual valleys and/or the San Dieguito River valley. There is no evidence of habitation sites or multiple activities taking place prehistorically within the Preserve. However, it is likely that prehistoric habitation sites or multiple activities took place within the Preserve but that they were unidentifiable during the current survey because of poor visibility (10% or less visibility due to high vegetation).

Historic-period uses of the Preserve and its vicinity were limited but varied. In the late nineteenth century, citrus growing, the dairy industry, and other farming and ranching activities were developed to a limited degree. Local interest in gold mining arose in the 1890s, and quarrying of granite for building stone occurred in the 1920s. Residential development was sparse, and was linked, in part, to religious movements such as the Harmony Grove Spiritualist Camp Meeting Association. Identified archaeological evidence for these activities within the Preserve itself is so far limited to the foundations, walls, and other traces related to two structures.

The previously recorded artifact isolate (P-37-026990) is not considered significant under County Guidelines (County 2007). The three prehistoric and historic sites

identified within the Preserve (SDI-17,760, P-37-031723 and P-37-031724) have not been evaluated for eligibility under CEQA or the County's Resource Protection Ordinance. As the significance of these sites has not been determined through a program of significance testing, they are considered to be significant resources under County guidelines (County 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 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, and the San Diego County General Plan (including the San Dieguito 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, County specific goals and guidelines can be found in the San Diego County General Plan. Specifically, the Preserve is located within the San Dieguito Community Plan area. The San Dieguito Community Plan includes goals to conserve natural resources, protect natural habitat, provide a system of open space, and preserve archaeological resources. In addition, portions of the Preserve are located within two Resource Conservation Areas, Mount Whitney Double Peak and Escondido Creek, which are designated by the General and Community plans.

5.1.2 MSCP-Related

The subregional MSCP Plan and the North County Plan provide general and core area-specific goals and objectives. The Preserve is comprised of parcels included in both the Elfin Forest and Harmony Grove core areas. 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.

Specific conservation goals for the Elfin Forest and Harmony Grove core areas, which are applicable to the Preserve, include the following:

- Protect sensitive species including: San Diego goldenstar; Encinitas baccharis, including different genders to ensure reproductive capability; and Wart-stemmed ceanothus, particularly dense stands.

- Minimize impacts to the sensitive habitats including coastal sage scrub to maintain populations and connectivity of coastal sage scrub-dependent species, including a core population of California gnatcatcher.

- Protect the Escondido Creek floodplain. Conserve riparian and upland habitat along Escondido Creek for water quality and sensitive species, such as least Bell's vireo. Maintain natural flow regimes to maintain functionality of the San Elijo Lagoon.

- Removal of invasive, non-native species (e.g., *Tamarix*, *Arundo*, brown-headed cowbirds, etc.), particularly to enhance habitat quality along Escondido Creek.

- Maintain connectivity, particularly east-west, along Escondido Creek canyon by minimizing road and maintaining natural habitat. Maintain connectivity through natural lands for wildlife movement of large and medium sized mammals between preserved habitats.

5.1.3 Management Directives and Implementation Measures

Based on the above goals and objectives, recommended management directives have been identified. The ASMDs provided herein 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.

This RMP includes management directives and implementation measures to meet MSCP goals and objectives under the following elements: (A) Biological Resources, (B) Vegetation Management, (C) Public Use, Trails, and Recreation, (D) Operations and Facility Maintenance, (E) Cultural Resources, and (F) Mitigation Lands.

5.2 Biological Resources Element (A)

5.2.1 Biological Monitoring

Biological monitoring will be performed on site to gather information that will assist DPR in making land management decisions to conform to MSCP goals and objectives, as well as DPR objectives. The biological monitoring that will occur will be designed to guide decisions at the individual preserve level. Baseline surveys of the Preserve have been conducted and the results are included as Appendix A. On-going monitoring is expected to commence in 2016. Additional monitoring results will be incorporated into stand alone monitoring reports. These reports may recommend revisions to the management directives contained within this RMP.

Monitoring at the preserve scale is focused on obtaining information for management purposes, but can be useful for subregional and ecoregional monitoring assessment as well. DPR will monitor the status and trends of MSCP-covered species and collect data on key environmental resources within the Preserve to select, prioritize, and measure the effectiveness of management activities. In most instances, the array of threats or stressors on preserved habitats, their mechanisms of action, and the responses of the habitats and associated species are not completely understood at this time. Therefore, ASMDs must comprehensively address resource management issues for each preserve. Information collected within each preserve will be aggregated for analysis at the subregion and ecoregion scales.

The key to successful monitoring at the individual preserve level 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 (known as the San Diego Monitoring and Management Program) has been formed and has designated a land manager who will assist jurisdictions in coordinating monitoring programs, analyzing data, and providing other information and technical assistance. The County is an active participant in the development of monitoring methods for the MSCP. Once these methods are fully developed, and as feasible, these methods will be adapted for the Preserve.

DPR will follow the habitat- and species-specific monitoring requirements outlined in the North County Plan. Additionally, DPR will follow USGS rare plant monitoring protocols (McEachern et al. 2007), San Diego State University habitat and vegetation community monitoring protocols (Deutschman et al. 2009) and USFWS wildlife monitoring protocols (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 objectives are met (*Priority 1*)

***Implementation Measure A.1.1*:** DPR will conduct habitat monitoring at five-year intervals. On-going monitoring within the Preserve will identify any adverse changes in vegetation community distribution and habitat quality, such as changes from fire, invasion by non-natives or decline of existing species, and indicate if modifications to current management actions are needed. More frequent monitoring may be required following a significant fire within the Preserve. The main product of this monitoring will be a report that 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 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 invasive, non-native 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. Particular attention will be paid in the vicinity of the known populations of wart-stemmed ceanothus and San Diego goldenstar. This information will be included in the monitoring report.

Management Directive A.2 – Meet the corridor monitoring requirements of the MSCP (*Priority 2*)

As discussed in Section 3.4.1, the Preserve is part of a corridor connecting the coast to open space in the inland portions of north and east San Diego County. However, while the general area may function to convey large and small mammals, the Preserve itself is fragmented by development, which may limit 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 wildlife movement on a regional scale.

***Implementation Measure A.2.1*:** DPR will conduct corridor monitoring at five-year intervals in conjunction with habitat monitoring, and general wildlife and rare plant surveys (see A.1.1 & A.1.2). The scope of monitoring will be sufficient to determine if corridors are being utilized, but not to determine the extent of use (i.e., how many individuals of any given species use a corridor). The results of the current assessment of habitat linkage function, including a list of species detected, will be included in the monitoring report.

5.2.2 MSCP Covered Species-Specific Monitoring and Management

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.

The North County MSCP Plan provides habitat-specific management and monitoring guidelines that will benefit certain covered species for the following habitat types: riparian, marsh and wet meadow habitat; coastal sage scrub, chaparral, and grassland habitat; oak woodlands and coniferous forest; and vernal pools. The Framework RMP outlines the major factors that are a risk to these specific habitats and discusses management and monitoring to reduce the threats. Additionally, the North County MSCP Plan conservation analysis provides species-specific monitoring and management conditions for covered species that may need more specialized management directives.

Management Directive A.3 - Provide for management and monitoring of North County MSCP Covered Species (*Priority 1*)

DPR will implement the habitat-based and, in some cases, species-specific management and monitoring guidelines as outlined in the Framework RMP and conservation analysis for all proposed North County MSCP covered species within the Preserve.

The recommended guidelines 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. In order to avoid repetition, the following is a list of the common threats/risk factors to habitats and proposed covered species, and the corresponding management directives or implementation measures intended to address these factors.

- ***Invasive, non-native plants***: Management directives B.2 & B.3 and implementation measures A.1.3
- ***Invasive, non-native animals***: Management directive A.5
- ***Fire***: Management directives B.3 and B.4
- ***Human Disturbance***: Management directives C.1, C.2 & C.5 and implementation measures C.4.2 & D.3.3
- ***Edge effects*:** Management directives D.6 & D.7, and implementation measures B.4.1 & C.5.3
- ***Hydrological Management***: Management directive D.3

Wart-stemmed Ceanothus (*Ceanothus verrucosus*)

Monitoring: Trend Monitoring (Medium Priority)

Monitoring efforts include habitat monitoring, general wildlife and rare plant surveys, and monitoring for invasive plant species (see A.1.1, A.1.2 & A.1.3), as well as the species-specific monitoring described in the implementation measure below.

> ***Implementation Measure A.3.1*:** DPR will conduct surveys of the wart-stemmed ceanothus populations within the Preserve to determine the number, size, variability and health status (e.g., new vegetative growth, flowering). These surveys will also document observations of insect pollinators, the status of invasive species in the vicinity of wart-stemmed ceanothus, and the condition of soils and evidence of soil disturbance. These surveys will be conducted at five-year intervals in conjunction with habitat monitoring.

Management: Population/Habitat Maintenance/Enhancement

Wart-stemmed ceanothus was observed throughout much of the Preserve as a common component of the southern mixed chaparral and the population on site is substantial in size (estimated at over 380,000 individuals). The management approach for this species is maintenance of the population and suitable habitat (chaparral) within the Preserve and, when necessary, enhancement. Chaparral habitat will be managed to reduce the threat of fire and invasive, non-native plants

San Diego Goldenstar (*Muilla clevelandii*)

Monitoring: Trend Monitoring (Medium Priority)

Monitoring efforts include habitat monitoring, general wildlife and rare plant surveys, and monitoring for invasive plant species (see A.1.1, A.1.2 & A.1.3), as well as the species-specific monitoring described in the implementation measure below.

> ***Implementation Measure A.3.2*:** DPR will conduct surveys of the San Diego goldenstar populations within the Preserve to determine the number, size, variability and health status (e.g., new vegetative growth, flowering). These surveys will also document the status of invasive species in the vicinity of wart-stemmed ceanothus, condition of soils and evidence of soil disturbance, and presence/absence of pollinators essential for seed distribution. These surveys will be conducted at five-year intervals in conjunction with habitat monitoring.

Management: Population/Habitat Maintenance/Enhancement

The management approach for this species is maintenance of the population and suitable habitat (chaparral, sage scrub and grasslands) within the Preserve and,

when necessary, enhancement. These habitats will be managed to reduce the threat of fire and invasive, non-native plants.

Western Spadefoot (*Spea hammondii*)

Monitoring: Status Monitoring (Low Priority)

Monitoring efforts include habitat monitoring, general wildlife and rare plant surveys, and monitoring for invasive plant species (see A.1.1, A.1.2 & A.1.3).

Management: Habitat Maintenance

The management approach for this species is maintenance of suitable breeding habitat (riparian/wetlands) and upland foraging and aestivation habitat (oak woodland) within the Preserve. These habitats will be managed to reduce the threat of fire and invasive, non-native species, and maintain hydrology.

Coast Horned Lizard (*Phrynosoma blainvillei*)

Monitoring: Status Monitoring (Low Priority)

Monitoring efforts include habitat monitoring, general wildlife and rare plant surveys, and monitoring for invasive plant species (see A.1.1, A.1.2 & A.1.3), as well as monitoring for presence of Argentine ant (see A.5.1).

Management: Habitat Maintenance

The management approach for this species is maintenance of suitable habitat (chaparral, sage scrub and grassland) within the Preserve. These habitats will be managed to reduce the threat of fire and invasive, non-native species. Argentine ants are a demonstrated stressor on this species in areas with substantial urban development, which is not typical of this region. No Argentine ants have been documented within the Preserve.

Two-striped Garter Snake (*Thamnophis hammondii*)

Monitoring: Status Monitoring (Low Priority)

Monitoring efforts include habitat monitoring, general wildlife and rare plant surveys, and monitoring for invasive plant species (see A.1.1, A.1.2 & A.1.3).

Management: Habitat Maintenance

The management approach for this species is maintenance of suitable habitat (riparian/wetlands, chaparral, sage scrub and oak woodland) within the Preserve,

specifically along Escondido Creek. These habitats will be managed to reduce the threat of fire and invasive, non-native species, and maintain hydrology.

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

Monitoring: Trend Monitoring (Medium Priority)

Monitoring efforts include habitat monitoring, general wildlife and rare plant surveys, and monitoring for invasive plant species (see A.1.1, A.1.2 & A.1.3), as well as the species-specific monitoring described in the implementation measure below.

> ***Implementation Measure A.3.3*****:** DPR will conduct focused surveys of rufous-crowned sparrows to determine the number of populations and the proportion of occupied habitat within the Preserve. These surveys will be conducted at five-year intervals in conjunction with habitat monitoring.

Management: Population/Habitat Maintenance/Enhancement

The management approach for this species is maintenance of the population and suitable habitat (chaparral and sage scrub) within the Preserve and, when necessary, enhancement. Chaparral and sage scrub habitats will be managed to reduce the threat of fire and invasive, non-native plants.

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

Monitoring: Trend Monitoring (Medium Priority)

Monitoring efforts include habitat monitoring, general wildlife and rare plant surveys, and monitoring for invasive plant species (see A.1.1, A.1.2 & A.1.3), as well as monitoring for cowbird nest parasitism (see A.5.1). In addition, monitoring efforts will include the species-specific monitoring described in the implementation measure below.

> ***Implementation Measure A.3.4*****:** DPR will conduct focused surveys of Bell's sage sparrow to determine the number of occupied locations, proportion of occupied habitat, and colonization of unoccupied, restored or recovering (e.g., from wildlife) habitat within the Preserve. These surveys will be conducted at five-year intervals in conjunction with habitat monitoring.

Management: Population/Habitat Maintenance/Enhancement

The management approach for this species is maintenance of the population and suitable habitat (chaparral and sage scrub) within the Preserve and, when necessary, enhancement. Chaparral and sage scrub habitats will be managed to reduce the threat of fire and invasive, non-native plants.

Northern Harrier (*Circus cyaneus*)

Monitoring: Status Monitoring (Low Priority)

Monitoring efforts include habitat monitoring, general wildlife and rare plant surveys, and monitoring for invasive plant species (see A.1.1, A.1.2 & A.1.3).

Management: Habitat Maintenance

The management approach for this species is maintenance of suitable habitat (open sage scrub and grassland) within the Preserve. These habitats will be managed to reduce the threat of fire and invasive, non-native plants

White-faced Ibis (*Plegadis chihi*)

Monitoring: Status Monitoring (Low Priority)

Monitoring efforts include habitat monitoring, general wildlife and rare plant surveys, and monitoring for invasive plant species (see A.1.1, A.1.2 & A.1.3).

Management: None

This species was observed flying over the Preserve during the baseline surveys; however, there is no suitable nesting, foraging or roosting habitat within the Preserve. This species was more than likely flying to or from Lake Hodges or the adjacent Olivenhain Reservoir. Therefore, no management is proposed at this time.

Coastal California Gnatcatcher (*Polioptila californica californica*)

Monitoring: Trend Monitoring (Medium Priority)

Monitoring efforts include habitat monitoring, general wildlife and rare plant surveys, and monitoring for invasive plant species (see A.1.1, A.1.2 & A.1.3), as well as monitoring for cowbird nest parasitism and Argentine ants (see A.5.1). In addition, monitoring efforts will include the species-specific monitoring described in the implementation measure below.

> ***Implementation Measure A.3.5*:** DPR will conduct focused surveys of California gnatcatcher to determine the number of occupied locations, proportion of occupied habitat, and colonization of unoccupied, restored or recovering (e.g., from wildlife) habitat within the Preserve. These surveys will be conducted at five-year intervals in conjunction with habitat monitoring.

Management: Population/Habitat Maintenance/Enhancement

The management approach for this species is maintenance of the population and suitable habitat (coastal sage scrub) within the Preserve and, when necessary, enhancement. Coastal sage scrub will be managed to reduce the threat of edge effects, fire, and invasive, non-native plants.

Management Directive A.4 - Provide management and monitoring of other sensitive species listed on the County's Sensitive Plant List (Lists A and B) (*Priority 1*)

The Biological Mitigation Ordinance, which will be the implementing ordinance for the North County MSCP, is currently in draft form. This ordinance will require avoidance of narrow endemic plant species as well as species included in Lists A and B of the County's Sensitive Plant List. List A and B species are considered rare, threatened or endangered in California. The general management directives and implementation measures outlined in this RMP are intended to be adequate for the conservation of these species, and the County will monitor these species to ensure this is the case. Monitoring efforts for List A and List B plants will include the monitoring described in the implementation measure below.

> ***Implementation Measure A.4.1*:** DPR will conduct surveys of County List A and List B plant species, not covered by the MSCP, within the Preserve including San Diego marsh-elder. Surveys will document the location of this species, and quantify the number of individuals and/or the acreage of the population. These surveys will be conducted at five-year intervals in conjunction with habitat monitoring.

5.2.3 Non-Native Invasive Wildlife Species Control

One of the conservation goals for the Elfin Forest and Harmony Grove core areas is the removal of invasive, non-native species, particularly to enhance habitat quality along Escondido Creek. The North County MSCP Plan-wide and habitat-specific management and monitoring guidelines for non-native, invasive species control were used to develop the management directives and implementation measures provided below, which are intended to meet this goal.

Management Directive A.5 – Reduce, control, or where feasible eradicate invasive, non-native wildlife known to be detrimental to native species and/or the local ecosystem (*Priority 2*)

As discussed in Section 3.3.4, the invasive, non-native species of management concern detected within the Preserve include brown-headed cowbird and European starling. These species do not currently appear to be posing an immediate threat to native species and/or the local ecosystem; however, they have potential to outcompete native species for valuable resources. Although not observed within the Preserve, Argentine ant is another invasive, non-native species known to adversely affect sensitive species that occur within the Preserve.

***Implementation Measure A.5.1*:** DPR will conduct surveys for the presence of invasive, non-native wildlife species of management concern, including cowbirds and European starlings as well as Argentine ants, at five-year intervals in conjunction with habitat monitoring and general wildlife surveys (see A.1.1 & A.1.2). Subsequent surveys will document and monitor the extent of cowbird parasitism on target species nests, if any, in the Preserve.

***Implementation Measure A.5.2*:** If future monitoring indicates that cowbird parasitism is occurring within the Preserve and having a detrimental effect on native bird species, DPR will consider establishing a cowbird trapping program to increase the nesting success of target species.

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 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 this open space system as well as how to improve conditions.

Management Directive A.6 – Allow for future research opportunities within the Preserve (*Priority 2*)

***Implementation Measure A.6.1*:** 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)

The North County MSCP provides Plan-wide and habitat-specific management and stewardship guidelines for non-native invasive species control, habitat restoration, and fire and vegetation management. In addition, a Vegetation Management Plan (VMP) was developed for Escondido Creek Preserve (Dudek 2011c) in conjunction with the baseline surveys and is included as Appendix C. The VMP characterizes current site conditions and details recommended measures for invasive species control, habitat restoration, and fire management within the Preserve. These guidelines and recommendations were used to develop the management directives and implementation measures provided below.

5.3.1 Habitat Restoration

Per the North County MSCP, habitat restoration on preserve lands is not typically required by the Plan, but is encouraged if resources are available.

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 2*)

The Preserve is generally composed of high-quality native vegetation communities, and habitat restoration opportunities within the Preserve are limited. However, several areas of disturbed habitat are recommended for passive and active restoration (Dudek 2011c).

***Implementation Measure B.1.1*:** DPR will implement passive restoration methods (e.g., perform weed and erosion control) in proposed restoration area 8 (Figure 10) as recommended in the VMP (Dudek 2011c). Passive restoration areas will be maintained weed free, as feasible, to allow native recruitment to continue until these areas are reincorporated back into the surrounding southern mixed chaparral. Should natural recruitment slow or stop over time, DPR will consider incorporation of active restoration in these areas including seed application or installation of container plants.

***Implementation Measure B.1.2*:** DPR will implement active restoration methods (e.g., soil preparation, seed application and installation of container plants) in proposed restoration areas 1-7 & 9 (Figure 10) as recommended in the VMP (Dudek 2011c). Any plant materials will be native species from San Diego County, preferably originating within 25 miles of the Preserve. Quantities, rates and composition of seed mixes or planting palettes will be determined on an individual basis, based on the existing plant composition surrounding the restoration sites.

5.3.2 Non-Native Invasive Plant Species Removal and Control

One of the conservation goals for the Elfin Forest and Harmony Grove core areas is the removal of invasive, non-native species, particularly to enhance habitat quality. The following management directives and implementation measures are intended to meet this goal. In addition, non-native, invasive plant removal serves the dual purpose of vegetation thinning for fire suppression.

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, 11 Cal-IPC rated invasive, non-native plant species were identified within the Preserve. These species were ranked for removal priority (high, moderate and low) in the VMP (Dudek 2011c) to assist management efforts within the Preserve.

> ***Implementation Measure B.2.1*:** DPR park rangers will routinely pull weeds or remove any invasive, non-native plant species in early stages of growth observed along trails or access roads.
>
> ***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 invasive, non-native plant removal projects within the Preserve. Precedence will be given to those species identified as high priority, followed by moderate and then low priority species. See also B.4.4.

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 adjacent residents in order to discourage the introduction of 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, non-native plants from their landscaping. See also D.7.1.

5.3.3 Fire prevention, control, and management

As described in Section 2.3.4, the Preserve is classified as a Very High Fire Hazard Severity Zone by CAL FIRE (FRAP 2011) and is located within the Rancho Priority Area for fuel management as identified by the Forest Area Safety Task Force (County 2009c).

Current fire management activities within the Preserve include the fuel modification zones described below:

- 30 feet of fuel treatment from the right-of-way of Harmony Grove Road along Preserve boundaries in the eastern portion of the Preserve.

- 30 feet of fuel treatment along either side of Canyon de Oro and Paint Mountain Road, which are part of a designated evacuation route that crosses through the western portion of the Preserve.

- Defensible space associated with Preserve-adjacent structures on APNs 264-041-13 & 264-042-87.

The intent of the fuel modification zones and defensible space is to protect habitable structures within and adjacent to the Preserve from wildfires and provide for safe access for fire agency vehicles and crew when responding to a fire within the Preserve. These areas may further protect the resources within the Preserve by absorbing some of the "edge effects" that might otherwise occur 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*:** Park ranger staff will maintain the established fuel modification zones on Preserve property adjacent to the existing residential structures within 100 feet of the Preserve property boundary, and along Harmony Grove Road, Canyon de Oro and Paint Mountain Road. Management of the fuel modification zones and defensible space will adhere to CAL FIRE requirements.

***Implementation Measure B.4.2*:** Park ranger staff will install and maintain inconspicuous fuel modification extent markers for all fuel modification zones to minimize additional thinning outside the intended areas and protect adjacent sensitive resources.

***Implementation Measure B.4.3*:** Park ranger staff will coordinate with SDG&E to conduct fuel reduction (especially non-native trees) beneath the high voltage electrical transmission lines that cross the Preserve, and along utility line access roads to reduce the likelihood of ignitions and fire spread.

***Implementation Measure B.4.4*:** DPR will coordinate with other agencies, non-profit organizations, and/or volunteer groups in order to seek funding and implement non-native, invasive plant removal projects for priority species that pose fire hazards within the Preserve. See also B.2.2.

***Implementation Measure B.4.5*:** DPR will continue to coordinate with CAL FIRE, the Rancho Santa Fe Fire Protection District, Elfin Forest/Harmony Grove Fire Department, and Escondido Fire Department to ensure that the fire response and implementation measures outlined in this RMP and in the VMP (Dudek 2011c) are up-to-date and adequate for effective fire response within the Preserve. As part of this effort, DPR will review fire history maps at least once

every 10 years to determine if Preserve lands are within natural fire return intervals and for estimation of fuel age class.

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

5.4.1 Public Access

As described in Section 2.5, the Preserve is currently not open to the public, except along the portion of the existing, delineated community trail that crosses through the Mendocino parcel. Recreational use of this trail is generally limited to passive uses (hiking or equestrian use) by residents in the surrounding communities. Public access is also possible along multiple utility access roads throughout the Preserve, which may function as informal trails.

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

***Implementation Measure C.1.1*:** Park ranger staff will patrol and monitor the Preserve for any unauthorized public access and use of the Preserve. Park rangers will document any illegal access and use of the Preserve, and inform any unauthorized persons observed on site that the Preserve is not open to the public and request that they leave the property.

***Implementation Measure C.1.2*:** Park ranger staff will enforce the following prohibited uses and restrictions within the Preserve. Park rangers may call the sheriff for legal enforcement, as appropriate.

a. Off-road or cross-country vehicle and public off-highway recreational vehicle activity (except for law enforcement, Preserve management, and/or emergency purposes)

b. Hunting or discharge of firearms (except for law enforcement, and/or emergency purposes)

c. Poaching, collecting or otherwise adversely impacting plant or animal species, and archaeological or historical features, artifacts or fossils.

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, equestrian use, or hiking

k. Littering

***Implementation Measure C.1.3*:** Park ranger staff will ensure that prohibited uses are clearly specified on kiosks, signage and/or trail maps.

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

***Implementation Measure C.2.1*:** DPR has identified and mapped sensitive vegetation communities, plant and wildlife species, and cultural sites in the Preserve so that these areas can be avoided and/or monitored. Updated information on sensitive resources in relation to access points (i.e., existing community trails and utility access roads) will be obtained in conjunction with routine monitoring activities (see A.1.1, A.1.2, C.5.1, D.3.3 & E.2.4).

***Implementation Measure C.2.2*:** In areas where adverse effects to sensitive resources are observed, DPR will implement measures (e.g., installation of signage or fencing) to restrict public access and protect highly sensitive areas (see also C.4.2). The appropriate types of measures to be taken will be determined based on location, setting, and use.

Management Directive C.3 – Analyze any future proposed public access such that recreational use of the Preserve is consistent with the protection and enhancement of biological and cultural resources (*Priority 2*)

Implementation Measure C.3.1: If, in the future, it is decided to open the Preserve to the public, DPR will develop a comprehensive Public Access Plan to determine the appropriate level of public access and recreational use within the Preserve, and provide recommendations for preferred trail alignments and features compatible with the protection and enhancement of biological and cultural resources. DPR will ensure that any proposed trail system is compatible with the North County MSCP and the County-approved Community Trails Master Plan (County 2009a).

Implementation Measure C.3.2: DPR will ensure that any future proposed trail on the Mendocino parcel will be located and constructed in a manner that causes the least impact to the Conservation Values set forth in the Conservation Easement Deed, as is reasonably practicable, and would not preclude the use of the property for future mitigation of transportation projects.

Implementation Measure C.3.3 DPR will ensure that any future proposed trail system will undergo environmental review in accordance with CEQA prior to public use of the Preserve. In addition, no trail construction will be allowed on Preserve parcels acquired with TEA grant funds until additional environmental review pursuant to NEPA is completed and approved by the FHWA.

5.4.2 Fencing and Gates

Currently, the only existing fencing within the Preserve is the split rail fencing that delineates the local community trail that crosses through Mendocino. There are also multiple gates throughout the Preserve at various access points (Figure 7). These fences and gates are maintained by DPR.

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

***Implementation Measure C.4.1*:** Park 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.

***Implementation Measure C.4.2*:** Park ranger staff will install fencing and/or gates as needed to restrict unauthorized access and protect sensitive resources from impacts. Points of unauthorized access and sensitive resource impacts will be identified in conjunction with routine monitoring activities (see A.1.1, A.1.2, C.5.1, D.3.3 & E.2.4). DPR will ensure that any fences or gates will be designed and located so they do not impede wildlife movement or impact cultural resources.

***Implementation Measure C.4.3*:** Any fencing erected within the Mendocino parcel to control access and prevent trespass on the property will be subject to the terms of the Conservation Easement and shall meet the following criteria: (a) the fence shall be either a wood-look concrete split rail fence, or wire fence with a maximum of four strands of barbed or smooth wire, and in either case the bottom rung or wire shall not be lower than 15 inches from the ground at any point and the top rung or wire shall not be higher than 42 inches from the ground at any point; (b) the fence shall be built solely within two (2) feet of the Easement Property boundary line or the nearest roadway edge; and (c) the fence shall not interfere with movement, nesting or forage of wildlife at the site.

5.4.3 Trail and Access Road Maintenance

As described in Section 2.5, the Preserve is currently not open to the public. However, portions of the existing Elfin Forest Community trails run alongside the roadways throughout the western and central parcels of the Preserve. The portion of the local community trail that crosses through the Mendocino parcel is maintained by DPR. In addition, there are several utility easement access roads throughout the Preserve, but they are maintained by the easement holders.

Management Directive C.5 – Properly maintain the existing Elfin Forest Community trail on Mendocino for user safety, and to protect natural and cultural resources (*Priority 1*)

The maintenance and repair of the existing trail on Mendocino at currently existing levels of improvement is permitted by the Conservation Easement. In the event of the destruction of the trail, it may be replaced with another of similar design, size, function, location and materials, provided that it is done in a manner consistent with the Easement Purposes.

***Implementation Measure C.5.1*:** Park ranger staff will monitor the existing local community trail through Mendocino for degradation and off-trail access and use. Park ranger staff will provide any necessary repair/maintenance as needed.

***Implementation Measure C.5.2*:** If unauthorized trail formation is observed by park ranger staff, those specific areas will be posted with clear signage reminding the public to remain on the delineated trail.

***Implementation Measure C.5.3*:** DPR will reduce detrimental edge effects along the trail, as needed. Measures to reduce edge effects may include, but are not limited to, removal of non-native plants, passive and/or active restoration, and maintenance of trails in accordance with the Conservation Easement and the County's Community Trails Master Plan (County 2009a).

5.4.4 Signage

Management Directive C.6 – Install, and maintain appropriate signage to effectively communicate the Preserve rules and regulations (*Priority 1*)

Preserve rules and regulations (e.g., Off Roading and ATV Activity Prohibited, Smoking and Open Flames Prohibited, No Trespassing, No Dumping, No Hunting) signs are currently posted on the existing gates located throughout the Preserve.

***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 within the Preserve (*Priority 1*)

***Implementation Measure D.1.1*:** 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 – Enforce regulations regarding littering/dumping (*Priority 1*)

***Implementation Measure D.2.1*:** Park ranger staff will enforce posted regulations regarding littering/dumping (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

Conservation goals for the Elfin Forest and Harmony Grove core areas include: protecting the Escondido Creek floodplain; conserving riparian and upland habitat along Escondido Creek for water quality and sensitive species; and maintaining natural flow regimes to maintain functionality of the San Elijo Lagoon. The North County MSCP habitat-specific hydrology management and monitoring guidelines were used to develop the management directives and implementation measures provided below, which are intended to meet these goals.

Management Directive D.3 – Retain Escondido Creek and floodplain in its natural condition (*Priority 1*)

***Implementation Measure D.3.1*:** DPR will review the data resulting from the County Watershed Protection Program, which monitors water quality throughout the County annually for pollutants that are likely to be delivered from nearby land use, to identify any potential water quality concerns within the Preserve.

***Implementation Measure D.3.2*:** DPR will conduct visual assessments of the Escondido Creek channel conditions in conjunction with habitat monitoring (see A.1.1). Where channel conditions are considered poor (e.g., unstable banks), follow up surveys will be conducted to determine if management actions are

necessary. Currently, OMWD and the County of San Diego Flood Control District hold a conservation easement and flowage easement, respectively, over Escondido Creek. Where necessary, DPR will coordinate with these agencies to determine appropriate measures to stabilize banks and control erosion.

***Implementation Measure D.3.3*:** Park ranger staff will inspect for off-trail access and use along the City of Escondido sewer easement and access road south of Escondido Creek during regular patrols and monitoring. If necessary, DPR will coordinate with the City of Escondido to implement measures to control public access along the sewer easement, such as installation of signage, access road management and increased patrols, as necessary.

5.5.3 Emergency, Safety and Police Services

Management Directive D.4 – Cooperate with public health and safety personnel to achieve their goals while helping to reduce or eliminate impacts to biological and cultural resources within the Preserve (*Priority 1*)

***Implementation Measure D.4.1*:** DPR will allow law enforcement officials and all medical, rescue and other emergency agencies to access Preserve property as necessary to enforce the law and carry out operations necessary to protect the health, safety, and welfare of the public. DPR will coordinate with the applicable agencies to inform field personnel of the locations of particularly sensitive biological and significant cultural resources and how to minimize damage to these resources.

5.5.4 Adjacency Management Issues

As described in Section 2.4.2, many of the Preserve properties abut large areas of conserved open space owned and/or managed by the CNLM, Water Authority and OMWD. The lands owned by the Water Authority are covered under the Water Authority's Subregional NCCP/HCP, which was designed to be compatible with other conservation plans in the region (Water Authority and USFWS 2010).

Management Directive D.5 – Coordinate with adjacent open space landowners and land managers (*Priority 1*)

Implementation Measure D.5.1: DPR will coordinate with the Water Authority, OMWD and CNLM as the adjacent open space landowners and 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 and Water Authority Subregional NCCP/HCP.

Management Directive D.6 - Enforce Preserve boundaries (*Priority 1*)

***Implementation Measure D.6.1*:** DPR and park ranger staff will enforce, prevent, and/or remove illegal intrusions into the Preserve (e.g., orchards, decks) on an annual and complaint basis.

Management Directive D.7 – Educate residents in surrounding areas about Preserve adjacency issues (*Priority 2*)

***Implementation Measure D.7.1*:** DPR will post this RMP on the DPR website (www.sdparks.org) to inform surrounding residents of Preserve adjacency issues including access, invasive plant impacts and appropriate landscaping, construction or disturbance within the Preserve boundaries, pet intrusion, and fire management. See also B.3.1.

5.6 Cultural Resources Element (E)

The goal of this section of the RMP is long-term preservation of 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 any new cultural resources discovered within the Preserve (*Priority 1*)

As noted in the archaeological survey report (ASM 2011), a substantial portion of the Preserve exceeds 20 percent slope and the majority of the terrain is densely vegetated, which largely precluded archaeological survey. Resources may possibly exist in these unsurveyed areas. If future ground disturbing projects, such as construction of trails, are proposed in these areas, significant adverse effects on potentially significant unknown resources could occur.

> ***Implementation Measure E.1.1*:** DPR will identify and record cultural resource sites in previously unsurveyed areas of the Preserve where, if in the future, brush is removed as a result of wildfire or planned ground disturbing activities, including clearing, grubbing or new trail development efforts. 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.

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*)

Potential impacts to cultural resources within the Preserve are most likely to result from fire suppression and maintenance activities, especially vegetation clearing and grading for fire breaks, and from use of roads by the public for hiking, biking and equestrian use. In order to protect these resources, it is necessary that impacts be prevented, reduced, eliminated, or adverse effects mitigated.

> ***Implementation Measure E.2.1*:** DPR will provide maps of sensitive cultural resources with sufficient buffer around them within the Preserve to the local fire agencies for inclusion in their wildland pre-response plans so that these resources can be avoided to the maximum extent possible.
>
> ***Implementation Measure E.2.2*:** 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 in conjunction with consultation with local Native American tribes. Removal or disturbance of cultural resources shall not occur prior to completion of an approved mitigation program, such as data recovery and a grading monitoring program consisting of a County-approved consultant and Native American representative. Preservation in place is the preferred mitigation measure.

If human remains are discovered, the County Coroner shall be contacted. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the Native American Heritage Commission, shall be contacted in order to determine proper treatment and disposition of the remains. Mitigation measures will be developed on a case by case basis by the County archaeologist and the archaeological consultant.

***Implementation Measure E.2.3*:** DPR 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 person(s) 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.

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.

***Implementation Measure E.2.4*:** The condition and status of known cultural resources on site shall be noted as part of routine monitoring activities conducted on a five-year basis (or on a more frequent basis as determined by DPR) 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 County guidelines (County 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.

Management Directive E.3 – Honor Native American Heritage and promote Native American ceremonies, gathering, and cultural practices (*Priority 2*)

***Implementation Measure E.3.1*:** DPR will continue to coordinate and consult with tribal representatives who may have knowledge of the Preserve area, including those representing the San Pasqual Band of Diegueño Mission Indians and Pala Band of Mission Indians, in order to keep them informed of activities

associated with the Preserve. Consultation 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.3.2*:** DPR will open the Preserve to traditional uses by the San Pasqual Band of Diegueño Mission Indians, Pala Band of Mission Indians, and other tribes which may have traditionally used the Preserve area. All activities by Native Americans in the Preserve shall be conducted with a Right-of-Entry permit specifically designed for the Preserve.

5.7 Mitigation Lands Element (F)

The terms and conditions required for the use of the Escondido Creek Uplands and Mendocino for mitigation purposes are outlined in the Water Authority (2001) and SANDAG (2010) agreements with the County. Many of the requirements established in these agreements pertain to general long-term management of the properties and are addressed under the management directives and implementation measures specified in Elements A through E above. Those requirements that are specific to fulfilling the County's obligations under these agreements are addressed below.

Management Directive F.1 – Fulfill the terms and conditions of the Agreement between the Water Authority and the County relating to the acquisition of Escondido Creek Uplands (*Priority 1*)

***Implementation Measure F.1.1*:** DPR shall hold Escondido Creek Uplands solely for purposes of maintaining it as a permanent open space and wildlife conservation area including passive recreation consistent with this RMP. DPR may grant easements as may be required for access, utilities and other purposes necessary to implement this RMP or for open space and wildlife conservation purposes with prior written approval of the Water Authority. Except as specified above, DPR shall maintain title free and clear of all encumbrances and liens.

***Implementation Measure F.1.2*:** DPR shall not use Escondido Creek Uplands for any purpose other than stated in the agreement between the Water Authority and County, except with the prior written authorization of the Water Authority.

***Implementation Measure F.1.3*:** DPR will cooperate and provide any requested books, records, receipts, purchase orders, settlements and other documentation and supporting information relating to the County's obligations under the agreement between the Water Authority and County if the Water Authority decides to undertake an audit. Audits shall be undertaken at reasonable business hours and in conformance with legally accepted auditing standards.

Management Directive F.2 – Fulfill the terms and conditions of the Mendocino Conservation Easement Deed and Land Management Agreement (*Priority 1*)

***Implementation Measure F.2.1*:** DPR will guarantee access to SANDAG, in perpetuity, for SANDAG to accomplish its obligations, as set forth in the Conservation Easement Deed and the Land Management Agreement.

***Implementation Measure F.2.2*:** DPR will cooperate with and accommodate reasonable requests made by SANDAG and/or the Wildlife Agencies related to the Mendocino Conservation Easement Deed and Land Management Agreement.

***Implementation Measure F.2.3*:** On July 1 of each calendar year, DPR shall provide SANDAG a written request for an annual payment for the management of the Mendocino parcel. Included in this request will be an itemized accounting of how funds from the previous year were spent and how next year's funds are expected to be spent to implement the management directives for the Preserve.

***Implementation Measure F.2.4*:** DPR will keep records on the Mendocino management and monitoring activities and costs for a period of at least five years for purposes of annual audits as required by the TransNet Extension Ordinance.

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APPENDIX A

Baseline Biodiversity Survey for the Escondido Creek Preserve

(See www.co.san-diego.ca.us/parks/management_plans.html)

APPENDIX B

Archaeological Survey Report for the Escondido Creek Preserve San Diego County, California

(*Confidential*)

APPENDIX C

Archaeological Survey Report for the Escondido Creek Preserve San Diego County, California

(*Available Upon Request*)