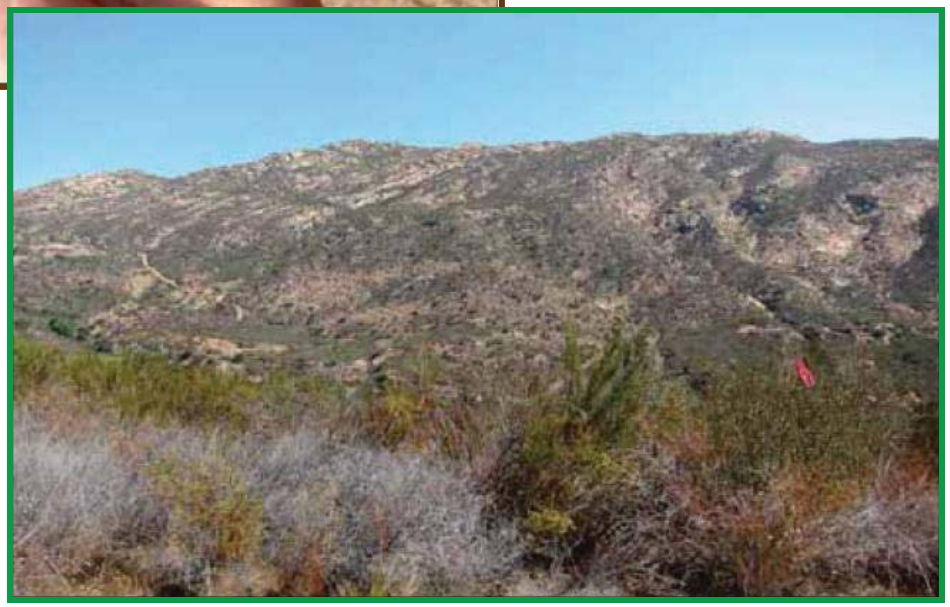
Resource Management Plan
for
Stoneridge Preserve
San Diego County





June 2013

PARKS AND RECREATION
COUNTY OF SAN DIEGO
Where having fun is natural.

STONERIDGE PRESERVE

RESOURCE MANAGEMENT PLAN

June 30, 2013

Approved by:

B. Albright

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

7/15/13

Date

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Appendix D Stoneridge Preserve Vegetation Management Plan

LIST OF ACRONYMS

AMSL	above mean sea level
ASMD	area-specific management directive
CAL FIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CMP	Comprehensive Monitoring Plan
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
DPR	County of San Diego Department of Parks and Recreation
FESA	Federal Endangered Species Act
FRAP	Fire and Resource Assessment Program
MSCP	Multiple Species Conservation Program
MSCP SAP	Multiple Species Conservation Program Subarea Plan
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
PAMA	Pre-Approved Mitigation Area
RMP	resource management plan
SANDAG	San Diego Association of Governments
SDMMP	San Diego Management and Monitoring Program
SRA	State Responsibility Area
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 Introduction

Stoneridge Preserve (Preserve) consists of approximately 248-acres[1] located within Harbison Canyon, east of the City of El Cajon, in Central San Diego County (Figure 1). The County was gifted portions of the Preserve in 1999 and acquired the remaining portions of the Preserve in 2011 for inclusion in the South County Multiple Species Conservation Program (MSCP) preserve system. The majority of the habitat within the Preserve is rated as very high to high. 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 guidance Area-Specific Management Directives (ASMDs) pursuant to the requirements of the County's Multiple Species Conservation Program (MSCP) Subarea Plan (County 1997), Framework Management Plan (County 2001), and Sections 10.9A and 10.9B of the Implementing Agreement (County 1998). These sections specify that the County will be responsible for managing lands which it owns or acquires within the MSCP preserve system.

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, and;

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

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

Chapter 5 of this RMP includes guidance ASMD's for Stoneridge Preserve.

Basic land management/stewardship, as detailed in this RMP, will be ongoing. However, detailed monitoring methods are beyond the scope of this document. It is

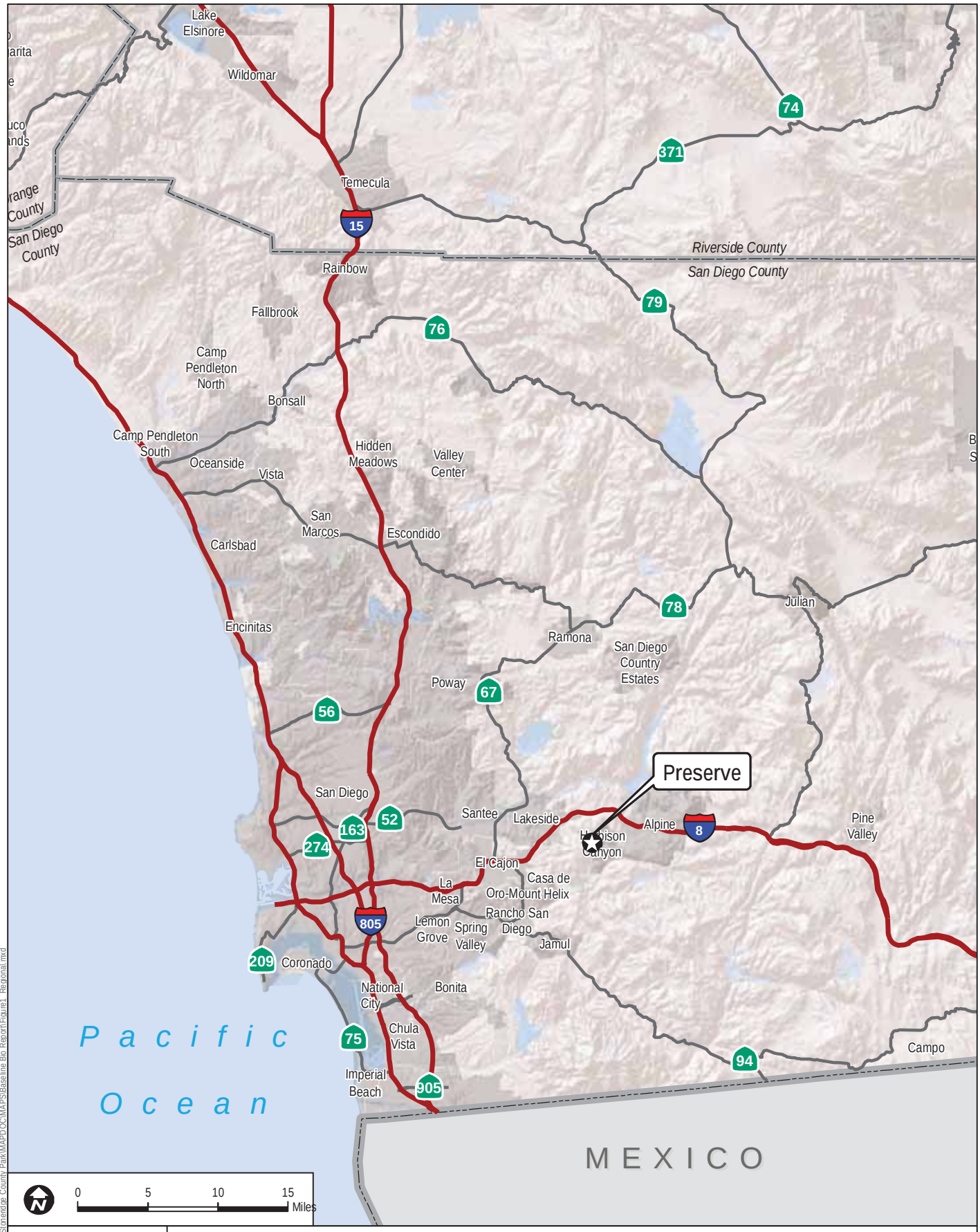
[1] The assessor's parcel data reports the Preserve to be 244 acres; however, calculations generated from the SanGIS parcel database show the Preserve as 248 acres. Therefore, this report references the Preserve as 248 acres.

commonly understood that monitoring needs to answer specific questions, should be prudently designed and should not just be conducted for the sake of collecting data. The San Diego Management and Monitoring Program (SDMMP) along with the Institute of Ecological Management and Monitoring (IEMM), both funded by the San Diego Association of Governments (SANDAG), have been instrumental in educating land managers on the importance of repeatable, scientifically defensible monitoring actions. The IEMM is currently developing an Integrated Management and Monitoring Framework with the intent to assist land managers in the preparation and implementation of their management and monitoring programs. Concurrently, the County is preparing a Comprehensive Monitoring Plan (CMP) that prioritizes monitoring needs and details monitoring methods to answer specific goals and objectives for various County owned/managed Preserves that have completed Resource Management Plans (RMPs).

Preparation of the CMP will involve research of existing literature including RMPs, meeting and workshop attendance, site visits and interaction with rangers, identification and prioritization of threats and stressors for each Preserve. Identifying threats and stressors at the individual Preserve level, and in the context of regional concerns, will help to determine the monitoring needs of each Preserve. Goals and objectives will be defined and will be SMART: Specific; Measurable; Achievable; Results-oriented and Time fixed. Conceptual models will be developed that will help link natural drivers, human stressors, and management actions such that adaptive management needs can be identified.

As mentioned above, this RMP serves as a resource inventory and guide for resource monitoring and management of resources and facilities. The CMP will prioritize specific resource monitoring needs and provide associated detailed monitoring methods for County owned/managed Preserves within the MSCP South County Subarea.

It is recognized that the 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 MSCP Plan and County's MSCP Subarea Plan when a regional funding source is identified pursuant to Section 10.9C of the Implementing Agreement.



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FIGURE 1

Regional Map

Stoneridge Preserve - Baseline Biodiversity Survey

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1.1.1 MSCP Background

The MSCP is a cooperative habitat program that encompasses 582,000 acres and establishes a 172,000-acre preserve system in southwestern San Diego County. The MSCP covers 85 plant and animal species and 23 vegetation communities. Agencies participating in the MSCP include the County, other local jurisdictions, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW). Local jurisdictions and special districts implement their respective portions of the MSCP Plan (City of San Diego 1998) through Subarea plans, which describe specific implementing mechanisms for the MSCP. The combination of the subregional MSCP Plan and Subarea plans serve as a Multiple Species Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA), the Natural Community Conservation Planning (NCCP) Program pursuant to the California NCCP Act of 1991 and the California Endangered Species Act (CESA). Stoneridge Preserve is owned and operated by the County and is included under the County of San Diego MSCP Subarea Plan (County of San Diego, 1997).

1.1.2 County Subarea Plan

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

1.1.3 Framework Management Plan and Area-Specific Management Directives

According to Section 6.3.1 of the MSCP Plan and as a condition of the Implementing Agreement with the Wildlife Agencies (Section 10.10), the County was required to prepare a Framework Management Plan for the portion of the MSCP Preserve within the MSCP SAP's boundaries. The document was submitted to the Wildlife Agencies on August 31, 2001. The Framework Management Plan sets forth management goals and objectives, along with general management directives that apply to all areas of the MSCP SAP.

One of the general management directives of the Framework Management Plan pertains to public access, trails, and recreation and states that appropriate recreational activities shall be accommodated in concurrence with the goals of the MSCP and MSCP SAP, as follows:

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

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

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

1.2. Implementation

1.2.1 Management Approach

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

It is anticipated that the recommended management actions provided in this RMP will be dynamic in nature. Applying adaptive management, the effectiveness and appropriateness of recommended management actions would be determined through review of management goal and objective achievement so that changes can be made to management directives and implementation measures as needed. Adaptive management techniques depend upon the specific issues impacting the resources. Therefore, the techniques herein may be subject to change or revisions when applied. Additionally, the monitoring protocols/requirements for MSCP

covered species and habitats will be revisited periodically by participants of the MSCP and are subject to change based on adoption of updated protocols. It is anticipated that this RMP will be revised once every five years, as needed. The RMP may be revised on a shorter time scale if there is a change in conditions, 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 within the County's jurisdiction, which includes County-owned land. The Preserve is operated, administered, and managed by the County Department of Parks and Recreation (DPR) and the DPR District Park Manager assigned to the Preserve is the land manager. DPR (District Park Manager and staff of the Resources Management Division) will also be responsible for the implementation and enforcement of the RMP.

The Preserve is located in the management district of one supervising park ranger one park ranger, and one seasonal. The Preserve boundary is patrolled at a minimum twice a month and as often as weekly. It is expected that many of the implementation measures, especially the maintenance tasks, will be carried out by the rangers who are most familiar with the site and currently patrol the Preserve.

1.2.3 Regulatory Context

The County's park rangers manage County parks and enforce 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 these sections is guilty of a misdemeanor as provided in Sections 11.116, 11.117, and 11.118 of this Code, punishable by fines up to $2,500 a day for each day the person violates these sections. The park rangers will contact law enforcement who will cite the offending individual. In addition, if an individual does not comply with signs within a facility and ignores park ranger instructions, the individual could potentially be charged with a misdemeanor by law enforcement.

1.2.4 Limitations and Constraints

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 2012-13 and 2013-14 (County 2012). 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 lands. Future regional funding sources are also anticipated to fund adaptive management and monitoring activities throughout the preserve system.

2.0 PROPERTY DESCRIPTION

2.1 Legal Description

Specifically, the Preserve is bounded to the northwest by Mountain View Road and to the southeast by Harbison Canyon Road. The Preserve is located in the Alpine U.S. Geological Survey (USGS) quadrangle within Township 15 South, Range 1 East, Sections 35 and 36 and Township 16 South, Range 1 East, Sections 1 and 2 (Figure 2). The Assessor's Parcel Numbers for the Preserve are 399-030-06, 399-030-16 (portion), 399-030-18, 399-030-19, 399-030-20, 399-030-021, 399-290-04, 401-101-10, 401-101-11, 401-101-12, and 401-101-13.

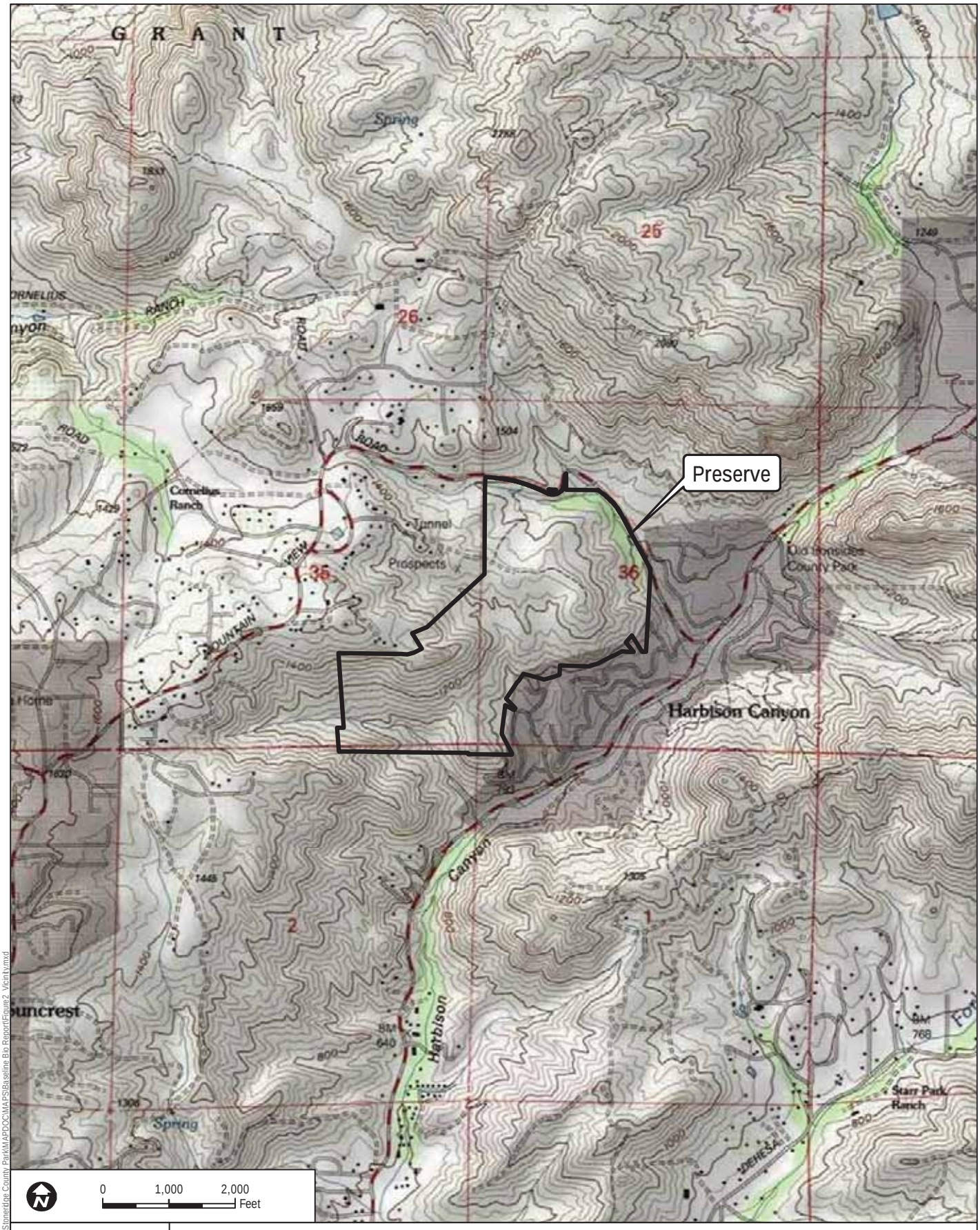
2.2 Geographical Setting

The Preserve is located in the coastal foothills of the Peninsular Ranges of Southern California and is composed of hilly terrain (the majority of the Preserve has a slope gradient of at least 30º) ranging in elevation from approximately 264 to 405 meters above mean sea level (AMSL) (867–1,330 feet).

The topography of the Preserve is determined primarily due to proximity to the Peninsular Range, which creates relatively hilly terrain. The Preserve has three vegetated riparian corridors that flow generally south through canyons. One prominent ridgeline dominates the topography of the northern half of the Preserve, and steep hillsides dominate the southern half.

2.2.1 Site Access

The Property is currently not open to the public. Access for ranger patrol purposes is limited primarily to a dirt trail off of Mountain View Road.



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SOURCE: USGS topo 7.5-Minute Series Quadrangle

FIGURE 2
Vicinity Map

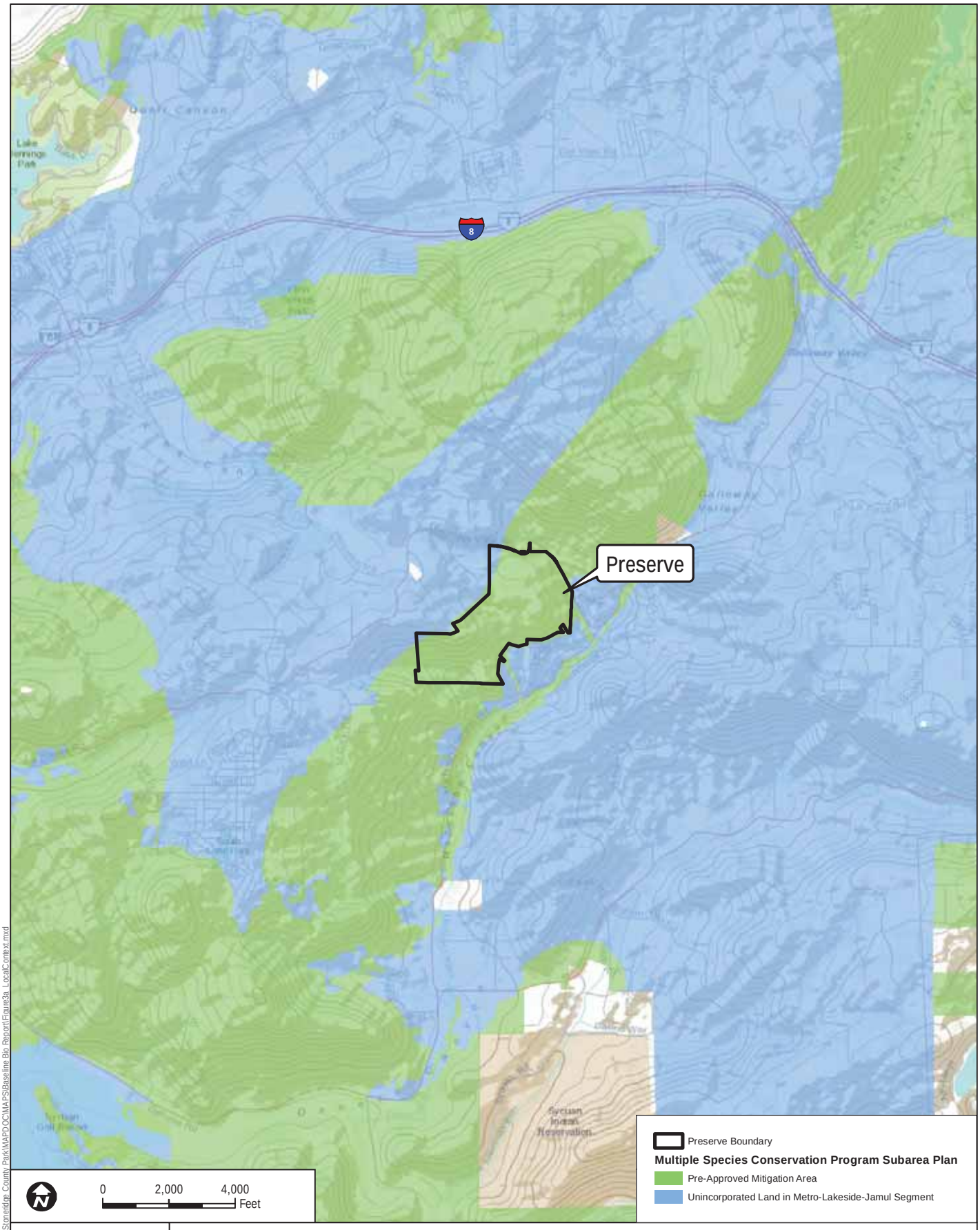
Stoneridge Preserve - Baseline Biodiversity Survey

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2.2.2 MSCP Context

The Preserve is located in the MSCP SAP (Figure 3a). A majority of the Preserve (241.4 acres) is included within the South Metro-Lakeside-Jamul segment of the MSCP SAP and is designated as Pre-Approved Mitigation Area (PAMA) and 6.6 acres are designated as Unincorporated Land in the Metro-Lakeside-Jamul Segment. Single family detached homes are located directly to the east and are designated as Unincorporated Land in Metro-Lakeside-Jamul; spaced rural residential are located to the west designated as Unincorporated Land in Metro-Lakeside-Jamul; spaced rural residential is also located to the south designated as PAMA; open space park or preserve is located to the south designated as PAMA; and privately owned vacant and undeveloped land is located to the northeast designated as PAMA.

The optimum future condition envisioned for the Metro-Lakeside-Jamul Segment is a network of open and relatively undisturbed canyons, ridges, river valleys, and their associated slopes, containing a full ensemble of native species which provide functional wildlife habitat and movement capability. The Preserve contributes to the network of undisturbed canyons and ridges contiguous with conserved lands owned and managed by the State of California Department of Fish and Wildlife (Crestridge Ecological Reserve to the northwest), private groups including the Endangered Habitats Conservancy (Gibson Open Space to the northeast and Crest Open Space to the southwest), and other County Department's (open space property directly south of the Preserve) (Figure 3b).



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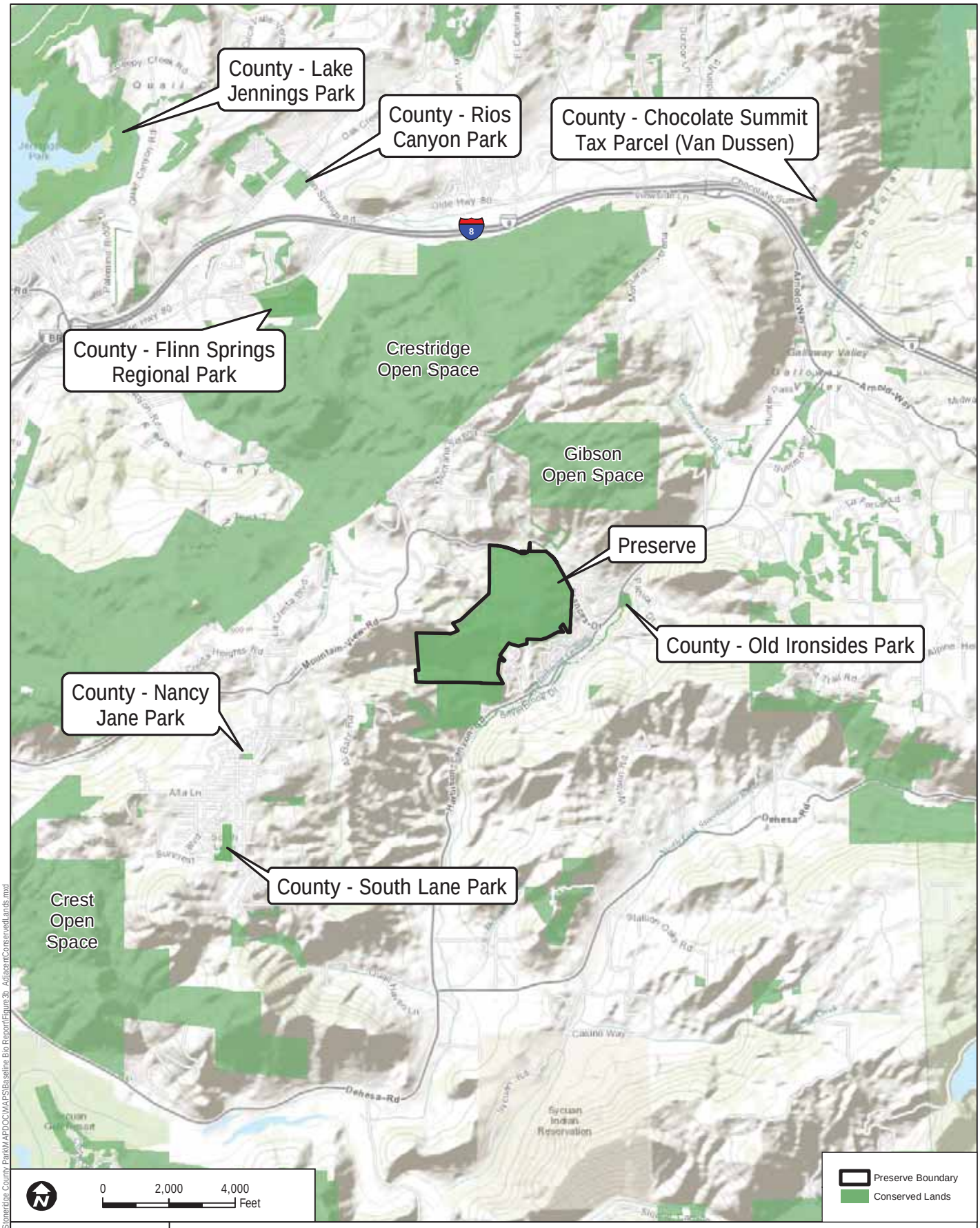
SOURCE: USGS, SanGIS 2012

FIGURE 3a

MSCP SAP Designations

Stoneridge Preserve - Baseline Biodiversity Survey

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SOURCE: USGS, SanGIS 2012

FIGURE 3b

Adjacent Conserved Lands

Stoneridge Preserve - Baseline Biodiversity Survey

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2.3 Physical and Climatic Conditions

2.3.1 Geology and Soils

The Preserve contains seven soil types belonging to four soil series: Cieneba very rocky coarse sandy loam, Fallbrook sandy loam, Fallbrook–Vista sandy loam, Las Posas fine sandy loam, Las Posas stony fine sandy loam, Vista coarse sandy loam, and Vista rocky coarse sandy loam (Figure 4) (USDA 2010). Fallbrook sandy loam is not included in Figure 4, because it is mapped over such a small area that it is not visible in the figure. A brief description of each soil series and the associated soil type is provided below.

Cieneba Series

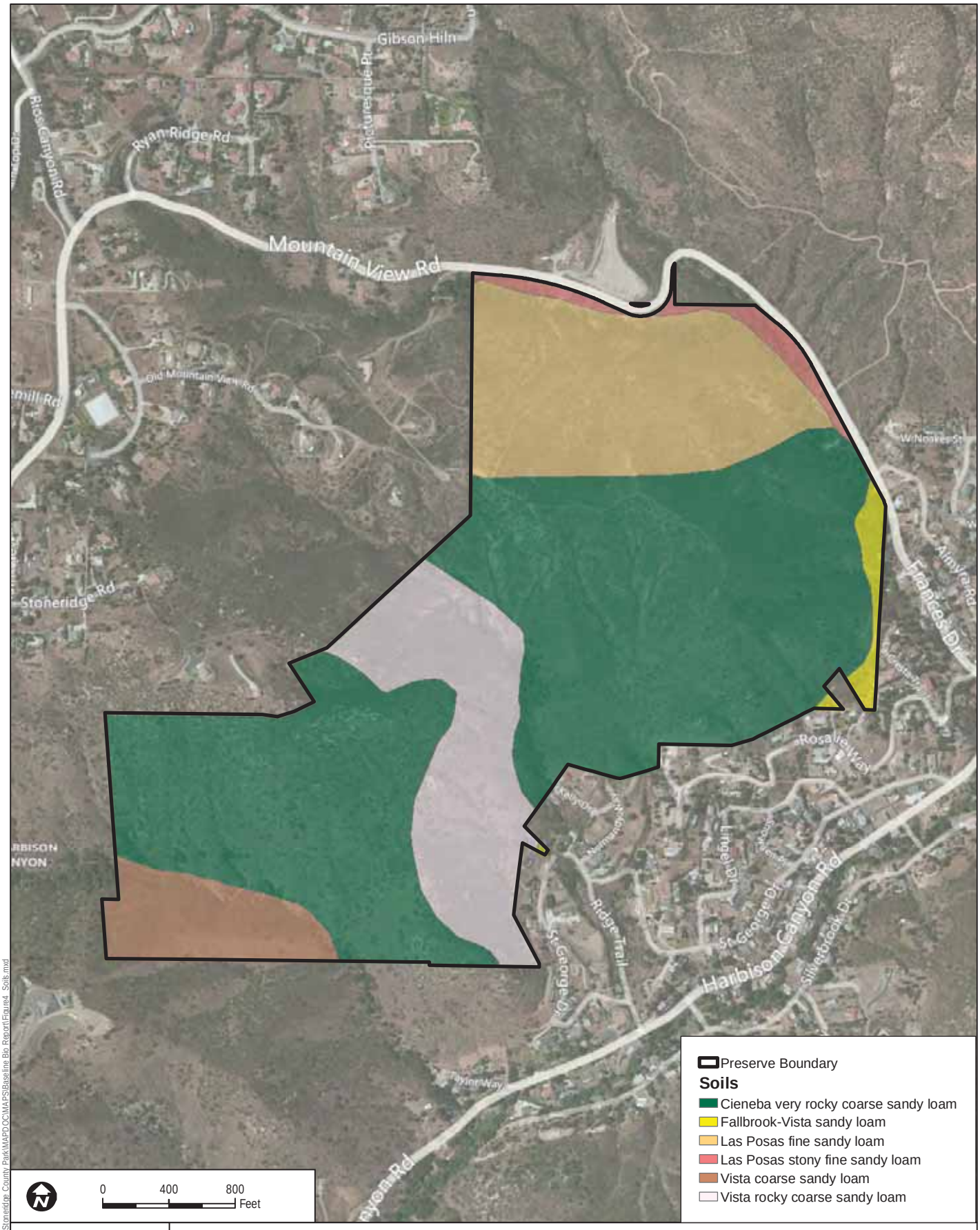
Cieneba very rocky coarse sandy loam is the representative of the Cieneba series mapped within the central and southern portions of the Preserve. Cieneba soils are very shallow and excessively drained and are characterized by low to medium runoff and moderately rapid permeability. Cieneba soils are found in uplands with slopes varying from 9% to 85%. Typical vegetation found on this soil series is chaparral, including chamise chaparral (*Adenostoma fasciculatum*). The Cieneba Series occurs in the Coast Range of the Central and South-Central California foothills of the Sierra Nevada (NRCS 2012).

Fallbrook Series

Fallbrook sandy loam and Fallbrook–Vista sandy loam are the representatives of the Fallbrook series, both found within the eastern portion of the Preserve. This series consists of deep, well-drained soils formed from granitic rocks. The Fallbrook Series is found on rolling hills with slopes of 5% to 75%. Fallbrook Series has moderately slow permeability and runoff varies from medium to rapid. Annual grasses, forbs, chaparral, chamise, buckwheat (*Eriogonum* spp.), and other shrubs are typical native vegetation found on soils in the Fallbrook Series. The Fallbrook Series occurs in San Diego County and in the foothills east of the San Joaquin Valley (NCRS 2012).

Las Posas Series

Las Posas fine sandy loam and Las Posas stony fine sandy loam are mapped within the northern portion of the Preserve. This series is composed of moderately deep, well-drained soils formed from igneous rocks. This series is found on mountainous uplands, with slopes of 5% to 50%. These soils have slow permeability and runoff varies from medium to rapid. Annual grasses, forbs, and chaparral are typical native vegetation found on soils in the Las Posas Series. The Las Posas Series occurs in the foothills of Southern California and the Sierra Nevada (NCRS 2012).



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SOURCE: Bing, USDA Soils 2010

FIGURE 4

Soils Map

Stoneridge Preserve - Baseline Biodiversity Survey

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Vista Series

Vista coarse sandy loam and Vista rocky coarse sandy loam, in the Vista Series, are located in the southwestern and central portions of the Preserve, respectively. The Vista Series consists of moderately deep, well-drained soils that formed from decomposed granitic rocks. Vista soils are found on hills and mountainous uplands and have slopes of 2% to 75%. These soils have moderately rapid permeability, and runoff varies from slow to rapid. The Vista Series occurs in Southern California and Sierra Nevada foothills (NCRS 2012). Within the Preserve, these soils are mapped along the faces of canyons.

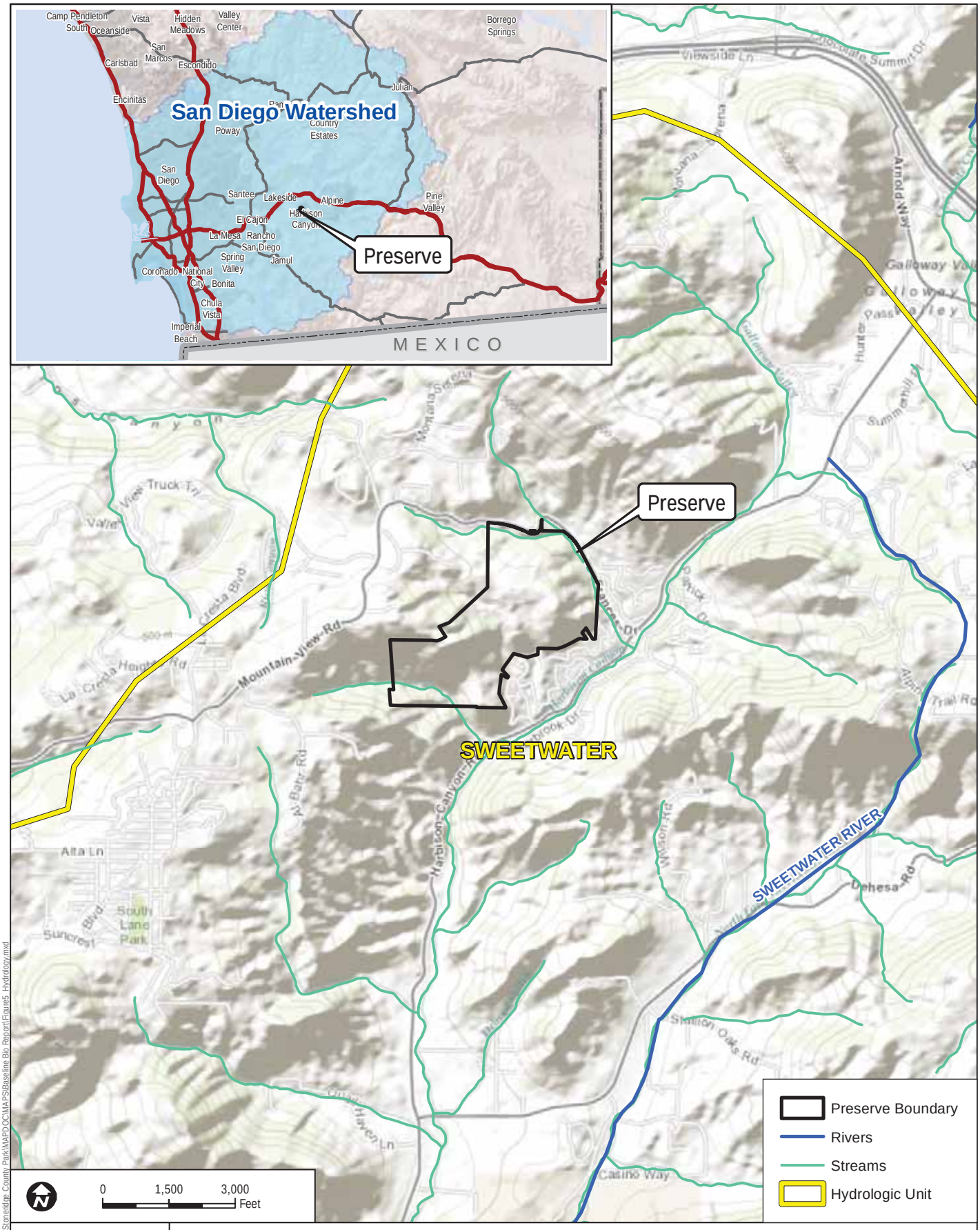
2.3.2 Climate

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 (WRCC 2012a). 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 (WRCC 2012a).

However, there is some local variance in the typical Southern California climate. The influence of the Pacific Ocean on the Preserve is lessened due to its inland location. As such, temperatures are subject to much more variability on a daily and seasonal basis than other areas in the region. The average high temperature calculated from October 1952 to June 2012 for the surrounding Alpine area is approximately 76.4º Fahrenheit (F), with higher temperatures in summer and early fall (June through September) reaching up to an average of 88°F (WRCC 2012b). The average low temperature for the same period is approximately 42°F during winter months. The mean annual precipitation for the area is 16.15 inches, with most rainfall concentrated in the months of January (2.91 inches), February (3.18 inches), and March (2.97 inches) (WRCC 2012b). Less rainfall occurs during summer months and is typically less than one inch (WRCC 2012b). In Alpine, the 2011–2012 season (July through June) cataloged 16.29 inches of rain, while the 2010–2011 season cataloged 22.86 inches of rain (WRCC 2012b).

2.3.3 Hydrology

The Preserve is entirely within the Sweetwater Watershed (Figure 5). The northern region of the Preserve generally drains southwest through a riparian corridor along the northern and northeastern boundary. The central region of the Preserve drains through a smaller canyon (not visible on Figure 5), and the southwest region of the Preserve drains through a third canyon. These three drainages converge at Harbison Canyon and flow into the Sweetwater River. The Sweetwater River flows southwest from the Preserve to the San Diego Bay in Chula Vista, California, (Project Clean Water 2012).



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SOURCE: USGS 2012, SanGIS 2012

FIGURE 5

Hydrology Map

Stoneridge Preserve - Baseline Biodiversity Survey

2.3.4 Fire History

Based on historical fire perimeter data from the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program (FRAP) (FRAP 2012)[2], five fires have affected the Preserve (Figure 6). An active fire regime is characteristic of the surrounding region, as most of the Preserve (176 acres or 72%) has burned four times, and a small portion (15 acres or 6%) has burned five times since 1947.

The 1970 Laguna Fire burned the entire Preserve. At the time, this was the largest fire in California since 1890 and was caused by downed power lines during a Santa Ana wind event (Western Institute of the Environment 2008). In 2003, the Cedar Fire burned the entire Preserve except for a small portion in the north.

The interval between wildfires is highly variable. The time interval between the Cedar Fire and the Laguna Fire was 33 years, although the 1960s were characterized by short fire intervals. Table 1 presents the fire interval data for the Preserve.

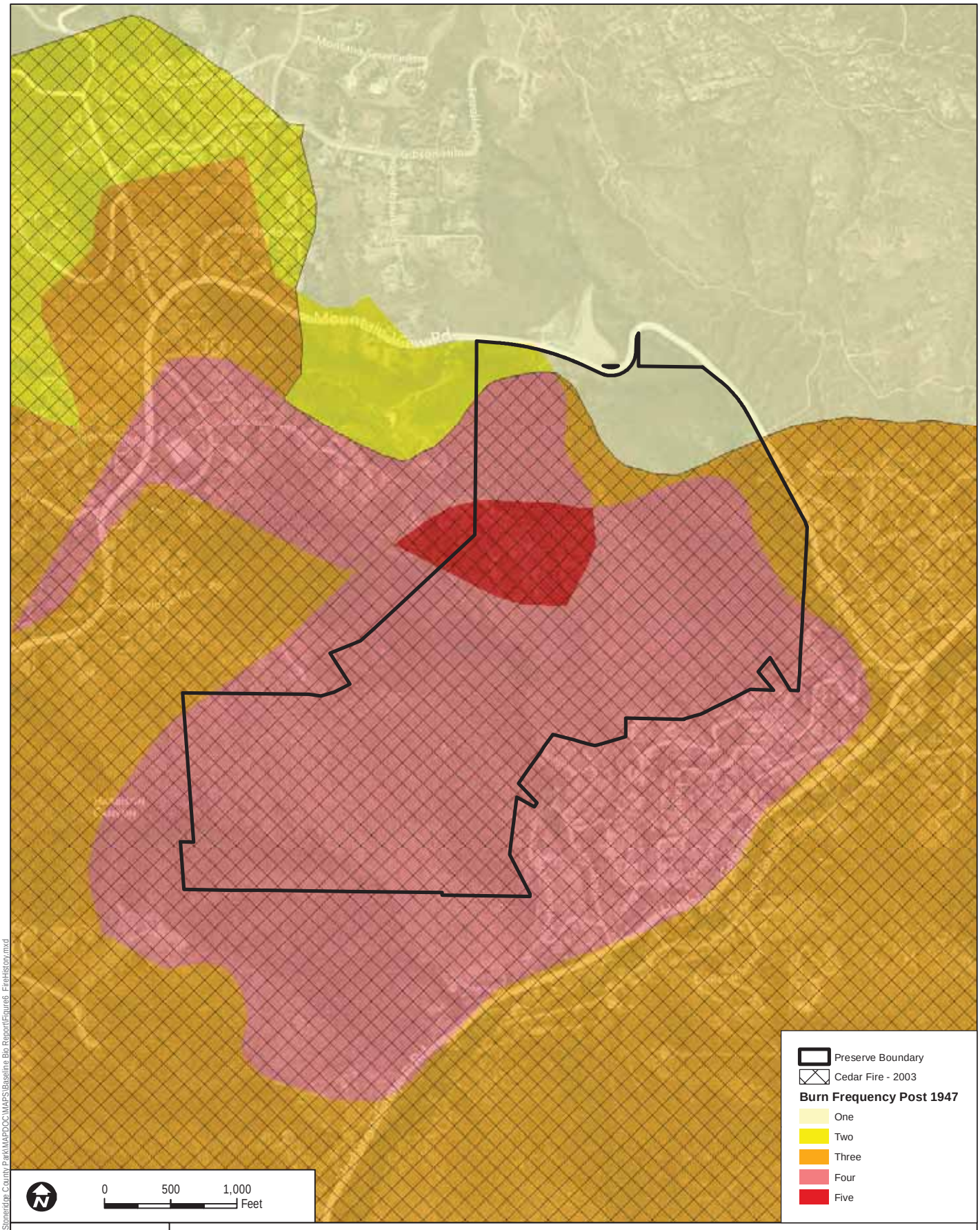
The Preserve is located in the jurisdiction of the San Miguel Fire District and San Diego Rural Fire Protection District.

Table 1. Preserve Fire Interval Data

Fire Year*	Fire Name	Interval (years)	Acreage Burned	Percent of Preserve Burned**
1947	No Name	—	223.8	92%
1965	Suncrest	18	34.2	14%
1967	Harbison Canyon	2	191.8	79%
1970	Laguna	3	246.4	100%
2003	Cedar	33	223.8	92%

*FRAP (Fire and Resource Assessment Program) 2012
**Based on the 248-acre total acreage of the Preserve

[2] Based on polygon geographic information system (GIS) data from the CAL FIRE's FRAP, which includes data from CAL FIRE, USDA Forest Service Region 5, Bureau of Land Management (BLM), U.S. National Park Service (NPS), contract counties, and other agencies. The data set is a comprehensive fire perimeter GIS layer for public and private lands throughout the state and covers fires 10 acres and greater back to 1878.



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SOURCE: Bing, SanGIS 2012

FIGURE 6

Fire History

Stoneridge Preserve - Baseline Biodiversity Survey

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2.4 Land Use

2.4.1 On-Site Land Use

The Preserve consists of native habitat and is currently not open to the public; however, there are two unauthorized trails located in the northern and southern portions of the Preserve. There is an existing double-swing gate on the northern boundary of the Preserve along Mountain View Road.

A concrete dam and associated metal pipes and drains are present in the northeastern portion of the Preserve. The dam spans the unnamed drainage running parallel to Mountain View Road and measures approximately 116 feet long, 27 feet wide, and, at its highest, 10 feet high. A corrugated metal pipe extends through the dam. Imported rock rip-rap is present on both sides of the dam and a metal drain and wooden plank are present along the northwestern wall of the dam. The dam is not obstructing the water flow of the unnamed drainage and there are no current plans to remove the dam.

2.4.2 Adjacent Properties

Single family detached homes are located to the east of the Preserve with spaced rural residential to the southwest and west. Privately owned open space lands are located directly to the north and conserved lands further to the north owned by Endangered Habitats Conservancy (Gibson Open Space). The County of San Diego Department of Animal Services owns open space directly south of the Preserve. Conserved lands owned by CDFW, Crestridge Ecological Reserve is located to the northwest. In addition, Endangered Habitats Conservancy owns conserved lands located to the southwest (Crest Open Space).

2.4.3 Easements or Rights

San Diego Gas & Electric

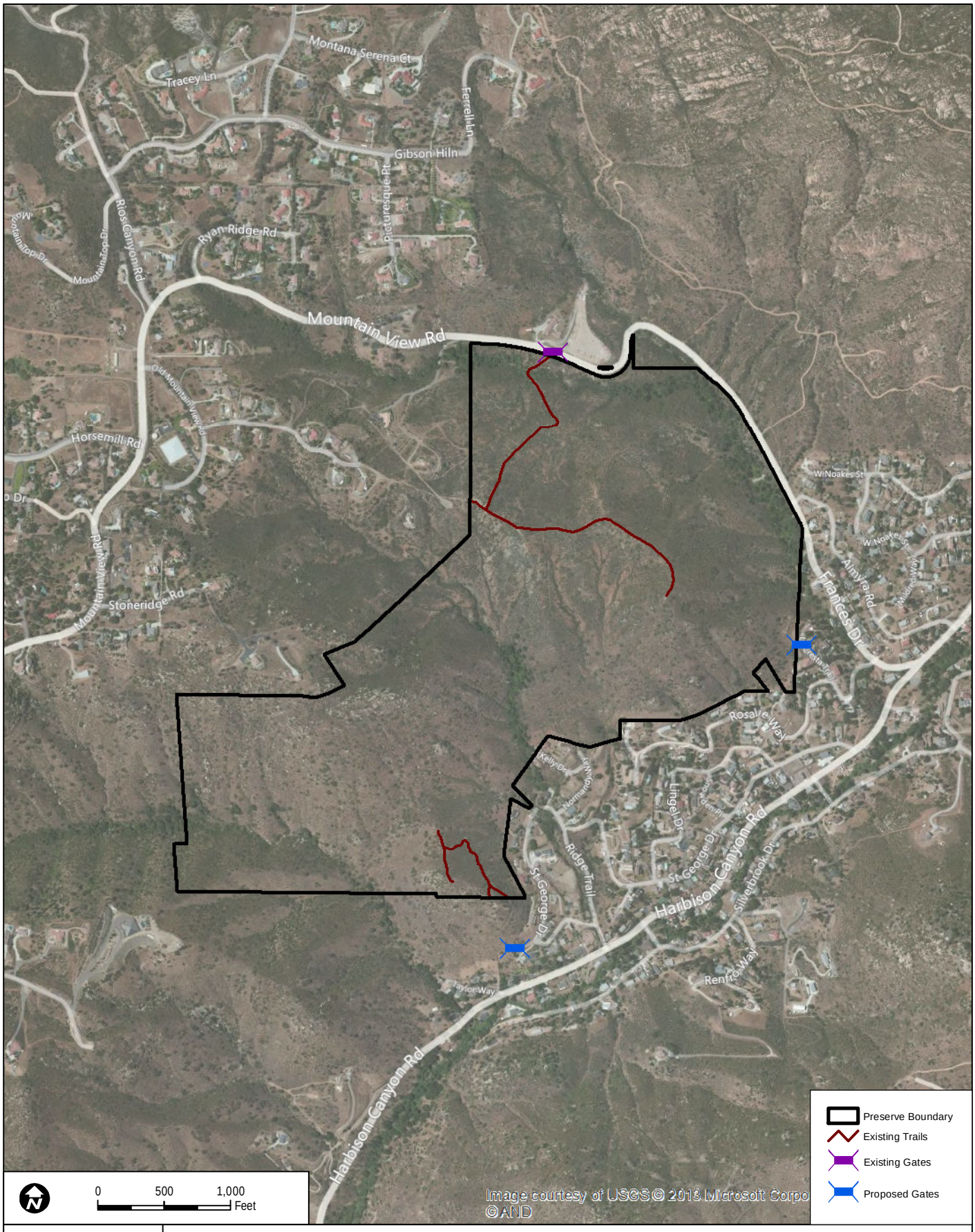
San Diego Gas & Electric (SDGE) retains a distribution easement for overhead power lines that traverse the southwest corner of the Preserve. SDGE conducts operation and maintenance activities for their facilities consistent with the SDGE Subregional Natural Community Conservation Planning (NCCP) (SDGE 1995). The SDGE NCCP was approved by the Wildlife Agencies and is compatible with this RMP.

Padre Dam Municipal Water District

Padre Dam Municipal Water District has two pipeline easements in the northern portion of the Preserve. Operations and management of the pipelines including repair and replacement may take place within these two easements.

2.5 Trails

Currently, no official trails exist on the Preserve. An overgrown unauthorized trail is present within the northern area of the Preserve that connects to a dirt trail in the central portion (Figure 7). The main dirt trail begins at Old Mountain View Road, continues south until it reaches the ridge, and heads east along the ridge. Within the southern region of the Preserve, one small dirt trail leads up the peak and is located off St. George Drive. These trails will only be utilized by DPR staff for patrolling.



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SOURCE: Bing

FIGURE 7

Trails and Gates

Stoneridge Preserve - Baseline Biodiversity Survey

3.0 Biological Resources Description

From spring through summer 2012 Dudek conducted baseline biological resources surveys of the Preserve. The results of these surveys can be found in the biological resources report entitled, *Baseline Biodiversity Survey Stoneridge Preserve*, dated December 2012, and attached as Appendix B. The survey results were used in the preparation of this RMP.

The surveys documented seven plant alliances, associations, or semi-natural stands and 279 species within the Preserve. The surveys detected 162 plant species, 34 invertebrate species, 11 herptiles (one amphibian and 10 reptiles), 43 bird species, and 29 mammal species (eleven bats, twelve small mammals, and six medium and large mammals). Twenty-five special-status wildlife species were detected during baseline surveys, of which seven are MSCP-covered species.

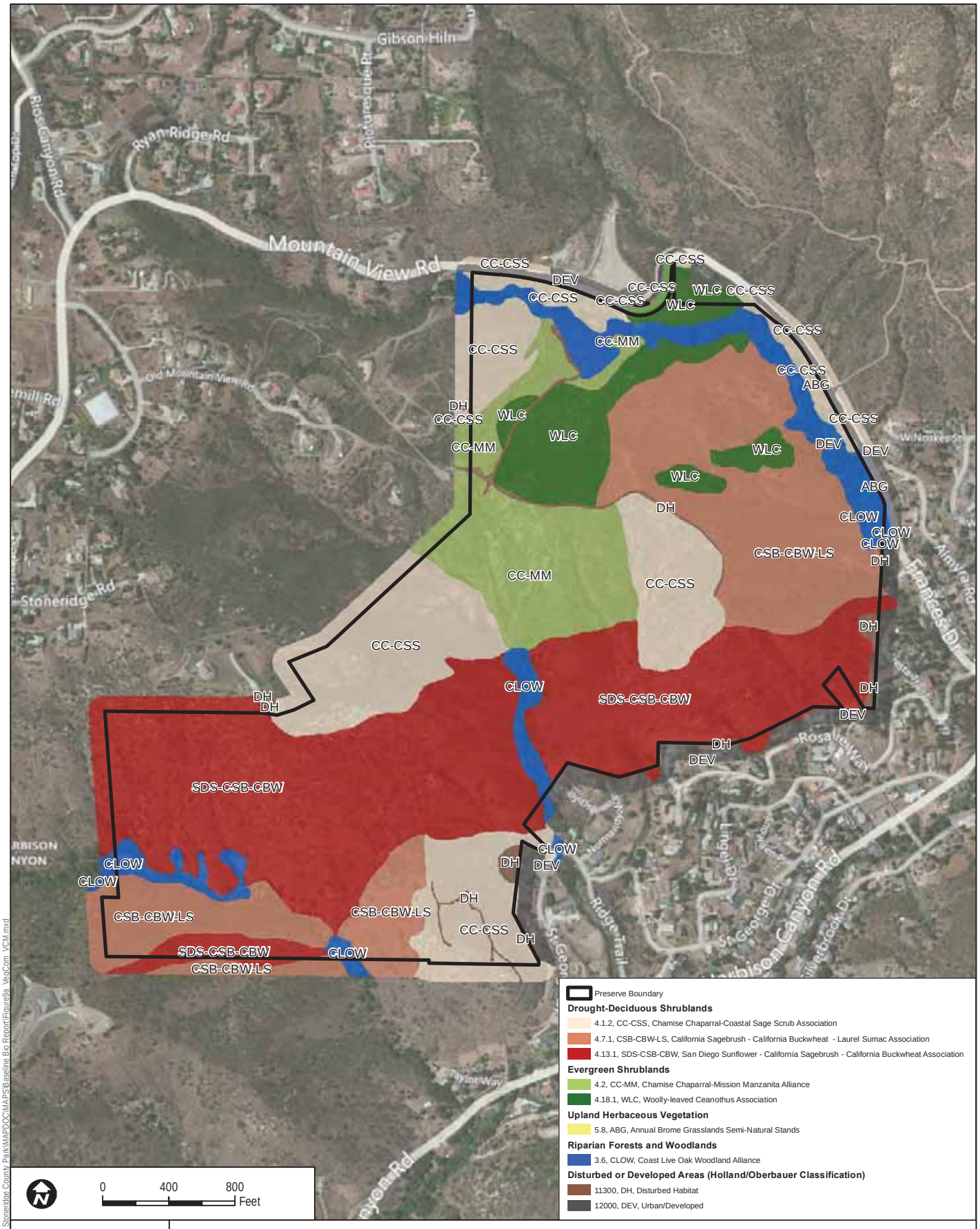
3.1 Vegetation Communities/Habitat

The Preserve consists of 7 plant alliances or associations (Table 2; Figure 8). These vegetation community types are described below and organized as they are in the classification key by functional group (e.g., riparian forest and woodlands, drought deciduous shrublands, and upland herbaceous vegetation). The Vegetation Classification Manual (VCM) for Western San Diego County does not include unvegetated habitat (e.g. disturbed habitat and urban/developed); therefore, unvegetated habitat is described using the Oberbauer-modified Holland classification system (Oberbauer et al. 2008, Holland 1986).

Until the VCM was finalized in 2011, MSCP preserve lands were generally mapped using the Holland classification system. To ensure consistency with previous mapping efforts, the Preserve map data layer was cross-walked to the Holland system pursuant to the VCM (AECOM et al. 2011; Table 2). The vegetation types found on the Preserve following the Holland classification system is shown in Table 3 and Figure 9.

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

VCM code	VCM Alliance/ Association	VCM Common Name	Holland Code	Holland Classification	Acres on Site[1]
Riparian Forests and Woodlands					
3.6	*Quercus agrifolia* Alliance	Coast Live Oak Woodland Alliance	71160	Coast Live Oak Woodland	15.98
				Riparian Forests and Woodlands Total	15.98
Drought-Deciduous Shrublands					
4.1.2	*Adenostoma fasciculatum–(Eriogonum fasciculatum Artemisia californica, Salvia mellifera)* Association	Chamise Chaparral–Coastal Sage Scrub Association	37G00	Coastal Sage-Chaparral Transition	46.51
4.2	*Adenostoma fasciculatum–Xylococcus bicolor* Alliance	Chamise Chaparral–Mission Manzanita Alliance	37120	Southern Mixed Chaparral	23.40
4.7.1	*Artemisia californica–Eriogonum fasciculatum–Malosma laurina* Association	California Sagebrush–California Buckwheat–Laurel Sumac Association	32500	Diegan Coastal Sage Scrub	50.81
4.13.1	*Bahiopsis laciniata–Artemisia californica–Eriogonum fasciculatum* Association	San Diego Sunflower–California Sagebrush–California Buckwheat Association	32500	Diegan Coastal Sage Scrub	89.47
4.18.1	*Ceanothus tomentosus* Association	Woollyleaf Ceanothus Association	37120	Southern Mixed Chaparral	17.04
				Drought-Deciduous Shrublands Total	227.23
Upland Herbaceous Vegetation					
5.8	*Bromus (diandrus, hordeaceus)–Brachypodium distachyon* Semi-Natural Stand	Annual Brome Grasslands Semi-Natural Stands	42200	Non-Native Grassland	0.04
				Upland Herbaceous Vegetation Total	0.04
Unvegetated					
N/A	*N/A*	N/A	11300	Disturbed Habitat	3.12
N/A	*N/A*	N/A	12000	Urban/Developed	0.35
				Unvegetated Total	3.47
				Total	**246.43**



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SOURCE: Bing

FIGURE 8

Vegetation Communities and Land Cover Types (VCM)

Stoneridge Preserve - Baseline Biodiversity Survey

Table 3. Vegetation Communities/Land Cover Types within the Preserve – Holland Classification

Vegetation Type	MSCP SAP Habitat Tier[1]	Acreage
Coastal Sage-Chaparral Transition (37G00)	Tier II	46.51
Coast Live Oak Woodland (71160)	Tier I	15.98
Diegan Coastal Sage Scrub (32500)	Tier II	140.28
Southern Mixed Chaparral (37120)	Tier III	40.44
Non-Native Grassland (42200)	Tier III	0.04
Disturbed Habitat (11300)	Tier IV	3.12
Urban/Developed (12000)	Tier IV	0.35
	Total	**246.72**

[1] Habitat tier levels rank habitat sensitivity, with Tier I being most sensitive and Tier IV being least sensitive

Coast Live Oak Woodland Alliance (3.6)

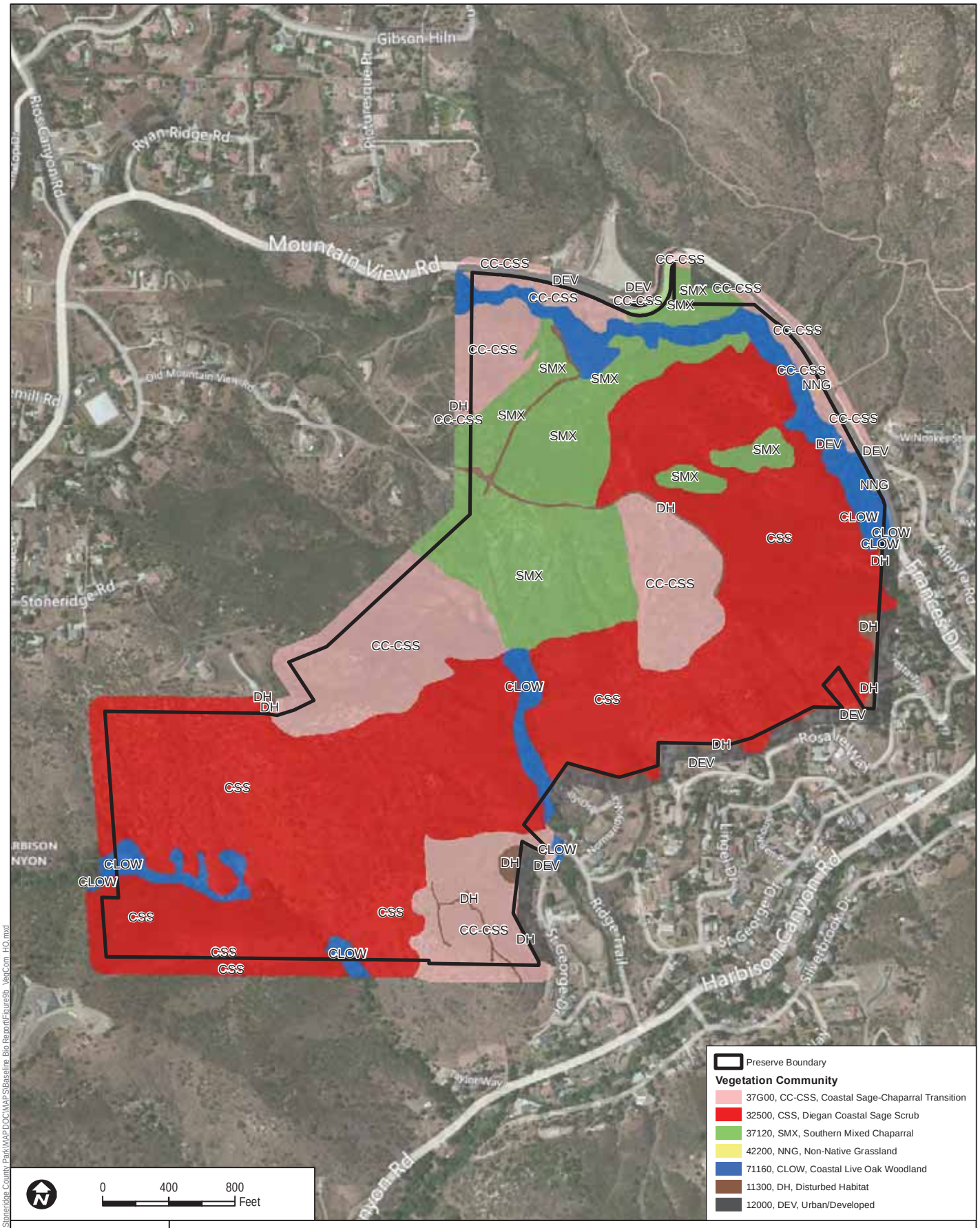
Coast Live Oak Woodland Alliance is dominated by a single evergreen species: coastal live oak (*Quercus agrifolia var. oxyadenia*). Canopy height reaches 10 to 25 meters (30 to 82 feet). The shrub layer is poorly developed, but may include toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes* spp.), laurel sumac (*Malosma laurina*), or blue elderberry (*Sambucus nigra* ssp. *caerulea*) (AECOM 2011). The herbaceous component is continuous, dominated by a variety of introduced species (AECOM 2011).

There are 15.98 acres of Coast Live Oak Woodland Alliance mapped within the Preserve. This habitat community is mapped along drainages following the northeastern boundary, in the central portion, and in the southwestern portion of the Preserve.

Chamise Chaparral – Coastal Sage Scrub Association (4.1.2)

The Chamise Chaparral– Coastal Sage Scrub Association is widespread throughout California, and is dominated by chamise in the shrub canopy, along with other shrubs occurring as subdominants to form a continuous canopy cover (AECOM 2011). Subdominants include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), as well as native or non-native grass species. This is a mature and stable shrub community.

The Chamise Chaparral– Coastal Sage Scrub Association is mapped on 46.51 acres within the Preserve, and is found on steep slopes.



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SOURCE: Bing

FIGURE 9

Vegetation Communities and Land Cover Types (Holland)

Stoneridge Preserve - Baseline Biodiversity Survey

Chamise Chaparral–Mission Manzanita Alliance (4.2)

The Chamise Chaparral–Mission Manzanita Alliance is found along the south coast of California on primarily mesic slopes from the coast inland (AECOM 2011). Chamise and mission manzanita (*Xylococcus bicolor*) are codominants with subdominant shrubs including ceanothus (*Ceanothus* sp.), chaparral yucca (*Hesperoyucca whipplei*), scrub oak (*Quercus berberidifolia*), and sages (*Salvia* spp.). The herbaceous layer in this alliance is sparse or intermittent (AECOM 2011). This alliance is mapped on 23.4 acres within the central region of the Preserve.

California Sagebrush–California Buckwheat–Laurel Sumac Association (4.7.1)

California sagebrush, California buckwheat, and laurel sumac are all codominant in an open shrub canopy of this association (AECOM 2011). Other species commonly found in this association include lemonadeberry (*Rhus integrifolia*), California brittlebrush (*Encelia californica*), chaparral yucca, and spiny redberry (*Rhamnus crocea*). There is an open herbaceous layer characterized by high diversity. This association is frequently a transitional stage resulting after fire or other disturbance (AECOM 2011). This association is one of the dominant habitat communities found within the Preserve and comprises a total of 50.81 acres.

San Diego Sunflower–California Sagebrush–California Buckwheat Association (4.13.1)

San Diego Sunflower, California sagebrush, and California buckwheat are all codominant in this open shrub canopy association (AECOM 2011). Other species commonly found in this association include lemonadeberry, California brittlebush, chaparral yucca, and spiny redberry. There is an open herbaceous layer characterized by high diversity. This association is frequently a transitional stage due to fire or other disturbance (AECOM 2011). This association is a dominant habitat community found within the Preserve and comprises a total of 89.47 acres.

Woollyleaf Ceanothus Association (4.18.1)

Woollyleaf Ceanothus Association is found on coastal foothills in Southern California (AECOM 2011). This association has a continuous to intermittent shrub canopy, and the herbaceous layer is sparse in mature stands. Woolyleaf ceanothus (*Ceanothus tomentosus*) comprises at least 30% of the relative cover in the shrub canopy. Subdominant shrubs include oaks (*Quercus* spp.), mountain-mahogany (*Cercocarpus* spp.), ceanothus, and heartleaf keckiella (*Keckiella cordiflora*) (AECOM 2011). There are 17.04 acres of this association within the northern portion of the Preserve.

Annual Brome Grasslands Semi-Natural Stands (5.8)

Annual Brome Grasslands Semi-natural Stands is characterized by a dense to sparse cover of annual grasses, particularly bromes (*Bromus diandrus, B. hordaceus, B. madritensis*), which are dominant or codominant in the herbaceous layer. There may be trees or shrubs present, although they are sparse (AECOM 2011). This vegetation community frequently results from changes in natural ecosystem processes, which can be caused by maintenance (e.g., mowing, scraping, disking, spraying), grazing, repetitive fire, agriculture, or other mechanical disruption that has altered soils and removed native seed sources from areas formerly supporting native vegetation (AECOM 2011). Annual brome grasslands typically occur adjacent to roads or other developed areas where there has been some historic disturbance (AECOM 2011). This habitat may support special-status plant and animal species and provide a valuable foraging habitat for raptors.

One polygon of Annual Brome Grasslands Semi-natural Stands, consisting of 0.04 acre, was mapped in the northeastern corner of the Preserve.

Disturbed Habitat (Holland 11300)

Disturbed habitat is not described by the VCM, but is described by Oberbauer et al. (2008). Disturbed habitat refers to areas that are not developed, yet lack native vegetation, and generally are the result of severe or repeated mechanical perturbation. Oberbauer et al. (2008) provides the following examples of disturbed land: “areas that have been graded, repeatedly cleared for fuel management purposes, and/or experienced repeated use that prevents natural revegetation, such as dirt parking lots and well-established trails, recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old home sites.” Vegetation, if present, is nearly exclusively composed of non-native plant species, such as ornamentals or ruderal exotic forbs, such as thistles (*Centaurea* spp., *Carduus* spp., *Cynara* spp., *Sonchus* spp., *Salsola tragus*), horehound (*Marrubium vulgare*), London rocket (*Sisymbrium irio*), wild radish (*Raphanus* spp.), fig-marigold (*Carpobrotus edulis*), chrysanthemum (*Chrysanthemum* spp.), and fennel (*Foeniculum vulgare*). Although some grass species may be present in disturbed land, most annual grass species are more typical of non-native grassland and do not dominate vegetative cover in disturbed land (Oberbauer et al. 2008).

There are 3.12 acres of disturbed land within the Preserve. The disturbed land consists primarily of dirt trails or cleared areas around existing homes.

Urban/Developed Land (Holland 12000)

Land designated as urban/developed is not addressed by the VCM; therefore, this description follows Oberbauer et al. (2008). Developed land is generally subject to significant human disturbance associated with development. There are 0.35 acres of developed land in the Preserve. The developed land is composed of encroachments from adjacent residences.

3.2 Plant Species

3.2.1 Plant Species Present

A total of 162 plant species were documented within the Preserve during the 2012 baseline surveys. Appendix B provides a complete list of all plant species observed during the surveys.

3.2.2 Rare, Threatened, or Endangered Plant Species Present

The following section discusses special-status plant species observed within the Preserve. A special-status plant species is one listed by federal or state agencies as threatened or endangered; considered to be of special status by one or more special interest groups, such as the California Native Plant Society (e.g., California Rare Plant Rank [CRPR] List 1, 2, 3, and 4 Plant Species); or is included on the County's Sensitive Plant list (A, B, C, or D Listed Plants).

Special-status plant species observed within the Preserve (Figure 10) consist of Engelmann oak (*Quercus engelmannii*), rush-like bristleweed (*Xanthisma junceum*), San Diego County viguiera (*Bahiopsis* [=*Viguiera*] *laciniata*), and San Diego sagewort (*Artemisia palmeri*).

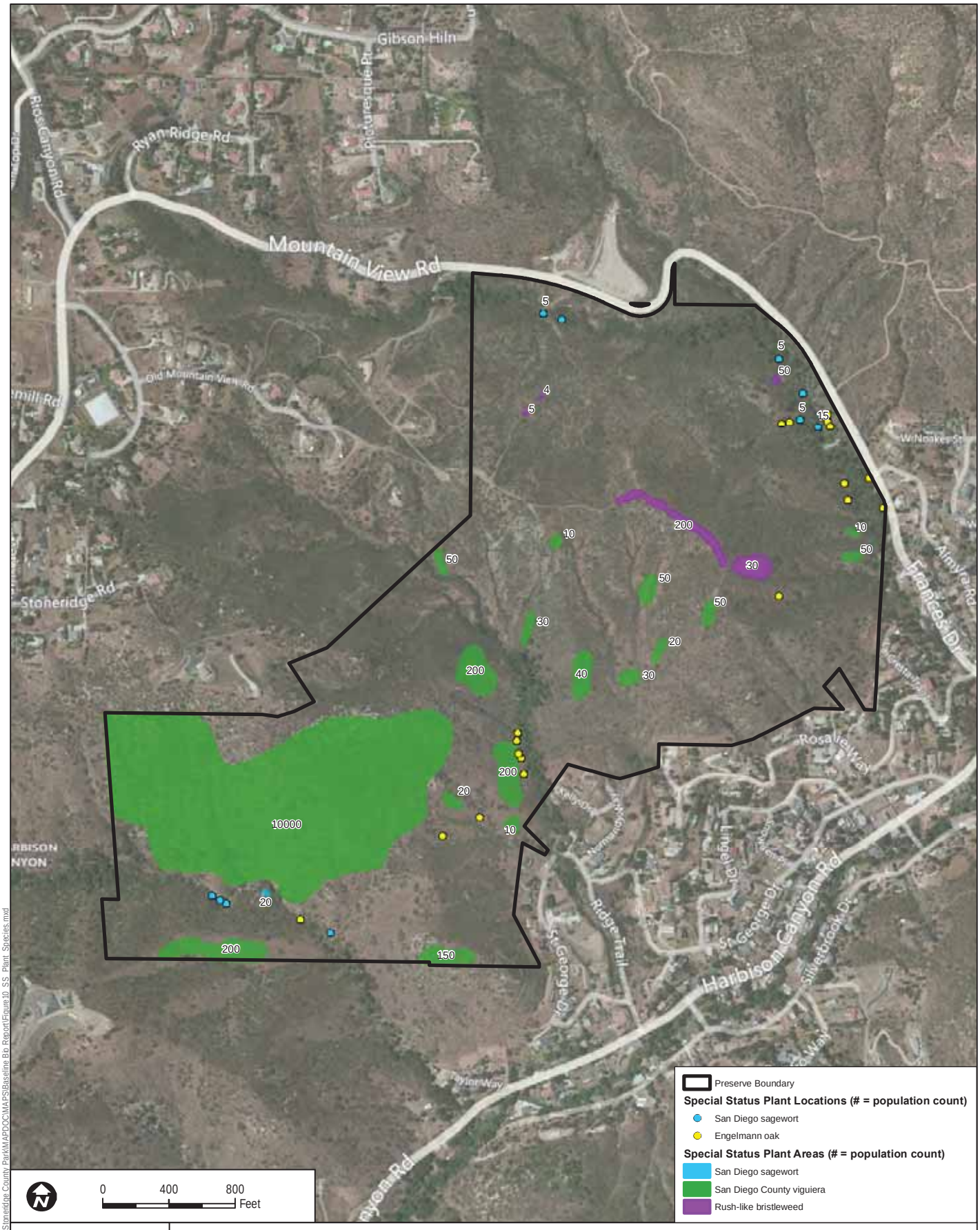
Engelmann oak (*Quercus engelmannii*)

CRPR 4.2, County List D

Engelmann oak is a perennial deciduous tree typically found in oak woodlands or southern mixed chaparral vegetation communities in areas of elevation from 50 to 1,300 meters (164 to 4,265 feet) (CNPS 2012, Reiser 1994). Large Engelmann oaks occur as trees generally in open savannah grasslands; in the foothills, this oak will occur as a shrub within chaparral habitats (Reiser 1994).

Reiser (1994) states that Engelmann oaks in Southern California are relatively abundant and stable, although successful reproduction is compromised by cattle overgrazing and herbivory by small mammals or deer. Additionally, this species requires specific weather conditions for seedling establishment. Hybridization with other species of scrub oak (e.g., *Quercus dumosa*) is common.

Within the Preserve, Engelmann oak is mapped throughout the eastern and central riparian corridors. This species occurs as a large shrub where it occurs in shrub communities and as a tree on the periphery of riparian corridors within the Preserve. One individual is mapped within the southern riparian corridor. A total of 18 individuals are mapped within the Preserve.



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SOURCE: Bing

FIGURE 10

Special Status Plant Locations

Stoneridge Preserve - Baseline Biodiversity Survey

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Rush-like bristleweed (*Xanthisma junceum*)

CRPR 4.3, County List D

Rush-like bristleweed is a perennial herb typically located in xeric chaparral or coastal scrub habitats, in areas of elevation from 240 to 1,000 meters (790 to 3,280 feet) (CNPS 2012). It typically grows in exposed areas with a rocky substrate and that generally lacks an herbivorous understory (Reiser 1994). Rush-like bristleweed is an inconspicuous subshrub that does not grow at high density in locales where it is known to occur. This species is native to San Diego County and Baja California, Mexico, (CNPS 2012).

Urbanization and habitat loss are threatening this species, especially as rural development expands in the foothill areas of San Diego County (Reiser 1994). Because rush-like bristleweed is an inconspicuous species, it is likely that undiscovered populations are located throughout its range and possibly even within the Preserve.

Within the Preserve, this species is mapped within the northern and central areas of the Preserve. Specifically, approximately 289 individuals were found along the main ridge in the northern area of the Preserve and in scattered areas in the vicinity.

San Diego County viguiera (*Bahiopsis* [=*Viguiera*] *laciniata*)

CRPR 4.2, County List D

San Diego County viguiera is a shrub in the *Asteraceae* family and is found at elevations from 60 to 750 meters (197 to 2,460 feet) (CNPS 2012). This species is commonly found in open Diegan sage scrub communities, where it is typically codominant with California sagebrush (Reiser 1994). San Diego County viguiera occurs on a variety of soil types, including Olivenhain cobbly loam, Las Posas fine sandy loam, and Cieneba very rocky coarse sandy loam (Reiser 1994).

San Diego County viguiera is found in Orange and San Diego Counties, as well as in Baja California and Sonora, Mexico, (CNPS 2012). This species is common in the foothills region of San Diego County, including the Jamul Mountains, near Otay Lake, and near Sycuan Indian Reservation, among other locales (Reiser 1994).

This species is declining but locally common throughout southern San Diego County and still occurs as a dominant shrub in many habitats (CNPS 2012, Reiser 1994). As is common with other special-status plant species, this species is threatened by development (CNPS 2012). This species is mapped throughout much of the Preserve, including a large area within the southern region. The estimated population size is greater than 10,000 individuals within this area.

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

CRPR 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 (CNPS 2012). 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 and 3,000 feet) AMSL (CNPS 2012). San Diego sagewort is most often found in a riparian context and in shaded understories beneath willow, sycamore, or cottonwood canopy. Occasionally it is also present beneath coast live oak canopy but in decidedly mesic circumstances (Reiser 1994).

This species has an extensive range in San Diego County and is known from Peñasquitos Creek, Escondido Creek, Rose Canyon, Tijuana River Valley, and Dulzura Creek, among other perennial drainages. San Diego sagewort is declining due to stream channelization or flood control projects, such as the San Diego River channelization project (Reiser 1994).

This species was mapped in coast live oak woodlands within the Preserve, primarily along the northern and southern boundaries. Approximately 56 individuals were mapped, although there are likely more individuals present in the Preserve.

3.2.3 Rare, Threatened, or Endangered Plant Species not Observed but with High Potential to Occur

Additional information on the species listed below can be found in the Baseline Biodiversity Survey (Appendix B).

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

CRPR 1B.2, County List A

Robinson's pepper-grass is an annual herb in the *Brassicaceae* family (CNPS 2012). It grows in openings in chaparral and sage scrub communities in the foothills of Southern California. Dry, exposed areas are typical microhabitat characteristics where this species is found (Reiser 1994). Robinson's pepper-grass blooms from January to July and is found at elevations from 1 to 885 meters (3 to 2,904 feet) AMSL (CNPS 2012).

Robinson's pepper-grass is found near the Preserve in the Harbison Canyon vicinity. Habitat and local site characteristics within the Preserve would support this species. Robinson's pepper-grass is threatened locally due to development, invasion by non-native plants, and recreation, although it is generally presumed stable in Southern California (Reiser 1994, CNPS 2012).

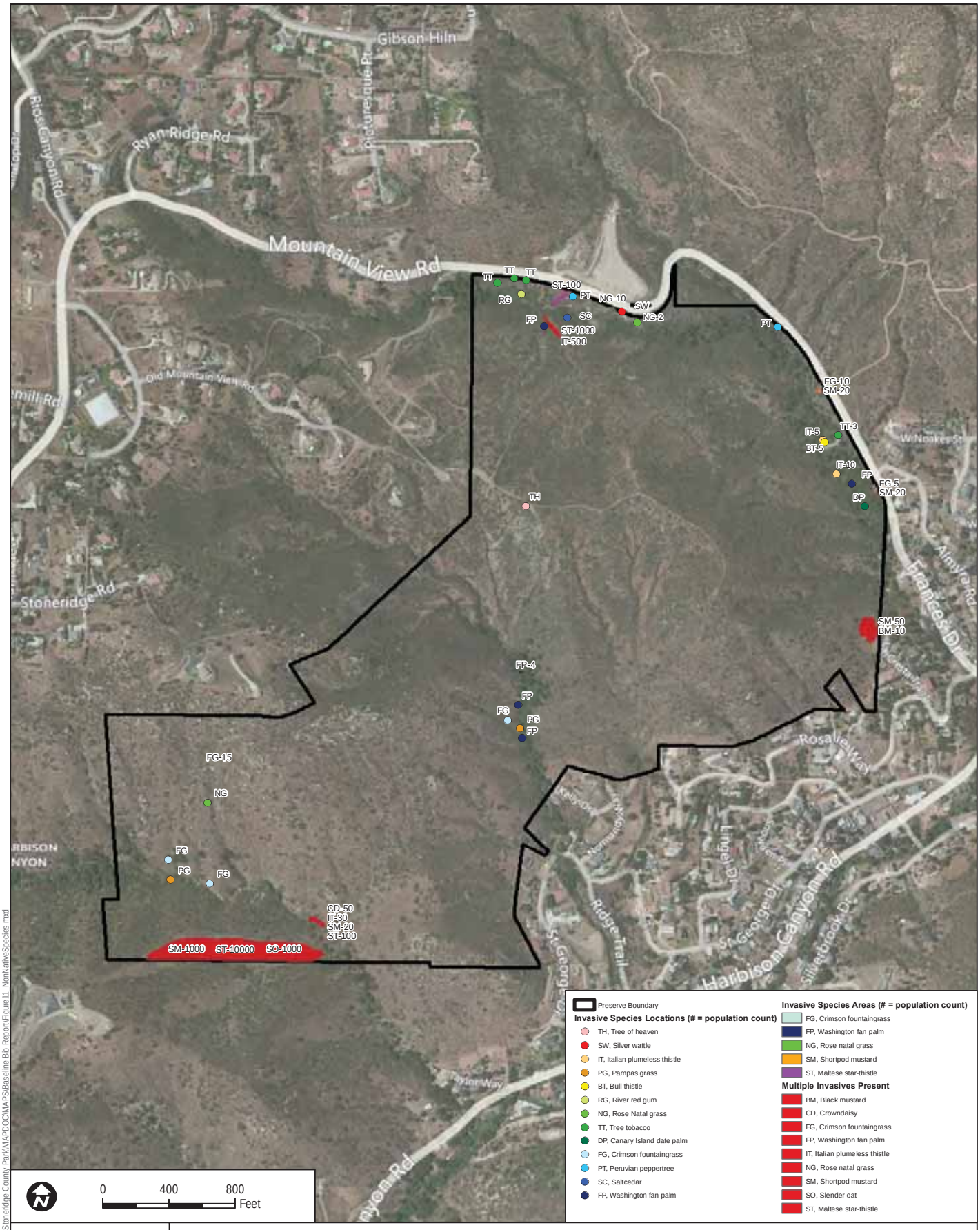
3.2.4 Non-native and/or Invasive Plant Species

A total of 29 non-native plant species were identified in the Preserve, 18 of those species were identified as target species in need of treatment and five of those species were ranked as high priority for removal. Table 4 lists the 18 target non-native invasive species that were mapped within the Preserve, along with their associated Cal-IPC Inventory Ranking and removal priority. Target non-native invasive species were selected based on their invasive potential, prevalence throughout the Preserve, and ability for management. These target non-native invasive plant species locations are shown on Figure 11. The species listed as high priority for removal are discussed below. The species listed as moderate and low priority for removal are discussed in the Vegetation Management Plan for Stoneridge Preserve (Dudek 2012). In addition, invasive species removal prioritization will be coordinated in accordance with the Management Priorities for Invasive Non-native Plants, A Strategy for Regional Implementation, San Diego County (Dendra Inc, 2012).

Table 4. Target Invasive Non-native Plant Species

Common Name	Scientific Name	Cal-IPC Rating[1]	Removal Priority
Pampas grass	*Cortaderia selloana*	High	High
Red river gum	*Eucalyptus camaldulensis*	Limited	High
Canary Island date palm	*Phoenix canariensis*	Limited	High
Saltcedar	*Tamarix ramosissima*	High	High
Washington fan palm	*Washingtonia robusta*	Moderate	High
Tree of heaven	*Ailanthus altissima*	Moderate	Moderate
Rose natal grass	*Melinis repens* ssp. *repens*	None	Moderate
Tree tobacco	*Nicotiana glauca*	Moderate	Moderate
Crimson fountain grass	*Pennisetum setaceum*	Moderate	Moderate
Peruvian peppertree	*Schinus molle*	Limited	Moderate
Silver wattle	*Acacia dealbata*	Moderate	Low
Slender oat	*Avena barbata*	Moderate	Low
Black mustard	*Brassica nigra*	Moderate	Low
Italian plumeless thistle	*Carduus pycnocephalus* ssp. *pycnocephalus*	Moderate	Low
Maltese star thistle	*Centaurea melitensis*	Moderate	Low
Bull thistle	*Cirsium vulgare*	Moderate	Low
Crown daisy	*Glebionis [=Chrysanthemum] coronaria*	Moderate	Low
Shortpod mustard	*Hirschfeldia incana*	Moderate	Low

[1] **Source:** Cal-IPC California Invasive Plant Inventory Database, updated June 2012. Overall rating listed for southwest region, factoring impact, invasiveness, distribution, and documentation level.
Inventory Categories
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, though 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; have low to moderate rates of invasiveness; and are generally limited but may be locally persistent and problematic.
None: Species has not been listed by Cal-IPC.



Z:\Projects\668000\668009 - Stoneridge County Park\MAPDOC\MAPS\Baseline Bio Report\Figure 11 NonNativeSpecies.mxd

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SOURCE: Bing

FIGURE 11

Invasive Plant Species Locations

Stoneridge Preserve - Baseline Biodiversity Survey

Washington fan palm

Washington fan palm is a species of palm tree commonly used for landscaping, which has become invasive in riparian areas, orchards, and landscaped areas (Cal-IPC 2012). It is known to create monotypic stands in riparian areas, and dead fronds of the tree can create a fire hazard. It can spread into native vegetation communities when seeds are washed downstream in drainages or birds disperse seeds into areas with sufficient soil moisture for the palm to germinate and establish (Cal-IPC 2012). This species is rated “moderate” by the Cal-IPC (Cal-IPC 2012). Four individuals of this species were mapped in the northern and central riparian corridors within the Preserve.

Pampas grass

Pampas grass is a large, clumping perennial grass about 2 meters (7 feet) tall. This is an aggressively spreading, ornamental species that produces significant amounts of biomass. This makes the species extremely flammable, increasing the potential for fire ignition and/or spread. This species produces an abundance of seed, which is light and can easily be windblown into surrounding areas. This species is rated “high” by the Cal-IPC (Cal-IPC 2012). Two individuals were mapped within the central and southern riparian corridors.

Saltcedar

Saltcedar (tamarisk) is a shrub or a tree found throughout California along streams and lakeshores. Saltcedar can substantially alter geomorphology, groundwater availability, soil chemistry, fire frequency, plant community composition, and native wildlife diversity (Cal-IPC 2012). Saltcedar can stabilize stream terraces, deepening flood channels, which can result in unsuitable habitat for arroyo toads (*Anaxyrus californicus*), which are found within the Sweetwater Watershed. Saltcedar is rated as “high” by the Cal-IPC (Cal-IPC 2012). Within the Preserve, one individual was mapped within the northern riparian corridor.

Red river gum (Eucalyptus)

Eucalyptus is a genus of large trees that have been widely planted throughout California. Some species commonly escape into natural areas and can spread rapidly, particularly in riparian habitats. Red river gum increases the risk of wildfires and overbears native plants and trees. This species has a Limited Cal-IPC Inventory Ranking (Cal-IPC 2012). One individual was mapped within the riparian corridor on the northern boundary of the Preserve.

Canary Island date palm

The Canary Island date palm is native to the Canary Islands, located off the coast of Africa. This species has escaped cultivated areas and is now found throughout riparian corridors in Southern California (Cal-IPC 2012). Canary Island date palms

typically grow in groups that then restrict light and other resources to native species growing in the understory. This species has a Limited Cal-IPC Inventory Ranking (Cal-IPC 2012). Within the Preserve, one individual was mapped within the riparian corridor along the eastern border.

3.3 Wildlife Species

3.3.1 Wildlife Species Present

A total of 115 wildlife species were observed or detected within the Preserve during the 2012 baseline inventory surveys, including 1 amphibian, 10 reptiles, 43 birds, 27 mammals, and 34 invertebrates. A total of 25 special-status species were observed or detected, including seven species covered under the MSCP. Appendix B provides a complete list of all wildlife species observed during the surveys.

Invertebrates

A complete list of invertebrate species identified on the Preserve below the level of family is included in the faunal list of the Baseline Biodiversity Survey Report (Appendix B). No special-status butterfly species or other invertebrate species were detected during the 2012 surveys and no special-status invertebrate species have high potential to occur at the Preserve.

Butterflies

Ten butterfly species were observed during the survey conducted on the Preserve, including blue (*Plebejus* sp.), white (*Pieris* sp.), anise swallowtail (*Papilio zelicaon*), California dogface (*Colias eurydice*), perplexing hairstreak (*Callophrys perplexa*), brown elfin (*Callophrys augustinus*), lady (*Vanessa* sp.), funereal duskywing (*Erynnis funeralis*), Behr's metalmark (*Apodemia mormo virgulti*), and acmon blue (*Plebejus acmon acmon*).

Two special-status butterfly species, Quino checkerspot and Hermes copper butterfly, have potential to occur within the Preserve based on the Preserve location, known habitat characteristics and the species' distribution. Neither species was detected during the general butterfly survey. Prior to conducting the general butterfly survey, the first pass of rare plant surveys was completed and locations of any host plants for the two species were noted. Butterfly surveys included areas with suitable butterfly habitat (e.g., hilltops, ridgelines) to maximize species diversity.

The general butterfly survey was conducted in mid-April, as most species are active at this time. This survey corresponded with the known flight period of Quino checkerspot (late February through April); Hermes copper, on the other hand, has a later flight period (mid-May through July). However, general wildlife surveys conducted later in the summer could have detected this species if present during its flight period; biologists performing surveys were familiar with identification of both butterfly species.

Although the host plants for Quino checkerspot, purple owl's clover (*Castilleja exserta* ssp. *exserta*) or plantain (*Plantago erecta*), were not observed within the Preserve, there was medium to high potential for this species to occur within the Preserve. The habitat within the Preserve is suitable for this species, including open chaparral habitat, ridgelines, and sloping hills. The absence of host plants does not necessarily indicate that Quino checkerspot is absent from the Preserve and therefore surveys were conducted within this species' flight period (USFWS 2002). Quino checkerspot was not recorded within the Preserve; the nearest known locations include 2 miles east of the Preserve near the community of Alpine Heights observed in 2003 (Susan Wynn, pers. comm. 2013); 2 miles southwest of the Preserve north of the Singing Hills Golf Course observed in 2010 (Susan Wynn, pers. comm. 2013); and 8.67 miles southwest of the Preserve at the San Diego National Wildlife Refuge (CDFG 2012).

During vegetation mapping, it was determined that the Preserve also supports a suitable habitat for Hermes copper, which includes a matrix of spiny redberry and California buckwheat located within 10 feet of each other (County of San Diego 2010). Although the butterfly survey was outside of the species' flight period, biologists conducting surveys later in the summer could have detected this species. The nearest recorded observations of Hermes copper include approximately 1 mile southwest of the Preserve at the Crestridge Ecological Preserve prior to the 2003 Cedar Fire (Susan Wynn, pers. comm. 2013) and 3.6 miles from the Preserve at Loveland Reservoir (Deutschman et al. 2010).

Amphibians

One species of amphibian, the Pacific treefrog (*Pseudacris regilla*), was heard calling from the riparian areas on site.

Reptiles

A total of 10 reptile species were observed within the Preserve. Two species were observed during coverboard surveys: coast horned lizard (*Phrynosoma blainvillii*) and southern alligator lizard (*Elgaria multicarinata*). Seven species were observed during herpetological arrays, including orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), coastal western whiptail (*Aspidoscelis tigris stejnegeri*), San Diego banded gecko (*Coleonyx variegatus abbotti*), western skink (*Plestidon skiltonianus*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), western fence lizard (*Sceloporus occidentalis*), and common side-blotched lizard (*Uta stansburiana*). Two reptile species were also recorded as incidental observations: northern red diamond rattlesnake (*Crotalus ruber ruber*) and coast patch-nosed snake.

Orange-throated whiptail was the most common reptile species observed. Four of the reptile species observed were CDFW California Species of Special Concern (CSC): coast patch-nosed snake, northern red diamond rattlesnake, coast horned lizard, and orange-throated whiptail. Orange-throated whiptail and coast horned lizard are covered under the MSCP. San Diego banded gecko is a County of San

Diego Sensitive Animal Group 1 Species and coastal western whiptail is a County of San Diego Sensitive Animal Group 2 Species.

Birds

Forty-three bird species were observed within the Preserve during avian point count surveys. The most common species observed in terms of numbers of individuals recorded were lesser goldfinch (*Spinus psaltria*), house finch (*Carpodacus mexicanus*), bushtit (*Psaltriparus minimus*) and wrentit (*Chamaea fasciata*). The following birds were observed during the nocturnal surveys: barn owl (*Tyto alba*), common poorwill (*Phalaenoptilus nuttallii*), and great horned owl (*Bubo virginianus*). Appendix B lists the bird species observed within the Preserve

Eight special-status bird species were observed during avian point count surveys: coastal California gnatcatcher (*Polioptila californica californica*), barn owl, Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), turkey vulture (*Cathartes aura*), western bluebird (*Sialia mexicana*), and white-tailed kite (*Elanus leucurus*).

Many species, such as the southern California rufous-crowed sparrow or western bluebird are likely permanent residents of the Preserve and are presumed to nest within the Preserve. Other species, such as turkey vulture or white-tailed kite, may nest on site but likely use the Preserve primarily for foraging and occasionally for roosting. No species were observed with nests or exhibiting nesting behavior.

The survey point located in the coast live oak woodland near the northeastern border of the Preserve had the greatest species richness and diversity. However, bird species richness and diversity did not vary substantially between survey points.

Mammals

A complete list of mammal species observed within the Preserve during the 2012 surveys is included in the faunal list of the Biological Diversity Baseline Report (Appendix B).

Small Mammals

Nine small mammals, all rodents, were trapped on the Preserve during the small mammal surveys. These included the special-status species Dulzura pocket mouse (*Chaetodipus californicus femoralis*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), and San Diego desert woodrat (*Neotoma lepida intermedia*). The most common species trapped was the Dulzura pocket mouse. One incidental capture of a southern California rufous-crowned sparrow occurred at Array-1 during small mammal trapping.

Three additional mammal species were also detected during surveys: Crawford's gray shrew (*Notiosorex crawfordi*), Botta's pocket gopher (*Thomomys bottae*), and California vole (*Microtus californicus*).

Medium and Large Mammals

Three large mammal species were detected by the camera stations located on the Preserve: coyote (*Canis latrans*), mule deer (*Odocoileus hemionus*), and bobcat (*Lynx rufus*). Medium-sized mammals detected include striped skunk (*Mephitis mephitis*), brush rabbit (*Sylvilagus bachmani*), and California ground squirrel (*Spermophilus beecheyi*). Coyote was the most common species observed. Only one special-status species, mule deer, was recorded during wildlife camera study. This species is covered under the MSCP.

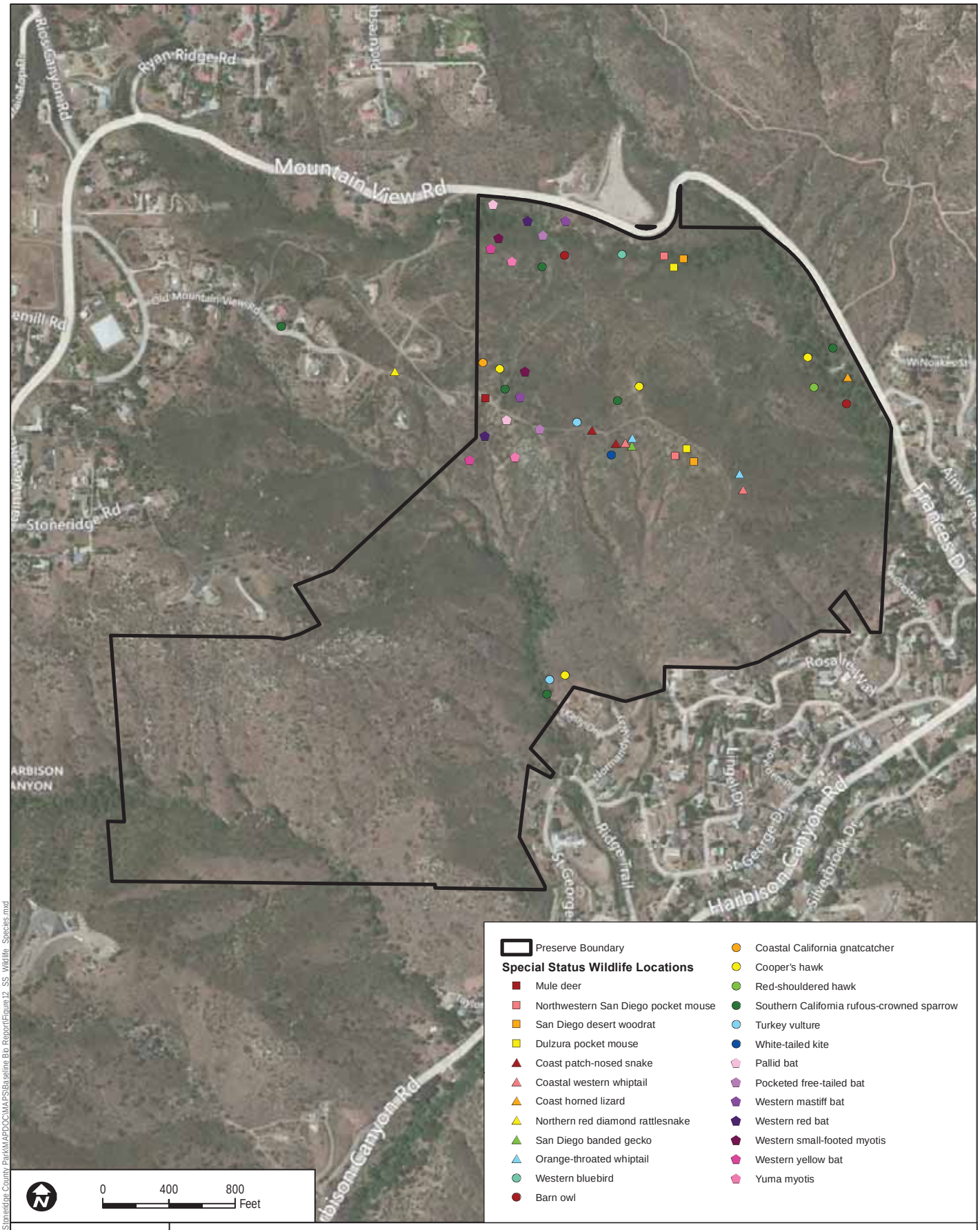
Bats

Eleven bat species were identified within the Preserve using the Anabat survey system, including pallid bat (*Antrozous pallidus*), big brown bat (*Eptesicus fuscus*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), western yellow bat (*Lasiurus xanthinus*), Californian myotis (*Myotis californicus*), western small-footed myotis (*Myotis ciliolabrum*), Yuma myotis (*Myotis yumanensis*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), canyon bat (*Parastrellus hesperus*), and Brazilian free-tailed bat (*Tadarida brasiliensis*). Five of these species are CDFW CSC: pallid bat, western mastiff bat, western red bat, western yellow bat, and pocketed free-tailed bat.

Big brown bat was the most common species recorded. Other relatively common species included Yuma myotis and canyon bat. Overall surveys during the month of July were characterized by increased minutes of detection when compared with detection minutes during September surveys. Although most species were more common during July surveys, several species were overwhelmingly more common during September; these species included western yellow bat, California myotis, canyon bat, and Brazilian free-tailed bat.

3.3.2 Rare, Threatened, or Endangered Wildlife Species Present

This section discusses special-status wildlife species observed at the Preserve (Figure 12). A special-status wildlife species is one listed by federal or state agencies as threatened or endangered; is included on the County's Sensitive Animal List (Group 1 or 2 Species); or is covered under the MSCP. Twenty-five special-status wildlife species were detected at the Preserve. Information on each of these species is provided below.



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DUDEK

6680-09

SOURCE: Bing

FIGURE 12

Special Status Wildlife Locations

Stoneridge Preserve - Baseline Biodiversity Survey

3.3.2.1 Herpetofauna

San Diego Coast horned lizard (*Phrynosoma blainvillii*)

Species of Special Concern, County Group 1, MSCP Covered Species

The San Diego coast horned lizard occurs throughout most of California in locations west of the desert and Cascade-Sierran highlands in elevations from sea level to around 2,438 meters (8,000 feet) AMSL (Stebbins 2003). Despite a wide-ranging distribution, the San Diego coast horned lizard seems to be restricted to localized populations because of its association with loose soils that have a high sand content (Jennings and Hayes 1994). The species is found in a wide variety of vegetation types with the requisite loose sandy soils, including California sagebrush scrub, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest (Klauber 1939; Stebbins 1954). Up to 90% of the diet of the San Diego coast horned lizard consists of native harvester ants (Pianka and Parker 1975), and coast horned lizards do not appear to eat non-native Argentine ants (*Linepithema humile*) (Jennings and Hayes 1994).

One San Diego coast horned lizard was observed during the coverboard surveys within the Preserve. There is suitable chaparral habitat within the Preserve for this species. Harvester ants were recorded throughout the Preserve, and no Argentine ants were observed.

Coast patch-nosed snake (*Salvadora hexalepis virgultea*)

California Species of Special Concern, County Group 2

The coast patch-nosed snake ranges from west-central Nevada south to the tip of Baja California and northwestern Sonora and from coastal Southern California to Southwestern Utah and central Arizona. The coast patch-nosed snake is found at elevations from below sea level to around 2,130 meters (6,988 feet) AMSL (Goldberg 1995). It inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains, where it eats lizards, small mammals, nestling birds, amphibians, and, possibly, small snakes (CaliforniaHerps 2012). This species will burrow in sandy loose soils (CaliforniaHerps 2012).

The coast patch-nosed snake is presumed to be declining in coastal areas due to development and loss of habitat, but the abundance and distribution of this species has not been extensively studied (CaliforniaHerps 2012).

One coast patch-nosed snake was recorded on July 11, 2012, in the herpetological array in the central portion of the Preserve. Another coast patch-nosed snake was observed near the same herpetological array on July 12, 2012. There is generally suitable chaparral habitat for this species throughout the Preserve.

Coastal western whiptail (*Aspidoscelis tigris stejnegeri*)

County Group 2

Coastal western whiptails are found in Southern California in chaparral, woodland, and riparian areas and, within the Preserve, were found primarily in chamise chaparral or Diegan coastal scrub. This species is diurnal and forages around the base of vegetation for invertebrates, including grasshoppers, beetles, ants, and spiders, among others (Zeiner et al. 1988). Whiptails generally avoid open areas to prevent exposure to potential predation. Principal threats result from habitat fragmentation and destruction (Zeiner et al. 1988).

A total of three coastal western whiptails were captured at both herpetological array sites during the June surveys. High-quality suitable habitat for this species occurs within the Preserve.

Northern red diamond rattlesnake (*Crotalus ruber ruber*)

California Species of Special Concern, County Group 2

The northern red diamond rattlesnake is distributed along coastal San Diego County to the eastern slopes of the mountains and north through Western Riverside County into southernmost portion of San Bernardino County. This species can be found from sea level to 900 meters (3,000 feet) AMSL in chaparral, woodland, and arid desert habitats in rocky areas and dense vegetation (Zeiner et al. 1988). The northern red diamond rattlesnake eats small mammals, including ground squirrels, wood rats, rabbits, lizards, and birds (CaliforniaHerps 2012). The northern red diamond rattlesnake is primarily nocturnal and crepuscular during periods of excessive daytime heat (CaliforniaHerps 2012). Northern red diamond rattlesnake young are live-born from July to September (CaliforniaHerps 2012).

One northern red diamond rattlesnake was identified just off-site through an incidental observation. Although this individual was not found within the Preserve, it is presumed that this species is found in the Preserve.

Orange-throated whiptail (*Aspidoscelis hyperythra*)

California Species of Special Concern, County Group 2, MSCP Covered Species

Orange-throated whiptail occurs in low-elevation coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitats (Zeiner et al. 1988). The orange-throated whiptail occurs in Orange, Riverside, and San Diego Counties; west of the crest of the Peninsular Ranges; and in southwestern San Bernardino County near Colton. This species' range extends up to 1,039 meters (3,410 feet) AMSL (Zeiner et al. 1988). Orange-throated whiptails forage on the ground and scratch through surface debris for food. Their diet consists of a variety

of small arthropods, especially termites. Orange-throated whiptails likely lay eggs in loose, well-aerated soil under or near surface objects or at the base of dense shrubs (Zeiner et al. 1988).

This species is considered special-status primarily due to loss of suitable coastal sage scrub habitat throughout its range.

Within the Preserve, the orange-throated whiptail was captured at both herpetological arrays. This species was the most common reptile captured during herpetological array surveys. High-quality suitable habitat for orange-throated whiptail occurs within the Preserve.

San Diego banded gecko (*Coleonyx variegatus abbotti*)

County Group 1

The San Diego banded gecko is found in rocky areas of coastal sage scrub and chaparral in the interior of Southern California. This species is generally found west of the Peninsular ranges and south of Transverse ranges (CaliforniaHerps 2012). The other subspecies of banded gecko, desert banded gecko (*C. v. variegatus*), is found throughout the Mojave Desert. San Diego banded geckos consume insects and hibernate during the winter period (CaliforniaHerps 2012). They are generally active at night and will hide in burrows or under rocks during the day. Habitat development is the principal threat to this species.

Within the Preserve, one San Diego banded gecko was recorded during herpetological arrays in August 2012. There is suitable coastal sage scrub and chaparral habitat within the Preserve, as well as rocky outcrops that typically characterize the habitat requirements for this species.

3.3.2.2 Birds

Barn owl (*Tyto alba*)

County Group 2

Barn owls are found in many open habitats, including grassland, chaparral, riparian, and developed or urban habitats (Zeiner et al. 1990a). Barn owls are residents of much of the continental United States, including California, although they are mostly absent from the Great Plains. This species will roost in barns, caves, dense trees, or other structures and hunt for small mammals on the wing or from a perch. Prey species include mice, voles, gophers, and squirrels, as well as other small birds. Barn owls in California retain their home range throughout the year and are not migratory (Zeiner et al. 1990a).

Barn owls can occur throughout the state from sea level to 1,680 meters (5,500 feet) AMSL (Zeiner et al. 1990a).

Four barn owls were recorded during the evening avian point count surveys on the Preserve. The oak woodland riparian corridors offer suitable roosting and nesting habitats for this species, as well as plenty of open habitats for foraging.

Coastal California gnatcatcher (*Polioptila californica californica*)

Federally Threatened, California Species of Special Concern, County Group 1, MSCP Covered Species

The coastal California gnatcatcher occurs in coastal Southern California and Baja California year-round, where it depends on a variety of arid scrub habitats. The coastal California gnatcatcher occurs mainly on cismontane slopes (coastal side of the mountains) in Southern California, ranging from Ventura and Northern Los Angeles Counties south through the Palos Verdes Peninsula to Orange, Riverside, San Bernardino, and San Diego Counties. Most coastal California gnatcatcher locality records are at or below an elevation of 300 meters (984 feet) AMSL (Atwood 1990), although they may occur as high as 914 meters (3,000 feet) AMSL (65 FR 63680). The coastal California gnatcatcher typically occurs in or near coastal scrub vegetation, which is composed of relatively low-growing, dry-season deciduous and succulent plants. Characteristic plants of this community include California sagebrush, various species of sage, California buckwheat, lemonadeberry, California brittlebush, and cactus (e.g., *Opuntia* spp.). Coastal California gnatcatchers glean insects and spiders from the foliage of shrubs, primarily California buckwheat and California sagebrush (Atwood 1993). The coastal California gnatcatcher has declined due to widespread destruction of its coastal scrub habitat (Atwood 1990).

The coastal California gnatcatcher was recorded during the avian point count survey on the Preserve. One male was heard calling once during the first survey pass of avian point count surveys. This individual was not observed, and no pair was recorded; no nesting behavior was noted. There is suitable coastal sage scrub habitat for this species within the Preserve.

Cooper's hawk (*Accipiter cooperii*)

CDFG Watch List, County Group 1, MSCP Covered Species

The Cooper's hawk inhabits live oak, riparian deciduous, or other forest habitats near water. This species is a year-round resident of much of western and eastern United States and is migratory in its range throughout the central United States south to Mexico (Zeiner et al. 1990a). This species is a resident of California, and most of its breeding occurs in the southern Sierra Nevada foothills, the New York Mountains, Owens Valley, and throughout Southern California.

This species nests and forages near open water or in riparian vegetation. Nests are built in dense stands of trees with moderate crown depths, usually in second-growth conifer or deciduous riparian areas. Nests in deciduous trees are typically located in crotches 20 to 50 feet above the ground; in conifers, nests are along horizontal branches or the main crotch of conifers (Zeiner et al. 1990a). Cooper's hawks primarily hunt small birds, although they will consume small mammals, reptiles, and amphibians (Zeiner et al. 1990a).

This species has been impacted due to continued use of pesticides, but population numbers have rebounded in recent years (NatureServe 2012). Loss of suitable riparian habitat may also be impacting this species, but they are known to occupy more urban habitats, as well (NatureServe 2012).

There is suitable habitat for the Cooper's hawk within the Preserve. This species was recorded during the April and June avian point count surveys. On both occasions, it was observed foraging over the Preserve. Cooper's hawk was not observed nesting or exhibiting nesting behavior. There was an old raptor nest located in the riparian corridor located along the eastern region of the Preserve, but it was not clear which species utilized this nest.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens)*

CDFG Watch List, County Group 1, MSCP Covered Species

Southern California rufous-crowned sparrows are found primarily in coastal sage scrub habitats in Southern California, although this species will also occupy sparse mixed chaparral or other coastal scrub habitats (Zeiner et al. 1990a). Steep and often rocky hillsides are preferred. Rufous-crowned sparrows are secretive and are frequently hidden in shrub patches or near rocky outcrops. Rufous-crowned sparrows forage on the ground for insects, spiders, seeds, and other vegetation. This species does very little migrating, although it may occasionally migrate upslope in other areas of its range (Zeiner et al. 1990a).

Like many other species that inhabit coastal scrub habitats, this species is threatened primarily by habitat loss and fragmentation. Brown-headed cowbird (*Molothrus ater*) parasitism has also been recorded for this sparrow (Zeiner et al. 1990a).

Several rufous-crowned sparrows were observed in coastal sage scrub or chaparral habitats at multiple locations within the Preserve. Southern California rufous-crowned sparrows were recorded during avian point count surveys, as well as during general biological surveys. This species was recorded at all avian point count locations.

Red-shouldered hawk (*Buteo Lineatus*)

County Group 1

Red-shouldered hawk inhabits low-elevation (below 1,524 meters or 5,000 feet AMSL) riparian woodlands, particularly in areas with interspersed swamps and emergent wetlands. This species is a permanent resident of much of the United States east of the Mississippi and inhabits coastal areas of the west coast (Dykstra et al. 2008). 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. Breeding occurs from February through July (Zeiner et al. 1990a).

Populations of red-shouldered hawks have declined in the last two centuries, mostly due to the loss of mature, dense woodlands that are preferred habitats of this species (Dykstra et al. 2008). However, populations in the west are known to also occupy suburban areas, particularly if there are suitable woodlands located nearby.

One red-shouldered hawk was recorded as flying overhead during the first pass of the avian bird count surveys. There is sufficient riparian forest for this species, and suitable trees for roosting or nesting within the Preserve. Red-shouldered hawk was not observed nesting or exhibiting nesting behavior. There was an old raptor nest located in the riparian corridor located along the eastern region of the Preserve, but it was not clear which species utilized this nest.

Turkey vulture (*Cathartes aura*)

County Group 1

Turkey vultures are found throughout Central America and the United States and are residents of much of Southern California (Kirk et al. 1998). This species typically inhabits farmland or other open areas suitable for scavenging carrion. Habitat for perching, roosting, or nesting is generally located nearby and is characterized by undisturbed forest with cliff ledges or rocky outcrops (Kirk et al. 1998). This species specializes in aerial soaring over roads, fields, and open forests in search of carrion, as it rarely eats live birds or mammals. Turkey vultures are common during the breeding season in most of California (Zeiner et al. 1990a).

Because this species feeds in pastureland or near roadsides, it is threatened by vehicular collisions, electrocution, shooting, or lead contamination from animals killed with lead bullets (Kirk et al. 1998).

Two turkey vultures were recorded during avian bird count surveys within the Preserve. There is suitable habitat in the Preserve for foraging. However, there are

no suitable cliffs or rocky outcrops for roosting or perching. As such, it is presumed that turkey vultures do not reside within the Preserve.

Western bluebird (*Sialia mexicana*)

County Group 2, MSCP Covered Species

Western bluebirds are small members of the thrush family and are found throughout much of the Western United States, including California (excluding the Mojave Desert regions) and much of the Southwest through Central Mexico (Guinan et al. 2008). This species is, generally, a wintering visitor in San Diego County, although it is a resident in some areas of Central San Diego. Open forests are preferred by this species, with large trees and snags for nesting and perching. Other habitats utilized by western bluebirds include open deciduous woodlands, wooded riparian areas, grasslands, and farmlands (Guinan et al. 2008).

During winter, bluebirds consume small berries or seeds, and insects are consumed during the breeding season (Guinan et al. 2008). Most individuals forage from a perch and, to a lesser extent, feed by flycatching insects. Other techniques utilized include hovering, gleaning, or hopping (Guinan et al. 2008).

Logging and habitat destruction, including fire suppression activities, can negatively affect this species. Bluebirds are a secondary cavity nester and are, therefore, reliant on habitats that support other cavity nesters, such as woodpeckers. Snags, large living trees, and other habitat characteristics are needed to support western bluebirds; habitat loss and fragmentation reduces the amount of suitable habitat available (Guinan et al. 2008).

Western bluebirds were recorded along the northern riparian corridor when walking to conduct herpetological arrays. This species was not detected during focused avian point count surveys.

White-tailed kite (*Elanus leucurus*)

State Fully Protected, County Group 1

White-tailed kite is a common to uncommon year-long resident in coastal and valley lowlands up to the western Sierra Nevada foothills and southeast deserts (Small 1994; County of Riverside 2008). The white-tailed kite is commonly associated with agricultural areas (Grinnell and Miller 1986), but it also inhabits low-elevation grasslands, savannah-like habitats, open sage scrub, meadows, wetlands, and oak woodlands, particularly in areas with a dense population of voles (Waian and Stendell 1970). Riparian areas adjacent to open space areas are typically used for nesting (County of Riverside 2008), and kites prefer dense, broad-leafed deciduous trees for nesting and roosting (Brown and Amadon 1968). They prey mostly on small mammals, with voles and other small rodents making up approximately 95% of

their diet, but they occasionally take birds, insects, reptiles, and amphibians. White-tailed kites hunt in the morning and late afternoon for voles and mice, usually near farmlands.

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). Peak breeding occurs from May to August and females lay three to five eggs, incubating for approximately one month (Zeiner et al. 1990a).

White-tailed kites do not generally migrate, but are sometimes nomadic and dispersive outside of the breeding season. It is common to see large communal roosts of white-tailed kites (Unitt 2004).

One white-tailed kite was recorded during the second pass of avian point count surveys. Suitable nesting habitat is located within the riparian corridors and additional suitable foraging or nesting habitat is located in the vicinity of the Preserve. This species was not observed nesting or exhibiting nesting behavior. There was an old raptor nest located in the riparian corridor along the eastern region of the Preserve, but it was not clear which species utilized this nest.

3.3.2.3 Mammals – Small Mammals

Dulzura pocket mouse (*Chaetodipus californicus femoralis*)

California Species of Special Concern, County Group 2

Dulzura pocket mouse inhabits coastal scrub, chamise-redshank, montane chaparral, sagebrush, grassland, valley foothill hardwood, valley foothill hardwood-conifer, and montane hardwood habitats from San Francisco Bay to Mexico (Zeiner et al. 1990b). Dulzura pocket mouse eats the seeds of annual grasses and forbs, as well as insects and leafy vegetation in brushy areas, while foraging mainly from the ground (Zeiner et al. 1990b). The pocket mouse is nocturnal and reduces activity during cold winters (Zeiner et al. 1990b). Between April and June, four offspring are usually born in the burrows pocket mice dig in soft soil (Zeiner et al. 1990b).

A total of 47 individual Dulzura pocket mice were captured during small mammal trapping in the Preserve. This species was detected during both trapping sessions at all trapping locations within the Preserve.

Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)

California Species of Special Concern, County Group 2

The northwestern San Diego pocket mouse occurs mainly in the arid coastal and desert border areas of San Diego County, but also occurs in parts of Riverside and San Bernardino Counties, from sea level to 1,829 meters (6,000 feet) AMSL. It inhabits coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush,

desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland, usually in sandy herbaceous areas with rocks or coarse gravel (Zeiner et al. 1990b). The northwestern San Diego pocket mouse feeds mostly on the seeds of forbs, grasses, and shrubs, but also eats some insects. Northwestern San Diego pocket mice carry seeds in cheek pouches and store them in and around their burrows (Zeiner et al. 1990b). The northwestern San Diego pocket mouse generally breeds from March to May with an average of four young per litter (Zeiner et al. 1990b).

Nineteen individual northwestern San Diego pocket mice were captured during small mammal trapping in the Preserve. This species was detected during both trapping sessions at both trapping locations.

San Diego desert woodrat (*Neotoma lepida intermedia*)

California Species of Special Concern, County Group 2

Desert woodrats are found in a variety of shrub and desert habitats and are primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth (Bleich 1973; Bleich and Schwartz 1975; Cameron and Rainey 1972; Thompson 1982). Desert woodrats are noted for their opportunistic and flexible behavior, using various materials, such as twigs and other debris (e.g., sticks, rocks, and dung), to build elaborate dens, or middens, which typically include several chambers for nesting and food, as well as several entrances.

Desert woodrats are primarily herbivorous, and their diet may include leaves, seeds, berries, parts of flowers, and yucca shoots (Cameron and Rainey 1972). This species is impacted by edge effects, primarily relating to increased predation from cats or other mesopredators.

Two San Diego desert woodrats were recorded during the second session of small mammal trapping one woodrat was captured within each of the arrays.

3.3.2.4 Mammals – Large Mammals

Mule deer (*Odocoileus hemionus*)

County Group 2, MSCP Covered Species

Mule deer occur throughout California and much of the Western United States and Great Plains, north into Canada, and south to the southern end of the Mexican Plateau. Mule deer inhabit a broad range of habitats, including agricultural and suburban areas, desert, woodlands, forests, grassland, herbaceous vegetation communities, savanna, shrubland, and chaparral. Mule deer are herbivorous and browse on a variety of woody plants, grasses, and forbs (NatureServe 2012). Mating typically peaks late November to mid-December, and births occur from May to August (NatureServe 2012).

Although this species is not considered special-status or declining in its range, mule deer is covered under the MSCP, because it is San Diego County's only large herbivore, and it performs important ecosystem functions. This species also has aesthetic and intrinsic conservation values.

Mule deer were observed on the western wildlife camera installed within the Preserve. Mule deer tracks were observed throughout the Preserve, as well.

3.3.2.5 Mammals – Bats

Pallid bat (*Antrozous pallidus*)

California Species of Special Concern, County Group 2

The pallid bat is locally common in arid deserts (especially the Sonoran life zone) and grasslands throughout the Western United States and also occurs in shrublands, woodlands, and forests at elevations up to 2,440 meters (8,000 feet) (Hermanson and O'Shea 1983; Hall 1981). Although this species prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging, it has been observed far from such areas (Hermanson and O'Shea 1983).

Pallid bats forage for a variety of insects, including flightless arthropods picked up from the ground (e.g., scorpions and ground crickets), insects gleaned from vegetation (e.g., cicadas), insects taken in flight, and small vertebrates, such as horned lizards and pocket mice, that are taken on the ground.

Pallid bats were detected at the South bat survey station during both survey passes and at the North bat survey station only during the June survey pass.

Pocketed free-tailed bat (*Nyctinomops femorosaccus*)

California Species of Special Concern, County Group 2

The pocketed free-tailed bat inhabits pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Pocketed free-tailed bats roost in rock crevices, caverns, or buildings, and they feed on flying insects, especially large moths, detected by echolocation (Zeiner et al. 1990b). Pocketed free-tailed bat occur in San Diego, Riverside, and Imperial counties and are more common in Mexico. Pocketed free-tailed bats bear a single litter with one young in June and July, peaking in late June (Zeiner et al. 1990b).

Pocketed free-tailed bats were detected at the South bat survey location during both survey passes and at the North bat survey location during the June survey pass only.

Western mastiff bat (*Eumops perotis californicus*)

California Species of Special Concern, County Group 2

The western mastiff bat is found in the San Joaquin Valley and coastal ranges from Monterey County south through Southern California and from the coast eastward to the Colorado Desert in open, arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, and desert scrub (Zeiner et al 1990b). The western mastiff bat is nocturnal and feeds while in flight on small low-flying insects (Zeiner et al. 1990b). Greater western mastiff bats typically roost alone in rock crevices, trees, on cliff faces or buildings (Zeiner et al. 1990b). Reproduction begins in spring, and one offspring is produced each year (Zeiner et al. 1990b).

Western mastiff bats were detected at the North bat survey station during both survey passes and at the South bat survey station only during the June survey pass.

Western red bat (*Lasiurus blossevillii*)

California Species of Special Concern, County Group 2

The western red bat occurs in California from Shasta County to the Mexican border and west of the Sierra Nevada/Cascade crest and deserts. Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests (Zeiner et al. 1990b). The species feeds over a wide variety of habitats, including grasslands, shrublands, open woodlands, forests, and croplands. The western red bat is not found in desert areas. It roosts primarily in trees and, less often, shrubs in edge habitats adjacent to streams, fields, or urban areas. The western red bat prefers edges or habitat mosaics that have trees for roosting and open areas for foraging.

Western red bats were detected at the North bat survey station during the June survey pass and at the South bat survey station during the September survey pass.

Western yellow bat (*Lasiurus xanthinus*)

California Species of Special Concern

The western yellow bat occurs as a year-long resident in California from the Los Angeles and San Bernardino Counties south to the Mexican border, primarily below elevations of 600 meters (2,000 feet) (Zeiner et al. 1990b). Habitats that this species occupies include valley foothill riparian, desert riparian, desert wash, and palm oasis (Zeiner et al. 1990b).

Western yellow bats were detected at both North and South survey locations during the September survey pass.

Western small-footed myotis (*Myotis ciliolabrum*)

County Group 2

Western small-footed myotis is found from Coastal California south of Contra Costa County to the Mexican border and occurs throughout the Central Valley, slopes of the Sierra Nevadas, and desert habitats (Zeiner et al. 1990b). Arid habitats are generally preferred by this species, including brushy uplands near water sources. The western small-footed myotis has been observed to drink water soon after emerging from roosting areas at dusk. Caves, buildings, mines, bridges, and other crevices are frequent roosting areas and may be occupied by individuals or a larger group (Zeiner et al. 1990b).

Western small-footed myotis were detected at both North and South survey locations during both survey passes.

Yuma myotis (*Myotis yumanensis*)

County Group 2

Yuma myotis occurs throughout California but is uncommon in the Mojave and Colorado desert regions, except the mountain ranges bordering the Colorado River Valley. They can be found in many habitat types but prefer open forests and woodlands with sources of water they can forage over (Zeiner et al. 1990b). Yuma myotis ranges from sea level to 3,353 meters (11,000 feet) AMSL but is generally found below 2,438 meters (8,000 feet) (Zeiner et al. 1990b). Yuma myotis roosts in groups of several thousand individuals in caves, buildings, mines, and under bridges (Zeiner et al. 1990b). Reproduction for Yuma myotis begins in the fall, and a single litter of one young is born sometime between May and June (Zeiner et al. 1990b).

Yuma myotis were detected at both North and South survey locations during both survey passes.

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

Seven 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 B.

3.3.3.1 Invertebrates

Quino checkerspot butterfly (Euphydryas editha quino)

Federally Endangered, County Group 1

Within the Preserve there is suitable habitat for this species including open chaparral habitat, ridgelines, and sloping hills. The nearest recorded observations of Quino

include 2 miles east of the Preserve near the community of Alpine Heights observed in 2003 (Susan Wynn, pers. comm. 2013); 2 miles southwest of the Preserve north of the Singing Hills Golf Course observed in 2010 (Susan Wynn, pers. comm. 2013); and 8.67 miles southwest of the Preserve at the San Diego National Wildlife Refuge (CDFW 2012).

Hermes copper butterfly (*Lycaena hermes*)

County Group 1

There is a high potential for this species to occur on-site because suitable habitat, including a matrix of spiny redberry and California buckwheat is present on the Preserve. The nearest recorded observations of Hermes copper include approximately 1 mile southwest of the Preserve at the Crestridge Ecological Preserve prior to the 2003 Cedar Fire (Susan Wynn, pers. comm. 2013) and 3.6 miles from the Preserve at Loveland Reservoir (Deutschman et al. 2010).

3.3.3.2 Herpetofauna

Coastal rosy boa (*Lichanura trivirgata roseofusca*)

County Group 2

Within the Preserve, there is suitable coastal sage scrub and chaparral habitat with rocky outcrops. Riparian woodland within the Preserve would also serve as suitable habitat for this species.

3.3.3.3 Birds

Bell's sage sparrow (*Amphispiza belli belli*)

CDFW Watch List, County Group 1

There is suitable dry chaparral and coastal scrub habitat within the Preserve for Bell's sage sparrow.

Yellow warbler (*Dendroica petechia brewsteri*)

California Species of Special Concern, County Group 2

There is suitable riparian habitat within the Preserve to support this species during the summer months.

3.3.3.4 Mammals

Townsend's big-eared bat (*Corynorhinus townsendii*)

California Species of Special Concern, County Group 2

There is potential for this species to occur within the Preserve, as there are suitable mesic habitats for foraging, and nearby residential areas may provide suitable roosting sites.

Pallid San Diego pocket mouse (Chaetodipus fallax pallidus)

California Species of Special Concern, County Group 2

There is suitable chaparral habitat on site for this species, including friable soils. Although this species was not recorded during the 2012 small mammal trapping efforts, there is potential that this species occurs in the Preserve.

Mountain lion (Puma [=Felis] concolor)

County Group 2, MSCP Covered Species

The Preserve is located within a known wildlife movement corridor and suitable habitat for this species occurs throughout the Preserve.

3.3.4 Non-native and/or Invasive Wildlife Species

Four brown-headed cowbird individuals were detected on the Preserve during 2012 surveys. This species is a brood parasite that adversely affects native passerine populations, such as California gnatcatcher, common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), and hooded oriole (*Icterus cucullatus*) (Unitt 2004).

3.4 Overall Biological and Conservation Value

The Preserve is located in the Dehesa to El Capitan Reservoir MSCP linkage providing a connection between El Capitan Reservoir and Cleveland National Forest with open space areas in south-central San Diego County, such as the San Diego National Wildlife Refuge. The Preserve provides an important open space linkage between preserved lands, including conserved open space owned by Endangered Habitats Conservancy to the northeast and southwest and California Department of Fish and Wildlife's Crestridge Ecological Reserve to the northwest.

The habitat evaluation map ranks habitat areas as Very High, High, Moderate, or Low based on their potential to support priority coastal California gnatcatcher

habitat, and wildlife corridors. According to the MSCP Habitat Evaluation Model, the majority of the habitat within the Preserve is rated as very high to high value.

The coast live oak woodland within the Preserve is considered MSCP Tier I habitat and supports several special status species including San Diego sagewort, Engelmann oak, coast horned lizard, barn owl, and southern California rufous-crowned sparrow. Coastal sage scrub is found covering a majority of the Preserve and is considered MSCP Tier II habitat and supports San Diego County viguiera, rush-like bristleweed, orange-throated whiptail and Cooper's hawk. Coastal sage – chaparral scrub is located in the northwest, central, western, and southeastern portions of the Preserve and is considered MSCP Tier II habitat and supports San Diego County viguiera, Engelmann oak, Dulzura pocket mouse, northwestern San Diego pocket mouse, Yuma myotis, and western mastiff bat.

3.4.1 Wildlife Linkages and Corridors

The Preserve is located within a biological linkage (Linkage I – Dehesa to El Capitan Reservoir also known as Harbison Canyon/Stepping Stone) identified by the MSCP, which connects the El Capitan Reservoir and Cleveland National Forest with open space areas in south-central San Diego County, such as the San Diego National Wildlife Refuge. This corridor is somewhat fragmented given the development pressures of this region, particularly from the north and west. Specifically, urban and agricultural development borders this corridor in some areas, which constricts wildlife movement.

The Preserve is bordered to the north and east by Mountain View Road, a main thoroughfare for the Crest, Harbison Canyon, and Dehesa communities. There are no wildlife culverts or other wildlife crossings in place on either road that bounds the Preserve, Mountain View Road, or Harbison Canyon Road, which most likely functions to limit some wildlife crossing into adjacent open areas. Although these roads certainly serve as barriers to movement, the presence of a two-lane road is not expected to impede large and medium wildlife movement out of the Preserve through open space areas and low-density residential to the north, northeast, south, and east. These roads are not highly traveled by vehicles, are not very wide, and offer sufficient cover. There was observation of one deer crossing Harbison Canyon Road to the east during the 2012 surveys. These roads are expected to be more of a barrier to small mammal species through direct mortality and indirect barrier effects to species that are behaviorally sensitive to roads.

It is presumed that wildlife also accesses the Preserve through the west and southwest, as only residential roads are found in that region. Wildlife camera data, track and scat observations, and visual observations of mule deer, bobcat, and coyote indicate that the Preserve is utilized by wildlife, and that access is provided through existing adjacent open-space areas.

4.0 CULTURAL RESOURCES

Archaeological evidence reveals that San Diego County has a long cultural history beginning approximately 10,000 years ago. The following cultural background discusses the characteristics of each cultural period of prehistory and history. The information provided in Section 4.1 includes excerpts from the County of San Diego Guidelines for Determining Significance: Cultural Resources: Archaeological and Historic Resources (County 2007) and the Archaeological Survey Report for the Stoneridge Preserve (ASM 2012).

San Diego County is characterized by a rich and varied prehistoric and historic past. Cultural resources which reflect this history consist of: archaeological sites, historic structures, artifacts, rock art (i.e., pictographs and petroglyphs), photographs, traditional tribal cultural knowledge and oral traditions, oral histories, ethnographic accounts, sacred sites, traditional cultural properties, and public documents. This RMP discusses the known cultural resources within the Property and describes management recommendations for handling these sensitive resources.

In 2012, a Phase I archaeological survey and site inventory was completed for the Preserve in compliance with the County of San Diego Guidelines for Determining Significance: Cultural Resources: Archaeological and Historic Resources (County 2007) to assist in land use and resource protection planning. The results of this study can be found in the report entitled, "*Archaeological Survey Report for the Stoneridge Preserve, San Diego County, California"* (ASM 2012) attached as Appendix C. The report included a records search, literature reviews, archival research, historic map review, Native American consultation, field survey, and resource documentation. The information provided in the report was used in the preparation of this RMP.

4.1 Site History

The body of current research of Native American (Pre-Contact) occupation in San Diego County recognizes the existence of at least two major cultural traditions, Early Period/Archaic and Late Period, based upon general economic trends and material culture. Within San Diego County, the Early Period/Archaic includes the period from 10,000 to 1,300 years ago, while the Late Period is from 1,300 years ago to historic (Spanish) contact. The Post-contact/Historic Period covers the time from Spanish contact to present.

4.1.1 Pre-Contact

The antiquity of human occupation in the New World has been the subject of considerable debate over the last few decades. The most widely accepted model currently is that humans first entered the western hemisphere between 13,000 and 10,000 B.C. The generally accepted archaeological record begins with the Clovis pattern, a widespread phenomenon in North America. Noted for its distinctive tool kit characterized by fluted projectile points, Clovis occupation dates to the end of the

Pleistocene, around 11,500 B.C. (Meltzer 1993). Although no substantial Clovis sites are documented in the region, occasional isolated fluted points have been recovered in southern California (e.g., Kline and Kline 2007; Rondeau et al. 2007).

Early Period/Archaic

Within San Diego County, Early Period/Archaic archeological sites date from 10,000 to 1,300 years ago and include coastal and inland valley habitation sites, inland hunting and milling camps, and quarry sites. Though various culture traits developed or disappeared during the long span of 10,000 to 1,300 years ago, there is a clear pattern of cultural continuity during this period. The absence or near-absence of milling tools in during this time was often viewed as a major difference between the Early Period/Archaic and the lifeways which characterized the Late Period. Other distinctions between the two periods include: a high frequency of shaped manos; the presence of finely worked small domed scrapers; the presence of knives and points and discoidals and cogged stones; a predominance of deep basin metates over slab metates; a predominance of volcanic rock over quartzite as a source material for flaked lithics; an extreme scarcity of obsidian; and flexed burials.

Late Period

A material culture pattern, similar to that of historic Native Americans, first becomes apparent in the archaeological record during the Late Period (circa 1,300 to historic contact). The economic pattern during this period appears to be one of more intensive and efficient exploitation of local resources. The prosperity of these highly refined economic patterns is well evidenced by the numerous Kumeyaay/Diegueño and Luiseño habitation sites scattered throughout San Diego County. This increase in Late Period site density probably reflects both better preservation of the more recent archaeological record and a gradual population increase within the region. This period was characterized by the appearance of small, pressure-flaked arrow points (Cottonwood triangular, Desert side-notched, and Dos Cabezas serrated forms) indicative of a bow-and-arrow technology, the appearance of ceramics, the establishment of permanent or semi-permanent seasonal village sites, the presence of obsidian from the Imperial Valley source Obsidian Butte, the replacement of flexed inhumations with cremations, extensive use of the mortar and pestle, and an emphasis on collecting and processing inland plant foods, especially acorns

4.1.2 Post-Contact

The history of San Diego County is commonly presented in terms of Spanish, Mexican, and American periods. Certain themes are common to all periods, such as the development of transportation, settlement, and agriculture.

Spanish Period (1769-1821)

The Spanish Period represents exploration, the establishment of the San Diego Presidio and missions at San Diego (1769) and San Luis Rey (1798), and *asistencias* (chapels) to the San Diego Mission at Santa Ysabel (1818) and to the San Luis Rey Mission at Pala (1816). Horses, cattle, agricultural foods and weed seeds, and a new architectural style and method of building construction were also introduced. Spanish influence continued after 1821 when California became a part of Mexico. For a period of time under Mexican rule, the missions continued to operate as in the past, and laws governing the distribution of land were also retained.

Mexican Period (1821-1848)

The Mexican Period includes the initial retention of Spanish laws and practices until shortly before secularization of the missions in 1834, a decade after the end of Spanish rule. Although several grants of land were made prior to 1834, vast tracts of land were dispersed through land grants offered after secularization. Cattle ranching prevailed over agricultural activities, and the development of the hide and tallow trade increased during the early part of this period. The Pueblo of San Diego was established and transportation routes were expanded. The Mexican Period ended in 1848 as a result of the Mexican-American War.

American Period (1848 to Present)

The American Period began when Mexico ceded California to the United States under the Treaty of Guadalupe Hidalgo. Terms of the treaty brought about the creation of the Lands Commission, in response to the Homestead Act of 1851 that was adopted as a means of validating and settling land ownership claims throughout the state. Few Mexican ranchos remained intact because of legal costs and the difficulty of producing sufficient evidence to prove title claims. Much of the land that once constituted rancho holdings became available for settlement by immigrants to California. The influx of people to California and the San Diego region resulted from several factors including the discovery of gold in the state, the conclusion of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. The growth and decline of towns occurred in response to an increased population and the economic boom and bust cycle in the late 1800s.

Automobiles became increasingly popular as they became affordable, prompting San Diego County to grade roads to open up the backcountry (Etulain and Malone 1989:40; Kyvig 2004:27). Glenn H. Curtiss flew the first seaplane from North Island in 1911, initiating a growing interest in aviation technologies in San Diego that would later be heightened by Charles Lindbergh's historic flight on the Spirit of St. Louis from Rockwell Field in San Diego to St. Louis, Missouri in 1927. Balboa Park and the San Diego Zoo remained after the Panama-California Exposition in 1915, leaving

San Diegans with city-defining legacies. In 1917, the U.S. Army established Camp Kearney as part of the nationwide campaign for World War I (Engstrand 2005).

While ranching and farming had long been important livelihoods in San Diego County, agriculture increasingly became an important economy. Beekeeping, an agricultural specialty, had long been a part of San Diego's economy, first introduced to southern California in 1869. Sage honey became an important export industry, with shipments sent to eastern and foreign destinations from small or large apiaries located across the county, especially in the backcountry areas of Campo, Poway, Morena, Julian, Potrero, Ramona, Jamul, Flinn Valley, Rainbow Valley, Alpine, Wynola, Sycamore Canyon, and Lakeside (Heilbron 1936:232-234). Avocado and other subtropical fruits were primary crops in coastal San Diego areas and Escondido. Winter vegetables were primarily grown in the southern part of the county, from La Mesa to Flinn Springs and Chula Vista. San Diegans began raising chickens and chicken egg production increased significantly between 1908 and 1912, until demand could no longer be met by local supply. Large producers during the heyday of chicken production (1908-1935) were in Lemon Grove, La Mesa Heights, Spring Valley, Sunnyside, Chula Vista, El Cajon, Lakeside, Escondido, and Ramona (Heilbron 1936; LeMenager 1989:207).

Flourishing agricultural communities existed across the county, with federal and state water development projects, harbor improvements, and high levels of construction curbing some of the effects of the Great Depression. Construction projects for the Navy and Army helped sustain the area. Social changes such as the construction of San Diego State College (1931), the transition from coal-derived gas to natural gas, and the planning and hosting of the World's Fair (1935) also aided in sustaining the San Diego area (Engstrand 2005:147-155). A significant economic impact during the 1929 financial crisis was Reuben H. Fleet's decision to move Consolidated Aircraft from Buffalo, New York to San Diego, a more suitable climate for testing planes. The company brought 800 employees and $9 million in orders (Consolidated Aircraft 2004; Engstrand 2005:151).

Infrastructure improvements to both roadways and railroads in San Diego County became necessary to accommodate new residents, again primarily near defense centers (Oceanside Daily Blade-Tribune, 25 February 1941:1, 20 August 1941:1). In 1956, President Eisenhower authorized an interstate highway system with the Federal-Aid Highway Act, an act that further interconnected multiple state routes for increased interstate traffic flow. According to Iris Engstrand (2005:165), "the automobile affected almost every major decision regarding the direction taken by San Diego planners during the post-World War II decades." A new trend of constructing retail stores outside the city center provided suburban enclaves as more houses filled in the outskirts of the city (Engstrand 2005:165-166). By 1960, 1,033,011 people lived in the county, and between 1950 and 1970, bedroom communities such as El Cajon, Escondido, Chula Vista, and Oceanside experienced a tremendous growth rate (between 214 and 833 percent) (Engstrand 2005:166; U.S. Census Bureau 1960).

4.1.3 Historic Overview of the Stoneridge Preserve

Historic-period uses of the Preserve were limited because of the steep and rugged landscape and lack of reliable water sources. The severe conditions prohibited any intensive use of the land or development. Rather, historic land use primarily focused on transportation to more desirable locations, recreational hiking and off-road vehicle use, and erosion control. Mining took place directly outside of the Preserve, to the west, but no evidence of mining inside the property was identified during the current survey. CA-SDI-20,695, a concrete dam, is present along the drainage paralleling Mountain View Road. Additional modern erosion control is also present within the Preserve in the form of mechanically constructed earthen berms and sandbags. It is not known who constructed the concrete dam or the other recent erosion control features. Modern trash was found at the northern boundary of the project area adjacent to Mountain View Road and along the southern drainage, accessible by Harbison Canyon Road. Evidence of recreational off-road vehicle use is present in the southern portion of the property.

Site History- Harbison Canyon and Crest

Harbison Canyon was homesteaded by the famous local apiarist John Stewart Harbison for whom the area is named. Crest was created in the 1960s from two communities: La Cresta (the northern part of Crest), and Suncrest (the southern part of Crest) (Fetzer 2005:30; San Diego Union 1963, 1966). One of the early settlers in Crest was John H. Dodson, El Cajon's postman in 1895-1901 and again in 1914-1940.

In the early days of present-day Crest, there was not much occurring, according to homesteader John H. Dodson. Similar to many newcomers to San Diego, Dodson moved here to improve his health when his physician had given him six months to live as a consequence of influenza. His brother showed him Crest in 1894, and despite his first impression of the desolate land, he made the area his new home. For a short time he took his horse and buggy and camped out in a brush house near a spring before he bought the homestead. Dodson regained his strength and took on the position of postmaster and justice of the peace in El Cajon, and operated his nursery on his property, Calamity Ranch. He lived on the property in La Cresta until he passed away in 1962 (Dodson 1959:5-6; San Diego Union 1963).

Local rancher and land developer Barney A. Cornelius owned ranches between Crest and Harbison Canyon and was largely responsible for the creation of La Cresta and Suncrest. The Texan moved to the area in 1916 and began ranching. His three ranches, comprised of 1,500 acres, were subdivided and lots were sold in the 1920s and 1930s for seasonal use by auto tourists traveling Highway 80 (Fetzer 2005:30; San Diego Union 1966). Auto tourists in search of relaxation in the wilderness could also travel from Highway 80 to Harbison Canyon to play in the creek along the canyon or stay at the Harbison Canyon Resort at the north end of

the canyon, outside the Preserve (Automobile Club of Southern California 1929; Commercial Finance Corporation n.d.).

Part of the Preserve was homesteaded by John Stewart Harbison and his family in the 1880s. Harbison created the bee industry in San Diego County when he and his partner, R.G. Clark, arrived in 1869 with 110 bee colonies from San Francisco. Harbison had made a name for himself in Sacramento Valley patenting his "California Hive" or "Harbison Hive" in 1857-1858, and became one of the larger beekeepers in the area. Harbison first started out in California as a gold miner from Pennsylvania who sought his fortune in the gold fields, but neither mining nor milling at Sutterville suited him. Instead he opened a nursery from the few fruit trees and seeds he had ordered from the east. Although successful, his interests turned to how he could import bees from his family farm in Pennsylvania. After returning to his family farm for a time, he designed lighter apiary boxes suitable for long distance travel, and arrived in San Francisco with hives to sell. Harbison earned considerable revenues from the business, and soon many others were interested in potential profits from bee keeping. As more people became bee keepers, disease and lower prices affected the new industry. Harbison continued bee keeping and also returned to his nursery business where he focused on specialty trees and other nursery products. In 1869, Harbison joined forces with R.G. Clark to establish a beekeeping business in San Diego. In the 1870s, beekeepers were located throughout the county but were concentrated most often in backcountry valleys, where black and white sage bushes were the ideal flora for honey-making. By 1874, the beekeeping and honey production business was well established and thriving. It had become a major industry in the County; keeping sawmills busy making equipment for beekeepers. Honey production had become a San Diego County export to eastern markets, and Harbison's brand made its way into stores in Chicago and from Boston to Baltimore. At that time, Harbison, his wife Mary, and their daughter Florence moved to the southern part of present-day Harbison Canyon near the Sweetwater River and established their 700-acre home apiary. They made it their primary residence for a short time. In December 1875, the family also constructed their two-story house at the corner of 12th and C and made it their primary residence beginning in early 1876. Harbison remained active in the bee industry in the 1880s, but he also had extensive real estate holdings and orchards. Although most of his hives were rented out by then, Harbison continued to work at his Sweetwater apiary until at least 1905, and he still owned a few when he died at his main residence in downtown San Diego in 1912 (Davidson 1936; Watkins 1969; Wilson 1883:7).

By 1928, Harbison Canyon was under development as a new rural residential community with larger lots. Streets had been graded, and some houses were constructed (Tax Factor 1928). Rural residential development began in both Harbison Canyon and Crest in the 1920s. While Crest and Harbison Canyon retained a rural character for many years, the pace of infill in Harbison Canyon and Crest quickened between 1953 and 1964 (Nationwide Environmental Title Research 1953, 1964).

Early Land Ownership and Uses

An 1858 General Land Office survey indicated that the Preserve was difficult terrain and was characterized as impassable mountains. A trail already provided access to Harbison Canyon (General Land Office 1859, 1881a). Earliest homesteaders settled in the project area in the 1890s in the SE¼ of Section 35 and the SW¼ and the S½ of the NW¼ of Section 36, Township 15 South, Range 1 East. Owen V. Jarrett patented 322 acres as a Homestead Entry that included the Preserve in the SE¼ of Section 35 Township 15 South, Range 1 East and the N½ of the N½ of Section 2, Township 16 South, Range 1 East. Wilbur T. Carson patented land that included the NW¼ of the NW¼ of the NW¼ of Section 1, Township 16 South, Range 1 East. Land within Section 36, Township 15 South, Range 1 East was set aside as school grant land in May 1881, a common practice by the federal government whereby sections 16 and 36 of townships were set aside for public schools (General Land Office 1881b, 1891, 1931).

In 1885, famous local bee man James Stewart Harbison applied for 360 acres in the NE¼ of the NE¼, the SW¼ of the NE¼, the SE¼ of the NW¼, the W½ of the NW¼, the N½ of the SW¼, the SW¼ of the SW¼, and SE¼ of the SE¼ of Section 36, Township 15 South, Range 1 East. The property included his apiary operations in Harbison Canyon and a portion of the Preserve (Tax Factor 1928). Harbison finally patented the School Grant land on May 27, 1907 (State of California 1885, 1907). By 1910, Harbison still owned most of Section 36, Township 15 South, Range 1 East, excluding the NE¼ of the NW¼ and the NW¼ of the NE¼. Kate Dixon had owned that portion of Section 36, Township 15 South, Range 1 East in 1896. In 1912, Harbison passed away (Alexander 1910; San Diego County 1896; San Diego Union 1912). Homesteaders had not patented the SE¼ of Section 36, Township 15 South, Range 1 East in 1891, 1896, or 1910 (Alexander 1910; San Diego County 1891, 1896). No structures or roads were present in the Preserve according to a 1903 topographical map (United States Geological Survey 1903).

No mining operations were identified in or near the Preserve in 1902 (Aubry 1902). A northwesterly trending road across the Preserve existed in 1928 and portions of this road remain today (Tax Factor 1928). In 1963, the Hoover Deposit had been developed west of the Preserve. The feldspar mined there could have been used for typical commercial items such as glass or ceramics (Industrial Minerals Association, North America 2009; Weber 1963). Over the years, the Preserve remained relatively undeveloped except for some secondary trails or roads (Nationwide Environmental Title Research 1953, 1964; Tax Factor 1928).

4.2 Native American Consultation

ASM contacted the Native American Heritage Commission (NAHC) on March 20, 2012 to request a search of their Sacred Lands File for any recorded traditional cultural properties or Native American heritage sites within the Preserve. On March 21, 2012, the NAHC responded that Native American cultural resources were not

identified in the project area. The NAHC also provided a list of all Native American tribal representatives who may have further knowledge of such sites within the project area. On March 28, 2012, ASM contacted those tribal representatives by letter to solicit further information.

On April 17, 2012, Lisa Haws, the Environmental and Cultural Manager for the Sycuan Band of the Kumeyaay Nation contacted ASM by phone and email to discuss the project. She asked to receive further information regarding the project location and to be emailed directly concerning upcoming projects. Subsequently on April 17, 2012, ASM provided Ms. Haws, via email, with the exact project location and project description. On May 17, 2012 Daniel Tucker, Chairman of the Sycuan Band of the Kumeyaay Nation, responded, by mail, that the Sycuan Band requested a Kumeyaay cultural monitor be present during the study and any ground-disturbing activities, and that Sycuan be provided with digital copies of all reports. ASM contracted Redtail Monitoring and Research to provide a Kumeyaay cultural monitor to be present during the study. Gabe Kitchen, of Redtail Monitoring and Research was present during the duration of the study. To date, no additional responses to these letters have been received. All documentation pertaining to the NAHC and tribal representatives is included in Appendix C.

4.3 Cultural Resource Descriptions

In both the prehistoric and historical periods, settlement within the area focused primarily in the nearby Harbison Canyon, Dehesa Valley, and the San Diego River and Sweetwater River valleys. The vast majority of land within the project area has a slope of 20 percent or greater, as it is located on the steep ridges and hilltops of the foothills of the Peninsular Ranges.

4.3.1 Prehistoric Resources

No prehistoric archaeological sites were identified during current survey efforts by ASM; however, several bedrock milling features have been previously recorded outside of the Preserve within the 0.25-mile study area (ASM 2012). Three bedrock milling features are located within an unnamed drainage extending outside of the Preserve. Due to the very steep and rugged nature of the Preserve and the lack of water sources, apart from the seasonal drainages, it is likely that prehistoric habitation and activity sites are located in the vicinity, but outside of the Preserve boundaries.

Functionally, prehistoric uses of the area probably played a subordinate role to more habitable areas in the surrounding vicinity. However, it is possible that prehistoric resources are located within the drainage bottoms and ridge tops within the Preserve, but were obscured by dense native and non-native vegetation during the current survey. Due to the steep and rugged landscape characterizing the Preserve, it is likely that the area was traversed prehistorically in order for people to reach more resource-rich and hospitable locations. While no prehistoric cultural resources

have been recorded, the project area is nonetheless part of a broader prehistoric settlement pattern within the foothills of the Peninsular Ranges.

4.3.2 Historic Resources

CA-SDI-20,695 (P-37-032657)

The resource consists of a historic/modern concrete dam and associated metal pipes and drains. The concrete dam spans the unnamed drainage running parallel to Mountain View Road. It measures approximately 116 ft. long, 27 ft. wide, and, at its highest, 10 ft high. The southeast wall of the dam slopes upward 10 to 8 ft. in height. The dam has a flat top, approximately 10 ft. wide, and then slopes downward 4 to 5 ft. along the northwestern side of the dam. A corrugated metal pipe extends through the dam. The concrete is in good condition and appears to have been replaced or overlaid with newer concrete in recent years. Imported rock rip-rap is present on both sides of the dam and a metal drain and wooden plank are present along the northwestern wall of the dam. The dam is visible on the historical aerial photograph of the area taken in 1971, but not present on the 1968 aerial photograph, and no other aerial photographs show historic buildings or structures within the Preserve (Historicaerials.com 1953, 1964, 1968, 1971, 1980, 1989, 2003, and 2005). Therefore, the dam was constructed between 1968 and 1971 and is between 41 and 44 years old as of the date of this RMP.

4.4 Resource Significance

Table 5 summarizes the current eligibility status of resources within the Preserve. The one cultural resource identified within the project area, CA-SDI-20,695, has been recommended not eligible for significance under CEQA for the CRHR, the Local Register, or under County Guidelines (County 2007). The resource fails to meet the age threshold for eligibility, it is neither historically nor architecturally significant, it is not known to be associated with any important events or individuals in terms of local, state or national history, it does not embody the distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master architect or craftsman.

CA-SDI-20,695 has not yet reached the age threshold for NRHP and CRHR eligibility; however, it was recorded to facilitate future planning within the Preserve. Resources younger than 50 years can be found significant per the County guidelines (County 2007) if sufficient time has passed to understand their historical importance. ASM recommends that the dam not be found eligible to the NRHP, CRHR, or the Local Register as it is neither historically nor architecturally significant. It does not meet the age threshold usually necessary for eligibility. It is not known to be associated with any important events or individuals in terms of local, state or national history. Moreover, it does not embody the distinctive characteristics of a type, period or method of construction, nor does it represent the work of a master architect or craftsman.

Table 5. Eligibility Status of Resources within the Preserve

Site Number	Era	Site Contents	Eligibility Status
Newly Recorded Site			
CA-SDI-20,695 (P-37-032657)	Modern/Historic	Concrete dam	Not eligible to the CRHR or Local Register. Does not meet age eligibility since less than 50 years of age and not historically important.

5.0 RESOURCE MANAGEMENT

5.1 Management Goals and Objectives

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

5.1.1 MSCP-Related

The MSCP Plan and the County's SAP provide both general and segment-specific goals and objectives. The Preserve is located within the Metro-Lakeside-Jamul Segment of the MSCP SAP and, as discussed in Section 3.4, lies within the South County Subarea Plan designated Dehesa to El Capitan Reservoir Linkage. This linkage provides a connection between El Capitan Reservoir and Cleveland National Forest. The overall MSCP goal is to maintain and enhance biological diversity in the region and conserve viable populations of endangered, threatened, and key sensitive species and their habitat, thereby preventing local extirpation and ultimate extinction. This is intended to minimize the need for future listings, while enabling economic growth in the region.

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

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

5.1.2 Management Directives and Implementation Measures

Based on the above management goals and objectives, recommended management directives have been identified. In accordance with the Framework Management Plan, the guidance ASMDs have been designated as Priority 1 or Priority 2. This designation recognizes the fact that many of the directives cannot be immediately implemented, but instead will occur over the life of the MSCP. The ability to

implement and the timing of many of the management directives will be directly related to the availability of funding in any fiscal year and on the priority. The priorities are, therefore, intended to assist in decisions on where and how to spend limited funds. Priority designations are as follows:

> Priority 1: Directives that protect the resources in the Preserve and the MSCP Preserve, including management actions that are necessary to ensure that sensitive species are adequately protected.
>
> Priority 2: Directives other than those required for sensitive species status and other long-term items that may be implemented during the life of the MSCP as funding becomes available.

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

5.2 Biological Resources Element (A)

5.2.1 Biological Monitoring

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

Monitoring at a 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 covered species in accordance with Table 3-5 of the MSCP, the SAP's Framework Management Plan and DPR's Comprehensive Monitoring Plan (CMP - under preparation) 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 San Diego Association of Governments (SANDAG) land management working group, San Diego Management and Monitoring Program (SDMMP), has been formed and will designate a land manager who will assist jurisdictions in coordinating monitoring programs, analyzing data, and providing other information and technical assistance. A Connectivity Monitoring Strategic Plan has been developed by SDMMP for the San Diego Preserve System (SDMMP 2011). This Plan provides direction for connectivity monitoring that helps assess if the dual goals of the MSCP and the Multiple Habitats Conservation Program (MHCP) are being achieved, and for identifying and informing adaptive management actions to maintain, restore or improve connectivity between conserved core areas in San Diego County. The Plan will be reviewed with relevance to the Preserve.

The County is an active participant with SDMMP in the development of revised monitoring methods for the MSCP SAP. Concurrently, DPR is preparing a CMP that prioritizes monitoring methods and management directives for County owned preserves in the MSCP SAP. The CMP will utilize references, such as USGS monitoring protocols for rare plants (McEachern et al. 2007), SDSU habitat and vegetation monitoring protocols (Deutschman and Strahm 2009), and USFWS monitoring protocols for animals (USFWS 2008).

The guidance ASMDs below currently follow the habitat- and species-specific monitoring requirements outlined in Table 3-5 of the Subregional MSCP Plan (City of San Diego 1998) and the San Diego State University (SDSU) Grouping and Prioritization Report for MSCP covered species (Regan et al, 2006). Detailed monitoring methods will be included in the Comprehensive Monitoring Plan.

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

***Implementation Measure A.1.1*:** DPR will conduct habitat monitoring on 5-year intervals within the Preserve, and annually for 5 years after a burn. Ongoing monitoring within the Preserve will identify any adverse changes in vegetation community distribution and habitat quality, such as changes from fire, invasion by nonnatives, 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 assess trends, relative abundance, and distribution status. Wildlife surveys will be performed during the flight season of Quino checkerspot butterfly if feasible. Particular focus will be paid to species with a high potential to occur as listed in

Sections 3.2.3 and 3.3.3. In addition, wildlife surveys will include observation of the old raptor nest located in the riparian corridor located along the eastern region of the Preserve to determine what species may be using the nest. All survey information will be included in the monitoring report.

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

***Implementation Measure A.1.4*:** DPR will conduct corridor monitoring at five-year intervals in conjunction with habitat monitoring and general wildlife and rare plant surveys (as described in implementation measures A.1.1 and A.1.2). The 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 assessment of habitat linkage function, including a list of species detected, will be included in the monitoring report.

Implementation Measure A.1.5: DPR will prepare a biological monitoring report that summarizes the monitoring goals, objectives, methodology, and results of the biological monitoring efforts described in implementation measures A.1.1 to A.1.4. The report will also address the effectiveness of current stewardship and management actions, identify the need for corrective actions, and include recommendations for adaptive management.

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.

However, there are some special-status species listed as MSCP-covered and County-listed species, require additional measures. Table 3-5 of the Subregional MSCP Plan (City of San Diego, 1998) provides specific management and/or monitoring measures that are conditions of coverage for MSCP covered species.

In addition, in the document *San Diego Multiple Species Conservation Program Covered Prioritization* (Regan et al., 2006), SDSU has prioritized the MSCP-covered species for monitoring. The species were classified as Risk Group 1 (most endangered), Risk Group 2 (moderately endangered), and Risk Group 3 (less endangered). Next, the threats/risk factors facing the species were identified and ranked as high, moderate, or low degree of threat to the species. Only management

conditions addressing high and moderate threats for Risk Group 1 species will be discussed in this RMP. No Risk Group 1 species are currently present on the Preserve.

The top management issues at the Preserve include protecting the riparian habitat for water quality and sensitive species. This will include the removal of invasive, nonnative species including Tamarisk and pampas grass. Another top management issue will be to maintain and enhance the viability of the Preserve's MSCP-covered resources (e.g., coastal California gnatcatcher, orange-throated whiptail, mule deer, and rare plants).

Management Directive A.2 - Comply with applicable conditions of coverage for MSCP Covered Species (*Priority 1*)

DPR will implement habitat based and, in some cases, species specific monitoring and management as outlined in Table 3-5 of the Subregional MSCP Plan and *San Diego Multiple Species Conservation Program Covered Species Prioritization* (Regan et al., 2006) for all MSCP Covered Species detected within the Preserve.

In order to avoid repetition, the following is a list of common risk/threats to MSCP Covered Species that are found to benefit from habitat based management and the corresponding management directives or implementation measures to address these factors:

- ***Invasive non-native plants*:** Implementation measure A.1.3 and management directives B.1 and B.2
- ***Invasive non-native animals*:** Multiple implementation measures under management directive A.3
- ***Wildfires*:** Multiple implementation measures under management directive B.3.
- ***Edge effects*:** Multiple implementation measures under management directives D.6 and D.7.

Coast horned lizard (*Phrynosoma cornonatum*)

Monitoring: Table 3-5 - Site Specific, SDSU - Risk Group 3

Monitoring efforts will include habitat monitoring and general wildlife surveys (as described in implementation measures A.1.1 and A.1.2).

Management Conditions: Table 3-5

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

No Argentine ants were observed within the Preserve in 2012; however, future detection will be addressed by general wildlife surveys (as described in implementation measure A.1.2). Edge effects are addressed through multiple implementation measures under management directives D.6 and D.7.

Orange-Throated Whiptail (*Cnemidophorus hyperythrus beldingi*)

Monitoring: Table 3-5 - Site Specific, SDSU - Risk Group 3

Monitoring efforts will include habitat monitoring and general wildlife surveys (as described in implementation measures A.1.1 and A.1.2).

Management Conditions: Table 3-5

The management approach for this species is maintenance of suitable habitat (chaparral and sage scrub) within the Preserve. These habitats will be managed to reduce the threat of fire and invasive non-native species. In addition, management of these habitats also addresses edge effects as a condition of Table 3-5.

Coastal California Gnatcatcher (*Polioptilia californica californica*)

Monitoring: Table 3-5 – Area Specific Management Directives, SDSU – Risk Group 2

Management Conditions: Table 3-5

Area Specific Management Directives must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to maintain or improve habitat quality including vegetation structure. No clearing of habitat within the County's Biological Resource Core Areas may occur between March 1 and August 15.

Edge effects are addressed through implementation measure C.6.1, multiple implementation measures under management directives D.6 and D.7. Fire management is addressed through implementation measures under management directive B.3.

Cooper's Hawk (*Accipiter cooperii*)

Monitoring: Table 3-5 - Habitat Based, SDSU - Risk Group 3

Monitoring efforts include habitat monitoring and general wildlife surveys (as described in implementation measures A.1.1 and A.1.2).

Management Conditions: Table 3-5

The management approach for this species is maintenance of suitable foraging (upland and riparian habitats) and nesting habitat (oak woodland) within the Preserve. These habitats will be managed to reduce the threat of fire and invasive non-native plants, and maintain hydrology. In addition, management of these habitats will include 300-foot impact avoidance areas around any active nests, and minimization of disturbance in oak woodlands and riparian forests as a condition of Table 3-5.

No nesting territories were observed within the Preserve during the 2012 surveys; however future detection will be addressed through general wildlife surveys (as described in implementation measure A.1.2).

Western Bluebird (*Sialia mexicana*)

Monitoring: Table 3-5 - Habitat Based, SDSU – Excluded

Monitoring efforts include habitat monitoring, general wildlife and rare plant surveys, and monitoring for invasive non-native plant species (as described in implementation measures A.1.1, A.1.2 and A.1.3).

Management Conditions: Table 3-5 does not include any conditions for coverage of this species as its persistence in the County depends largely on conservation of existing large populations on public lands east of the MSCP SAP. The management approach for this species is maintenance of suitable nesting (oak woodland) and foraging habitat (chaparral and grasslands) within the Preserve. These habitats will be managed to reduce the threat of fire and invasive non-native plants.

No nesting territories were observed within the Preserve during the 2012 surveys; however future detection will be addressed through general wildlife surveys (as described in implementation measure A.1.2).

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

Monitoring: Table 3-5 - Habitat Based, SDSU - Risk Group 3

Management Conditions: Table 3-5 states area-specific management directives must include maintenance of dynamic processes, such as fire, to perpetuate some open phases of coastal sage scrub with herbaceous components.

Southern California rufous-crowned sparrows were detected in coastal sage scrub or chaparral habitats at multiple locations in the Preserve. The entire Preserve was burned during the 2003 Cedar Fire and approximately 186 acres of coastal sage scrub on-site are in different stages of recovery. Currently, the coastal sage scrub habitat on-site has open areas needed by southern California rufous-crowned sparrow.

Southern Mule Deer (*Odocoileus hemionus*)

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

Monitoring efforts include habitat monitoring, general wildlife surveys (as described in implementation measures A.1.1and A.1.2) as well as corridor monitoring (as described in implementation measure A.2.1).

Management Conditions: Habitat Maintenance

5.2.3 Non-Native Invasive Wildlife Species Control

Management Directive A.3 – Reduce, control, or where feasible eradicate invasive, non-native fauna known to be detrimental to native species and/or the local ecosystem (*Priority 2*)

As discussed in Section 3.3.4, brown-headed cowbird, a brood parasite, was detected within the Preserve during the 2012 surveys. This species does not currently appear to be posing an immediate threat to native species and/or the local ecosystem; however, this species has the potential to out compete native species for valuable resources. Argentine ants and goldspotted oak borer (*Agrilus coxalis*) were not observed on the Preserve, but will be monitored as these invasive species can adversely impact plant and animal species.

***Implementation Measure A.3.1*:** DPR will conduct surveys for the presence of cowbirds (brood parasite) and Argentine ants and goldspotted oak borer (non-native invasive species) at five-year intervals in conjunction with habitat monitoring and general wildlife surveys (as described in implementation measures A.1.1 and A.1.2). If any of these species are detected DPR will coordinate with regional control efforts.

5.2.4 Future Research

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

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

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

Management Directive A.4 – Allow for future research opportunities within the Preserve (*Priority 2*)

> ***Implementation Measure A.4.1*:** DPR will accept and review proposals for scientific research, monitoring, and habitat restoration and enhancement activities which are permitted within the MSCP Preserve. Proposed research activities will be subject to approval by DPR. All such activities must obtain any necessary permits and shall be consistent with this RMP. Additionally, any person conducting research of any kind within the Preserve shall obtain a Right-of-Entry Permit from DPR, which will outline the precautions to be taken to preserve and protect sensitive biological and cultural resources within the Preserve and require results of any research to be made available to DPR.

5.3 Vegetation Management Element (B)

5.3.1 Habitat Restoration

Habitat restoration is not typically required by the MSCP SAP, but is encouraged if resources are available. As stated in the Vegetation Management Plan for the Preserve (Dudek 2013), no habitat restoration is currently proposed within the Preserve. Passive restoration primarily in the form of invasive plant species control is discussed under management directive B.1.

5.3.2 Non-Native Plant Species Removal and Control

Management Directive B.1 – 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, 18 Cal-IPC rated invasive, non-native plant species were identified within the Preserve. Five (5) invasive non-native plant species including pampas grass, eucalyptus, Canary Island date palm, tamarisk, and Washington fan palm have been identified as high priority for removal. Removal of non-natives will be coordinated in accordance with the Management Priorities for

Invasive Non-native Plants, A Strategy for Regional Implementation, San Diego County (Dendra Inc, 2012).

***Implementation Measure B.1.1*:** DPR will coordinate with licensed County herbicide applicators for the treatment of the five high priority species for removal (pampas grass, eucalyptus, Canary Island date palm, tamarisk, and Washington fan palm) identified in the Vegetation Management Plan (Dudek 2013).

***Implementation Measure B.1.2*:** Park Rangers will routinely pull weeds or remove any invasive, non-native plants in early stages of growth observed during patrols along trails or access roads.

***Implementation Measure B.1.3*:** DPR will assess and pursue mitigation opportunities that implement invasive, non-native plant removal within the Preserve. Precedence will be given to those areas occupied by species identified as high priority, followed by moderate and then low priority species.

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

***Implementation Measure B.2.1*:** DPR will identify and assess upstream sources of invasive, non-native plants on adjacent properties that have the potential to expand into the Preserve. DPR will coordinate with the adjacent land owners and managers of those properties and encourage them to treat and control the invasive, non-native plants on their property.

5.3.3 Fire Prevention, Control, and Management

The Preserve is classified as a Very High Fire Hazard Severity Zone by California Department of Forestry and Fire Protection (FRAP 2012).

No official fuel modification zones are found on the Preserve. Currently, unapproved clearing has occurred within the Preserve adjacent to residences along the eastern boundary of the Preserve to create fuel modification zones.

For emergency vehicle access during a wildfire, the Preserve currently has only a minor trail that begins at Mountain View Road, continues south until it reaches the ridge, and heads east along the ridge widths ranging from 13-44 feet.

Management Directive B.3 – Provide for necessary fire management activities that are sensitive to natural and cultural resources protection (*Priority 1*)

***Implementation Measure B.3.1*:** As shown in Figure 13, DPR staff will create fuel modification zones on Preserve property adjacent to the existing residential structures that are within 100 feet of the Preserve property boundary. Fuel modification will not take place in riparian habitat. Management of the fuel modification zone will adhere to CalFire requirements.

***Implementation Measure B.3.2*:** The existing dirt trails acting as access roads within the Preserve will be maintained as needed to keep the trails fuel free. In addition, DPR will continue to coordinate with San Miguel Consolidated Fire Protection District and/or the San Diego Rural Fire Protection District to determine what improvements need to be made to make fire response feasible throughout the Preserve.

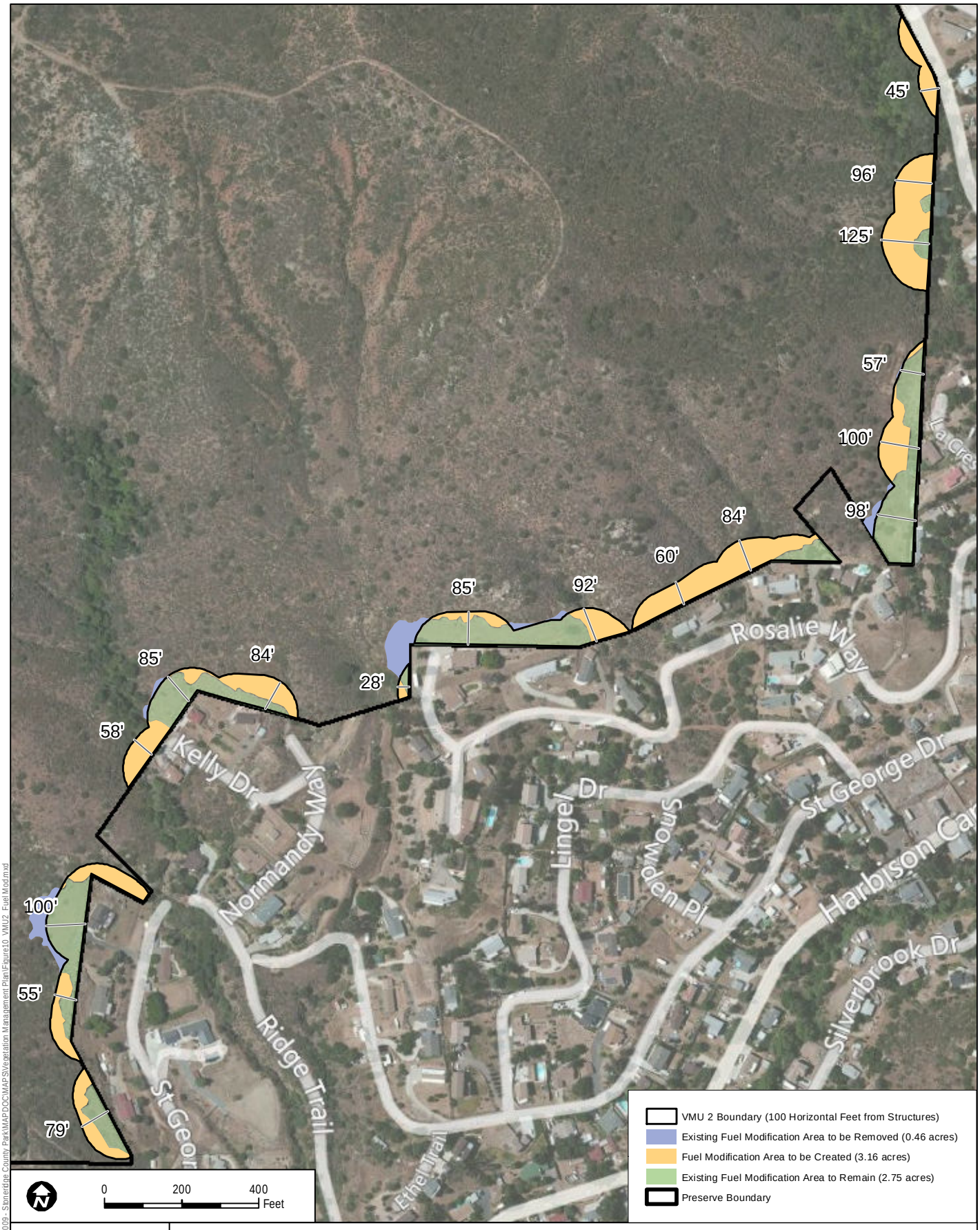
Implementation Measure B.3.3: DPR will continue to coordinate with San Miguel Consolidated Fire Protection District and San Diego Rural Fire Protection District to ensure that the fire response and implementation measures outlined in this RMP and in the VMP (Dudek 2013) are up-to-date and adequate for 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)

*****THE PRESERVE IS NOT OPEN TO THE PUBLIC*****

5.4.1 Public Access

The Preserve is currently not open to the public; however the Preserve currently has a minor trail that begins at Mountain View Road, continues south until it reaches the ridge, and heads east along the ridge. Within the southern region of the Preserve, one small dirt trail leads up the peak and is located off St. George Drive (Figure 7). These dirt trails are only utilized by DPR staff for patrolling of the Preserve.



DUDEK

6680-09

SOURCE: Bing, SanGIS 2012

FIGURE 13

Focused Fuel Modification Areas in VMU 2

Stoneridge Preserve - Vegetation Management Plan

Path: Z:\Projects\6680010\6680109 - Stoneridge County Park\MAPDOC\MAPS\Vegetation Management Plan\Figure10_VMU2_Fuel Mod.mxd

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

***Implementation Measure C.1.1*:** DPR rangers will patrol and monitor the Preserve for any unauthorized public access. Park rangers will document any illegal access, and inform any unauthorized persons observed on site that the Preserve is not open to the public and request that they leave the property. In addition, they 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 are considered incompatible uses in the MSCP preserve, and are therefore prohibited in the Preserve, except for law enforcement, Preserve management, and/or emergency purposes.
b. Hunting or discharge of firearms is an incompatible use in the MSCP preserve, and is therefore prohibited in the Preserve, except for law enforcement, and/or emergency purposes.
c. Poaching or collecting plant or animal species, archaeological or historical artifacts or fossils from the Preserve is generally prohibited; however, the County may authorize collecting upon approval for scientific research, revegetation or restoration purposes, or species recovery programs. In addition, impacts to historic features are prohibited except upon approval by the County.
d. Fishing, swimming, and wading in rivers, streams, or creeks
e. Camping (including homeless and itinerant worker camps)
f. Feeding wildlife
g. Domestic animals, except horses and leashed dogs
h. Smoking
i. Campfires/Open Flames
j. Littering/Dumping

***Implementation Measure C.1.2*:** Park Rangers will ensure that prohibited uses are clearly specified on posted signage.

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

***Implementation Measure C.2.1*:** DPR has identified and mapped sensitive vegetation communities, special-status plant and wildlife species (including narrow endemics and County-listed species), so that these areas can be avoided and/or monitored. Updated information on sensitive resources in relation to access points (i.e., existing access roads and unofficial trails) will be obtained in

conjunction with routine monitoring activities (see implementation measures A.1.1, A.1.2, and C.5.1).

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*)

The Preserve is currently not open to the public and there are no immediate plans to open it to the public.

Implementation Measure C.3.1: If, in the future, it is decided to open the Preserve to the public, DPR will develop a 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 MSCP SAP objectives and the County-approved Community Trails Master Plan (County of San Diego 2009a).

Implementation Measure C.3.2: DPR will ensure that any future proposed trail system will undergo environmental review in accordance with CEQA prior to public use of the Preserve.

5.4.2 Fencing and Gates

Currently, a double-swing gate is located in the northern portion of the Preserve off of Mountain View Road allowing access to the Preserve. A pedestrian gate is proposed off of La Cresta Trail to prevent unauthorized mountain bike entrance. A second pedestrian gate is proposed off of St. George Drive on adjacent County of San Diego Department of Animal Services property to prevent unauthorized access onto the Preserve. The Preserve is not fenced.

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

Implementation Measure C.4.1: Points of unauthorized access and sensitive species impacts will continue to be identified in conjunction with habitat, plant and wildlife, and access road monitoring activities (as described in implementation measures A.1.1, A.1.2, and C.5.1). DPR will ensure that any installation of fences or gates will be designed and located so they do not impede wildlife movement or impact cultural resources.

***Implementation Measure C.4.2*:** Park ranger staff will regularly inspect and maintain the existing gate in the northern portion of the Preserve and after the two proposed gates are installed. Gates will be repaired or replaced as necessary.

5.4.3 Trail and Access Road Maintenance

The Preserve is not open to the public. However, it contains a minor trail that begins at Mountain View Road, continues south until it reaches the ridge, and heads east along the ridge that is utilized by DPR staff for patrolling.

Management Directive C.5 – Properly maintain access roads and trails for user safety, and to protect natural and cultural resources (*Priority 1*)

> ***Implementation Measure C.5.1*:** Park ranger staff will monitor the existing dirt access road in the northern portion of the Preserve currently used for management purposes for degradation and unauthorized use. Park ranger staff will provide necessary repair/maintenance as needed.

5.4.4 Signage

No signage is currently posted at the Preserve.

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

> ***Implementation Measure C.6.1*:** Park ranger staff will identify unofficial access areas for signage then install appropriate signs (e.g., “Stoneridge Preserve, County of San Diego Department of Parks and Recreation, No Public Access "). The posted signs will be regularly inspected and maintained in good condition. Signs shall be kept free from vandalism and will be repaired or replaced as necessary.

5.5 Operations and Facility Maintenance Element (D)

5.5.1 Litter/Trash and Materials Storage

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

> ***Implementation Measure D.1.1*:** DPR prohibits the permanent storage of hazardous and toxic materials within the Preserve. 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 rangers will enforce 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

As stated in Section 2.3.3, the northern region of the Preserve generally drains southwest through a riparian corridor along the northern and northeastern border. The central region of the Preserve drains through a smaller canyon, and the southwest region of the Preserve drains through a third canyon. These three drainages converge at Harbison Canyon and flow into the Sweetwater River.

As stated in Section 2.4.1, a concrete dam is located in the northeastern portion of the Preserve. The dam spans the unnamed drainage running parallel to Mountain View Road.

Management Directive D.3 – Retain the three drainages on-site in their natural condition (*Priority 1*)

***Implementation Measure D.3.1*:** DPR will conduct visual assessments of the conditions of the drainages in conjunction with habitat monitoring (see implementation measure A.1.1) to determine if nonnative invasive plants are recurring.

Implementation Measure D.3.2: DPR staff will maintain the vegetation within the drainage upstream of the dam to allow continued flow of water.

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, there is currently open space land surrounding the Preserve, with the exception of sparse rural residential development to the north and

northeast, and the community of Dulzura to the southeast. The establishment of the MSCP preserve system does not include regulatory authority on properties adjacent to the Preserve; however, the County will require adjacent property owners to follow guidelines when planning and implementing uses and activities that can be regulated.

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

***Implementation Measure D.5.1*:** DPR will coordinate with the California Department of Fish and Wildlife, Endangered Habitats Conservancy, and County of San Diego Department of Animal Services (in association with their contiguous open spaces) on an annual basis, or more regularly as needed, to ensure contiguous preserved land is managed consistently and in accordance with the MSCP. Coordination will include discussion of conservation goals; threats; methodology for management, monitoring, restoration, and reintroduction; results of management tasks and scientific research; and potential future projects.

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

***Implementation Measure D.6.1*:** DPR staff will enforce, prevent, and remove illegal intrusions into the Preserve (e.g., parking areas, orchards, decks) on an annual basis, in addition to a complaint basis.

Management Directive D.7 – Educate residents of surrounding areas regarding adjacency issues (*Priority 2*)

***Implementation Measure D.7.1*:** DPR will post this RMP on the DPR website (www.sdparks.org) to heighten the environmental awareness of adjacent residents, and inform residents of appropriate landscaping, construction or disturbance within the Preserve boundaries, pet intrusion, fire management, and other adjacency issues. See also implementation measure B.2.1.

5.6 Cultural Resources Element (E)

The goal of this cultural resources section of the RMP is long-term protection and preservation of recorded and undiscovered cultural resources, public interpretation and educational opportunities, and consultation with local Native American tribes regarding the significance of cultural resources as well as usage of the Preserve for their traditional gathering and ceremonial practices.

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 reports (ASM 2012), a substantial portion of the Preserve exceeds 20 percent slope and the majority of the terrain is densely

vegetated, which largely precluded cultural resource surveys in these areas. It is possible that cultural resources exist in these unsurveyed areas. If future ground disturbing activities 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. No removal or modification of cultural resources shall occur without written approval by the Director of Parks and Recreation. All management activities within the Preserve including, but not limited to, routine maintenance and habitat restoration, 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. For site CA-SDI-20,695, (P-37-032657) that has been already evaluated and determined not significant, no further action is required.

If in the future, avoidance of significant sites is not feasible, appropriate mitigation measures will be established in conjunction with consultation with 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 qualified consultant and Kumeyaay Native American representative. Preservation in place is the preferred mitigation measure.

Implementation Measure E.1.2: In the event that human remains are discovered during archaeological surveys or testing, DPR staff will immediately stop all work and notify the County Coroner. If the Coroner determines the remains are Native American, the Most Likely Descendant, as identified by the NAHC, will be contacted in order to determine proper treatment and disposition of the remains. Per County guidelines, any time human remains are encountered, the site is considered significant (County 2007).

Management Directive E.2 – Promote cultural resources interpretation and educational programs (*Priority 2*)

***Implementation Measure E.2.1*:** Currently, there is no public education or interpretation of prehistoric and ethnographic resources within the Preserve. DPR will develop off-site, and when possible, on-site interpretive programs for Native American heritage, local and regional history, and prehistory appropriate to the Preserve in coordination with Kumeyaay tribal representatives, particularly the Sycuan Band of the Kumeyaay Indians whose reservation is located south of the Preserve. Interpretive signage should focus on Kumeyaay land use within the vicinity of the Preserve including plant and animal food sources, hunting and

gathering techniques, non-food resource uses, such as clothing, housing, basketry and pottery making, and lithic technology, as well as seasonal land use. Public education and interpretation of historical resources should discuss the history and land use of the region surrounding the Preserve, especially the nearby communities of Crest and Harbison Canyon and land usage within the vicinity. Discussions of the bee industry in San Diego County and the role backcountry communities played in that important agricultural pursuit could be further developed for public interpretation. Additional areas of research should include developing a case study context where the vicinity is used to explain how homesteaders wanted to use the same land for diverse industries such as ranching, farming, and bee keeping. In addition, water usage, specifically the development of the El Capitan and Loveland Reservoirs and historic usage of the San Diego and Sweetwater River watersheds, would be appropriate for public interpretation. Another area of public education and interpretation is the discussion of fire, fire prevention, and the manipulation of the environment by prehistoric populations. Fire prevention tips and warnings could be combined with a discussion of prehistoric and historic prevention and management of fire in San Diego County, as well as a history of the 2003 Cedar Fire which impacted the Preserve.

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 Sycuan Band of the Kumeyaay Nation, 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 surveys, evaluation, recordation, protection and preservation of cultural resources.

***Implementation Measure E.3.2*:** DPR will open the Preserve to traditional uses by the Sycuan Band of the Kumeyaay Nation and other local 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.

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Personal Communications

Susan Wynn, Biologist with U.S. Fish and Wildlife Service, Comments on the Draft Stoneridge Preserve and Sycamore Canyon/Goodan Ranch Preserve Resource Management Plans, San Diego County, California. June 2013.

APPENDIX A

Management Directive and Implementation Measure Summary Table Stoneridge Preserve

Management Directives	Implementation Measures	Timeframe	Responsible Party*
	BIOLOGICAL RESOURCES ELEMENT (A)		
A.1 Conduct habitat monitoring to ensure MSCP goals and DPR objective are met (*Priority 1*)	***A.1.1*:** DPR will conduct habitat monitoring on 5-year intervals within the Preserve, and annually for 5 years after a burn. Ongoing monitoring within the Preserve will identify any adverse changes in vegetation community distribution and habitat quality, such as changes from fire, invasion by nonnatives, 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.	Every 5 years	RMD
	***A.1.2*:** DPR will conduct general wildlife and rare plant surveys at five-year intervals utilizing and refining baseline monitoring methods to assess trends, relative abundance, and distribution status. Wildlife surveys will be performed during the flight season of Quino checkerspot butterfly if feasible. Particular focus will be paid to species with a high potential to occur as listed in Sections 3.2.3 and 3.3.3. In addition, wildlife surveys will include observation of the old raptor nest located in the riparian corridor located along the eastern region of the Preserve to determine what species may be using the nest. All survey information will be included in the monitoring report.	Every 5 years	RMD
	***A.1.3*:** DPR will conduct monitoring for invasive nonnative plant species on an annual basis to assess invasion or re-invasion by invasive nonnative plants within the Preserve. These surveys will focus on areas where invasive non-native plants have been detected in the past, but also look for new occurrences in the Preserve. This information will be included in the monitoring report.	Every 5years	RMD
	***A.1.4*:** DPR will conduct corridor monitoring at five-year intervals in conjunction with habitat monitoring and general wildlife and rare plant surveys (as described in implementation measures A.1.1 and A.1.2). The 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 assessment of habitat linkage function, including a list of species detected, will be included in the monitoring report.	Every 5 years	RMD
	A.1.5: DPR will prepare a biological monitoring report that summarizes the monitoring goals, objectives, methodology, and results of the biological monitoring efforts described in implementation measures A.1.1 to A.1.4. The report will also address the effectiveness of current stewardship and management actions, identify the need for corrective actions, and include recommendations for adaptive management.	Every 5 years	RMD
A.2 Comply with applicable conditions of coverage for MSCP Covered Species (*Priority 1*)	DPR will implement habitat based and, in some cases, species specific monitoring and management as outlined in Table 3-5 of the Subregional MSCP Plan and *San Diego Multiple Species Conservation Program Covered Prioritization* (Regan et al., 2006) for all MSCP Covered Species detected within the Preserve including Coast horned lizard, orange-throated whiptail, coastal California gnatcatcher, Cooper's hawk, western bluebird, southern California rufous-crowned sparrow, southern mule deer.	Every 5 years	RMD
A.3 Reduce, control, or where feasible eradicate invasive, non-native fauna known to be detrimental to native species and/or the local ecosystem (*Priority 2*)	***A.3.1*:** DPR will conduct surveys for the presence of cowbirds (brood parasite) and Argentine ants and goldspotted oak borer (non-native invasive species) at five-year intervals in conjunction with habitat monitoring and general wildlife surveys (as described in implementation measures A.1.1 and A.1.2). If any of these species are detected DPR will coordinate with regional control efforts.	Every 5 years	RMD
A.4 Allow for future research opportunities within the Preserve (*Priority 2*)	***A.4.1*:** 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 Property and require results of any research to be made available to DPR.	On-going	DM & RMD
	VEGETATION MANAGEMENT ELEMENT (B)		
B.1 Reduce, control, or where feasible eradicate non-native plants that are known to be detrimental to native species and/or the local ecosystem (*Priority 1*)	***B.1.1*:** DPR will coordinate with licensed County herbicide applicators for the treatment of the five high priority species for removal (pampas grass, eucalyptus, Canary Island date palm, tamarisk, and Washington fan palm) identified in the Vegetation Management Plan (Dudek 2013).	On-going	DM and RMD
	***B.1.2*:** Park Rangers will routinely pull weeds or remove any invasive, non-native plants in early stages of growth observed during patrols along trails or access roads.	On-going	Park Rangers
	***B.1.3*:** DPR will assess and pursue mitigation opportunities that implement invasive, non-native plant removal within the Preserve. Precedence will be given to those areas occupied by species identified as high priority, followed by moderate and then low priority species.	As-needed	DM, DEV, RMD
B.2 Manage and minimize the expansion of non-native, invasive plants within the Preserve (*Priority 2*)	***B.2.1*:** DPR will identify and assess upstream sources of invasive, non-native plants on adjacent properties that have the potential to expand into the Preserve. DPR will coordinate with the adjacent land owners and managers of those properties and encourage them to treat and control the invasive, non-native plants on their property.	On-going	DM and RMD

Management Directives	Implementation Measures	Timeframe	Responsible Party*
B.3 Provide for necessary fire management activities that are sensitive to biological and cultural resources protection (*Priority 1*)	***B.3.1*:** As shown in Figure 13, DPR staff will create fuel modification zones on Preserve property adjacent to the existing residential structures that are within 100 feet of the Preserve property boundary. Fuel modification will not take place in riparian habitat. Management of the fuel modification zone will adhere to CalFire requirements.	Annually	Park Rangers
	***B.3.2*:** The existing dirt trails within the Preserve acting as access roads will be maintained as needed to keep the roads fuel free. In addition, DPR will continue to coordinate with San Miguel Consolidated Fire Protection District and/or the San Diego Rural fire Protection District to determine what improvements need to be made to make fire response feasible throughout the Preserve.	On-going	Park Rangers
	B.3.3: DPR will continue to coordinate with San Miguel Consolidated Fire Protection District and San Diego Rural fire Protection District to ensure that the fire response and implementation measures outlined in this RMP and in the VMP (Dudek 2013) 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.	On-going	DM & RMD
PUBLIC USE, TRAILS & RECREATION ELEMENT (C)			
C.1 Limit types of public uses to those that are appropriate for the Preserve (*Priority 1*)	***C.1.2*:** DPR rangers will patrol and monitor the Preserve for any unauthorized public access. Park rangers will document any illegal access, and inform any unauthorized persons observed on site that the Preserve is not open to the public and request that they leave the property. In addition, they 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 are considered incompatible uses in the MSCP preserve, and are therefore prohibited in the Preserve, except for law enforcement, Preserve management, and/or emergency purposes. b. Hunting or discharge of firearms is an incompatible use in the MSCP preserve, and is therefore prohibited in the Preserve, except for law enforcement, and/or emergency purposes. c. Poaching or collecting plant or animal species, archaeological or historical artifacts or fossils from the Preserve is generally prohibited; however, the County may authorize collecting upon approval for scientific research, revegetation or restoration purposes, or species recovery programs. In addition, impacts to historic features are prohibited except upon approval by the County. d. Fishing, swimming, and wading in rivers, streams, or creeks e. Camping (including homeless and itinerant worker camps) f. Feeding wildlife g. Domestic animals, except horses and leashed dogs h. Smoking i. Campfires/Open Flames j. Littering/Dumping	On-going	Park Rangers
	***C.1.3*:** Park Rangers will ensure that prohibited uses are clearly specified on posted signage.	On-going	Park Rangers
C.2 Manage access in sensitive biological and cultural resource areas within the Preserve (*Priority 1*)	***C.2.1*:** DPR has identified and mapped sensitive vegetation communities, special-status plant and wildlife species (including narrow endemics and County-listed species), so that these areas can be avoided and/or monitored. Updated information on sensitive resources in relation to access points (i.e., existing access roads and unofficial trails) will be obtained in conjunction with routine monitoring activities (see implementation measures A.1.1, A.1.2, and C.5.1).	Every 5 years	RMD
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*)	***C.3.1*:** If, in the future, it is decided to open the Preserve to the public, DPR will develop a 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 MSCP SAP objectives and the County-approved Community Trails Master Plan (County of San Diego 2009a).	As-needed	RMD
	***C.3.2*:** DPR will ensure that any future proposed trail system will undergo environmental review in accordance with CEQA prior to public use of the Preserve.	As-needed	RMD

Management Directives	Implementation Measures	Timeframe	Responsible Party*
C.4 Install and maintain fences and gates within the Preserve (*Priority 1*)	***C.4.1:*** Points of unauthorized access and sensitive species impacts will continue to be identified in conjunction with habitat, plant and wildlife, and access road monitoring activities (as described in implementation measures A.1.1, A.1.2, and C.5.1). DPR will ensure that any installation of fences or gates will be designed and located so they do not impede wildlife movement or impact cultural resources. ***C.4.2*:** Park ranger staff will regularly inspect and maintain the existing gate in the northern portion of the Preserve and after the two proposed gates are installed. Gates will be repaired or replaced as necessary.	On-going On-going	RMD & Park Rangers Park Rangers
C.5 Properly maintain access roads and trails for user safety, and to protect natural and cultural resources (*Priority 1*)	***C.5.1*:** Park ranger staff will monitor the existing dirt access road in the northern portion of the Preserve currently used for management purposes for degradation and unauthorized use. Park ranger staff will provide necessary repair/maintenance as needed.	On-going	Park Rangers
C.6 Install and maintain appropriate signage to effectively communicate Preserve rules and regulations (*Priority 1*)	***C.6.1*:** Park ranger staff will identify unofficial access areas for signage then install appropriate signs (e.g., "Stoneridge Preserve, County of San Diego Department of Parks and Recreation, No Public Access "). The posted signs will be regularly inspected and maintained in good condition. Signs shall be kept free from vandalism and will be repaired or replaced as necessary.	On-going	Park Rangers
OPERATIONS & FACILITY MAINTENANCE ELEMENT (D)			
D.1 Maintain a safe and healthy environment within the Preserve (*Priority 1*)	***D.1.1*:** DPR prohibits the permanent storage of hazardous and toxic materials within the Preserve. Any temporary storage will be in accordance with applicable regulations, and otherwise designed to minimize any potential impacts.	On-going	DM, RMD & Park Rangers
D.2 Enforce regulations regarding littering/dumping (*Priority 1*)	***D.2.1*:** Park Rangers will enforce 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.	On-going	Park Rangers
D.3 Retain the three drainages on-site in their natural condition (*Priority 1*)	***D.3.1*:** DPR will conduct visual assessments of the conditions of the drainages in conjunction with habitat monitoring (see implementation measure A.1.1) to determine if nonnative invasive plants are recurring. ***D.3.2:*** DPR staff will maintain the vegetation within the drainage upstream of the dam to allow continued flow of water.	Every 5 years Every 5 years	RMD Park Rangers
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*)	***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.	As-needed	DM, RMD & Park Rangers
D.5 Coordinate with adjacent open space landowners and land managers (*Priority 1*)	***D.5.1*:** DPR will coordinate with the California Department of Fish and Wildlife, Endangered Habitats Conservancy, and County of San Diego Department of Animal Services (in association with their contiguous open spaces) on an annual basis, or more regularly as needed, to ensure contiguous preserved land is managed consistently and in accordance with the MSCP. Coordination will include discussion of conservation goals; threats; methodology for management, monitoring, restoration, and reintroduction; results of management tasks and scientific research; and potential future projects.	Annually	RMD
D.6 Enforce Preserve boundaries (*Priority 1*)	***D.7.1*:** DPR and Park Rangers will enforce, prevent, and/or remove illegal intrusions into the Preserve (e.g., orchards, decks) on an annual and complaint basis.	Annually	DM & Park Rangers
D.7 Educate residents in surrounding areas about Preserve adjacency issues (*Priority 2*)	***D.8.1*:** DPR will post the 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 implementation measure B.3.1.	On-going	RMD
CULTURAL RESOURCES ELEMENT (E)			
E.1 Identify, record, and assess the significance of any new cultural resources discovered within the Preserve (*Priority 1*)	***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. No removal or modification of cultural resources shall occur without written approval by the Director of Parks and Recreation. All management activities within the Preserve including, but not limited to, routine maintenance and habitat restoration, 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. For site CA-SDI-20,695, (P-37-032657) that has been already evaluated and determined not significant, no further action is required. If in the future, avoidance of significant sites is not feasible, appropriate mitigation measures will be established in conjunction with consultation with Native	As-needed	RMD

Management Directives	Implementation Measures	Timeframe	Responsible Party*
	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 qualified consultant and Kumeyaay Native American representative. Preservation in place is the preferred mitigation measure. ***E.1.2:*** In the event that human remains are discovered during archaeological surveys or testing, DPR staff will immediately stop all work and notify the County Coroner. If the Coroner determines the remains are Native American, the Most Likely Descendant, as identified by the NAHC, will be contacted in order to determine proper treatment and disposition of the remains. Per County guidelines, any time human remains are encountered, the site is considered significant (County 2007).	As-needed	RMD
E.2 Promote cultural resources interpretation and educational programs (*Priority 2*)	***E.2.1*:** Currently, there is no public education or interpretation of prehistoric and ethnographic resources within the Preserve. DPR will develop off-site, and when possible, on-site interpretive programs for Native American heritage, local and regional history, and prehistory appropriate to the Preserve in coordination with Kumeyaay tribal representatives, particularly the Sycuan Band of the Kumeyaay Indians whose reservation is located south of the Preserve. Interpretive signage should focus on Kumeyaay land use within the vicinity of the Preserve including plant and animal food sources, hunting and gathering techniques, non-food resource uses, such as clothing, housing, basketry and pottery making, and lithic technology, as well as seasonal land use. Public education and interpretation of historical resources should discuss the history and land use of the region surrounding the Preserve, especially the nearby communities of Crest and Harbison Canyon and land usage within the vicinity. Discussions of the bee industry in San Diego County and the role backcountry communities played in that important agricultural pursuit could be further developed for public interpretation. Additional areas of research should include developing a case study context where the vicinity is used to explain how homesteaders wanted to use the same land for diverse industries such as ranching, farming, and bee keeping. In addition, water usage, specifically the development of the El Capitan and Loveland Reservoirs and historic usage of the San Diego and Sweetwater River watersheds, would be appropriate for public interpretation. Another area of public education and interpretation is the discussion of fire, fire prevention, and the manipulation of the environment by prehistoric populations. Fire prevention tips and warnings could be combined with a discussion of prehistoric and historic prevention and management of fire in San Diego County, as well as a history of the 2003 Cedar Fire which impacted the Preserve.	On-going	DM, RMD, Park Rangers
E.3 Honor Native American Heritage and promote Native American ceremonies, gathering, and cultural practices (*Priority 2*)	***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 Sycuan Band of the Kumeyaay Nation, 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 surveys, evaluation, recordation, protection and preservation of cultural resources. ***E.3.2*:** DPR will open the Preserve to traditional uses by the Sycuan Band of the Kumeyaay Nation and other local 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.	On-going As-needed	DM, RMD and Park Rangers DM, RMD

* DEV = Development Division Staff
DM = District Manager (Operations Division)
RMD = Resource Management Division Staff

APPENDIX B

Baseline Biodiversity Survey for Stoneridge Preserve (See www.co.san-diego.ca.us/parks/management_plans.html)

APPENDIX C

Archaeological Survey Report for the Stoneridge Preserve, San Diego County, California (Confidential)

APPENDIX D

Vegetation Management Plan for Stoneridge Preserve

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