Cañada de San Vicente

Volume 1:

FINAL - Land Management Plan

[FINAL Initial Study/Mitigated Negative Declaration: see vol.2]

February 2016

California Dept. of Fish & Wildlife
SOUTH COAST REGION
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This document represents the Final Land Management Plan

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This document is also available as an electronic file at:

https://www.wildlife.ca.gov/Lands/Planning/Canada-de-San-Vicente

Cañada de San Vicente

Volume 1: FINAL Land Management Plan

State Clearinghouse #2015051017

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Acknowledgments

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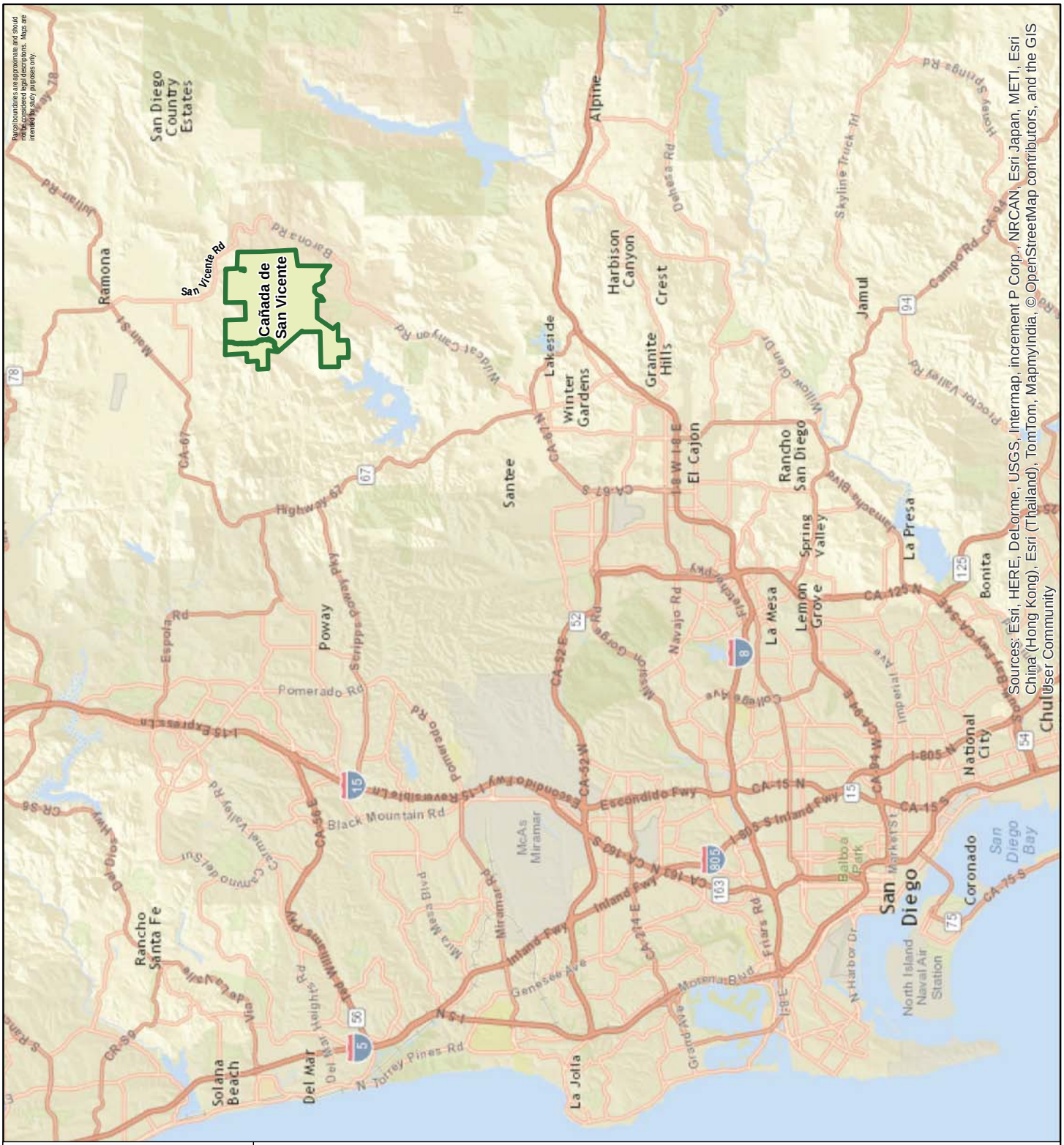


Date: 8/5/2015

Cañada de San Vicente

Figure 1
Location Map

Legend

CDFW Lands Boundary

0 500 1,000 2,000 Feet

1 INTRODUCTION

1 Introduction

1.1 Purpose of Acquisition

Cañada de San Vicente Reserve (Reserve) was acquired by the California Department of Fish and Wildlife (CDFW) to conserve, protect, and restore core habitat areas, and provide crucial wildlife linkages in the San Diego County Subregional Plan, under the Multiple Species Conservation Program (MSCP). Per a 2007 agreement between CDFW and San Diego County Water Authority (SDCWA), an approximate 392-acre portion of Reserve (a.k.a. Rancho Cañada) was purchased by SDCWA and ultimately transferred in fee title to CDFW, December 21, 2007 (see figure 8). The 392-acres provides mitigation for certain elements of SDCWA's Carryover Storage and San Vicente Dam Raise Project, with the balance of the property providing a contribution towards conservation for the SDCWA's subregional Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP). SDCWA provided CDFW $28,828.51 in start-up funds, $419,689 endowment funds, and $14,987.71 endowment interest for CDFW's management of the 392-acres per the terms of the 2007 agreement.

In June 2008, CDFW acquired 4,056 acres from The Nature Conservancy (TNC) for ≈$15,921,000 using a United States Fish and Wildlife Service (USFWS) section 6 grant (≈$6,221,000) and State Coastal Conservancy Subgrant #04-131 (≈$9,700,000) funds. The land was purchased for the protection of the natural resources including threatened and endangered species within San Vicente Reservoir watershed.

In June 2010, CDFW purchased 311 acres (Spitsbergen property) for ≈$2,100,000.00 using a USFWS section 6 grant. This acquisition protected undisturbed grasslands, chaparral, oak woodlands, and riparian habitat along the San Vicente Creek watershed. It also enhanced existing federal, State, and local NCCP efforts to secure key wildlife linkage and preserve core areas of habitat within the MSCP.

In September 2014, CDFW acquired 256 acres (Bonfils property) for ≈$450,000 using a USFWS Conservation Planning Land Acquisition Grant (≈$292,500) and Habitat Conservation Fund (HCF), Proposition 117 (≈$157,500) funds. This acquisition secured a key wildlife linkages, protected a core area of habitat and enhanced the existing MSCP.

In addition to the above purchases TNC provided funding for the operations and maintenance of the Reserve.

For additional details on the Reserve's acquisition history, refer to *section 2.9.2* of the Historical summary.

1.2 About the Department of Fish and Wildlife (CDFW)

> *The Mission of the Department of Fish and Wildlife is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public.*

The five coastal southern California counties, which make up the South Coast Region (SCR), are home to nearly 50 percent of the State's population. For this reason the SCR has a great need to identify priorities that will help us meet our trustee role as stewards of California's wildlife. Furthermore, the Mission Statement of the SCR proposes to:

> *Conserve the South Coast Region's plants, fish, and wildlife and their habitats for current and future generations through management, protection, and education.*

We accomplish this Mission through the shared values of integrity, respect, leadership, credibility, perseverance, open-mindedness, transparency, effectiveness, and being solution-oriented.

CDFW has two major land management designations: Wildlife Area and Ecological Reserve.

- Wildlife Areas (WA) exist to protect and enhance habitat for wildlife and to provide for public uses that are compatible with the long-term well-being of wildlife and habitat. The management of the wildlife areas results in a great variety of high-quality wildlife viewing, hunting, and fishing opportunities for the public.
- Ecological Reserves (ER) are established to provide protection for rare, threatened, or endangered native plants, wildlife, aquatic organisms, and specialized terrestrial or aquatic habitat types. Public entry and use of the Reserves shall be compatible with the primary purposes of such a Reserve.

Based upon the purpose for which the Reserve was acquired and the information collected for this Land Management Plan (LMP), the LMP team recommends to the Fish and Game Commission that the Reserve be designated as an ER as defined in the Fish and Game Code (FGC), Section 1580-1585:

> *'land or land and water area that are designated by the Commission pursuant to section 1580 and that are to be preserved in a natural condition, or which are to be provided some level of protection as determined by the Commission, for the benefit of the general public to observe native flora and fauna and for scientific study or research.*
>
> *Notwithstanding section 1580, which sets forth the primary purposes of ecological reserves, the department may construct facilities and conduct programs in ecological reserves it selects to provide natural history*

education and recreation if those facilities and programs are compatible with the protection of the biological resources of the reserve. As provided in section 1764 and 1765, the Department may control access, use, and collect fees for selected ecological reserves.

1.3 Purpose of This Land Management Plan

A LMP is mandated by FGC Section 1019, for any property wholly under CDFW jurisdiction. The LMP which becomes the primary management document for the WA and ER, contains management goals, tasks, and other necessary information for consistent and effective management of the Reserve. The plan does not provide specific designs or locations of facilities, but does provide a vision for the Reserve and guidelines for use, management, and development. As such, this LMP:

- Guides the adaptive management of habitats, species, and programs described herein to achieve CDFW's mission to protect and enhance wildlife values, as well as identified use/enjoyment by the public.
- Serves as a guide for appropriate uses of the Reserve.
- Serves as a descriptive inventory of fish, wildlife, and native plant habitats which occur on or use this Reserve.
- Provides an overview of the Reserve's operation, maintenance, and personnel requirements to implement management goals. It serves as a budget planning aid for annual, regional budget preparation.
- Provides a description of potential and actual environmental impacts and subsequent mitigation which may occur during management, and contains environmental documentation to comply with state and federal statutes and regulations.

The LMP has been developed with guidance from CDFW's *A Guide and Annotated Outline for Writing Land Management Plans, May 2013*. The CDFW provided overall guidance to the planning process and was responsible for all decisions about the content of this plan. The Southern Service Center (SSC) office of California State Parks (CSP), provided technical and scientific expertise, and was responsible for the administrative aspect of the plan which included the preparation of the draft LMP (the list of document preparers is provided on the Acknowledgments page at the beginning of this document.)

DALEY MINE OVERLOOKING THE CENTRAL VALLEY TO THE WEST/SOUTHWEST

1.4 Planning Influences and Considerations

The Reserve is located in San Diego County, home of the second largest city in California, and the eighth largest city in the Nation. A complex and interrelated network of existing policies, regulations, and plans provides the backdrop for future use of this Reserve, the location of which provides a large open space link between county preserve to the north and west, as well as protection of the watershed upstream of the San Vicente Reservoir.

California Environmental Quality Act (CEQA)

Established in 1970, CEQA is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts where feasible. It is the state counterpart to the National Environmental Policy Act (NEPA) and is the fundamental regulation influencing the environmental effects of development within California.

Natural Community Conservation Planning Act (NCCPA)

Under the State's NCCPA of 1991, and the large, local effort of the MSCP, the County of San Diego developed a plan in 1997 that was created to work across political boundaries in a regional conservation effort aimed at preserving San Diego's diversity of native plants and animals, as well as protecting habitat, watersheds, and water quality. In doing so, it helps to ensure compliance with the federal Endangered Species Act, state Endangered Species Act. The Reserve falls within the MSCP's South County Subarea Plan. Within the Subarea, the Reserve is part of the "Pre-Approved Mitigation Area" (PAMA) identified for long-term preservation for its inclusion of listed and sensitive species.

San Diego County Water Authority Natural Community Conservation Plan (SDCWA NCCPA)/ Habitat Conservation Plan (HCP)

On December 09, 2010 the SDCWA approved the NCCPA/HCP. This plan provides the SDCWA the certainty that it can undertake activities covered by the Plan without being unduly constrained or delayed. Under this Plan, conservation and management of covered species will occur under a comprehensive approach that contributes to the ongoing conservation and management efforts in San Diego County and southwestern Riverside County. The Plan overlays, but is separate from, other plans in the region and has been designed to be complementary to other approved plans. The Plan's Preserve Area lands are all within or adjoin lands designated for conservation in plans established by other parties. The Plan's Preserve Area lands are all within or adjoin lands designated for conservation in plans established by other parties.

State Wildlife Action Plan

California's distinctive topography and climate have given rise to a remarkable diversity of habitats that support a multitude of plant and animal species. In fact, California has more species than any other state in the United States, and also has the greatest number of species that occur nowhere else in the world. Many of the places where wildlife thrive are the same as those valued for recreation and other human activities. To ensure a sustainable future for wildlife – and the enjoyment of wildlife by generations to come – there is a need for a collaborative approach to conservation.

The State Wildlife Action Plan examines the health of wildlife and prescribes actions to conserve wildlife and vital habitat before they become more rare and more costly to protect. The plan also promotes wildlife conservation while furthering responsible development and addressing the needs of a growing human population.

Multiple Species Conservation Program (MSCP) Subregional Plan

The MSCP was developed to preserve a network of habitat and open space, protecting biodiversity and enhancing the region's quality of life. The MSCP Subregional Plan, finalized in August 1998, is a comprehensive, long-term habitat conservation plan that addresses multiple species' habitat needs and the preservation of native vegetation in 12 jurisdictions of southwestern San Diego County. The MSCP Subregional Plan encompasses 582,000 acres, identifying a 172,000-acre preserve system, and covers 86 species of plants and animals. The Subregional Plan identifies preserve lands where conservation planning is directed and where permanent conservation of habitat will be accomplished through individual Subregional Plans.

San Diego County General Plan

Chapter 5 (*Conservation and Open Space Element*) of the County's 2011 General Plan relates directly to the Reserve. Addressing nine resource types including biological, water, cultural, and visual resources, the Element is intended to help guide development while conserving natural resources, protecting open space, and providing park and recreation resources. Amongst its goals is a regionally coordinated preserve system that will be monitored and managed to facilitate "the survival of native species and the preservation of healthy populations of rare, threatened, or endangered species."

SanDAG Regional Open Space Strategy

The San Diego Association of Governments' (SanDAG) Regional Open Space Strategy identifies the importance of open space. The goal is to ensure adequate quantities of diverse habitat types are maintained, and that the plants and animals found in these habitats are less likely to become endangered. Central to this is the creation and retention of open space corridors within and between communities.

Ramona Community Plan (2011)

Chapter 3 (*Conservation and Open Space*) of the 2011 Ramona Community Plan calls for, amongst other things, the conservation of "functional wildlife and plant habitats, particularly those supporting rare or endangered species." Two of the Resource Conservation Areas (RCAs) identified in the plan are located within the Reserve: Irving Crest – Daney Canyon (RCA #51) and San Vicente Creek (RCA #52).

PUBLIC MEETING PARTICIPANTS OCTOBER 2013

Irving Crest – Daney Canyon is noted for its steep slopes, large rock outcrops, oak woodlands, and old-growth chaparral.

The San Vicente Creek area is noted for the existing oak and riparian woodlands along the drainage and its tributaries, which are considered significant resources that warrant conservation and protection.

Barnett Ranch Open Space Preserve

The Barnett Ranch Open Space Preserve (OSP), which lies to the immediate north of the Reserve, is owned and managed by the County of San Diego Department of Parks and Recreation (SDDPR) and shares similar vegetation communities, as well as plant and animal species. The adjacency of the two properties makes interagency coordination and collaboration important and relevant with regards to the larger MSCP context, as well as site-specific management goals including utilization of wildlife corridors, management of biological resources, and fire prevention and control.

1.5 Public Process

A public scoping meeting was held on October 29, 2013 at the Charles E. Nunn Performing Arts Center in Ramona, California. Approximately 60 people attended the scoping meeting, which was structured to present the planning process and resource inventory data to the public, and provide a general background of the Reserve.

After the presentation of the resource inventory, a workshop format was arranged so participants could visit three tables, each with maps and manned by available team members, for the purpose of seeking input on such topics as desired use opportunities, known/perceived site constraints, and answering any resource questions regarding the Reserve.

Comments or topics provided and documented included, but were not limited to:

- Desire for hiking and equestrian trails
- Desire for dog training areas
- Request for open hunting
- Request for improved public access and entry road
- Protection of cultural, archaeological, and natural resources
- Protection of the wildlife and preserve areas

At the end of the scoping meeting, participants were encouraged to submit additional comments via mail (on comment cards distributed), or via email (at environmental.review@parks.ca.gov).

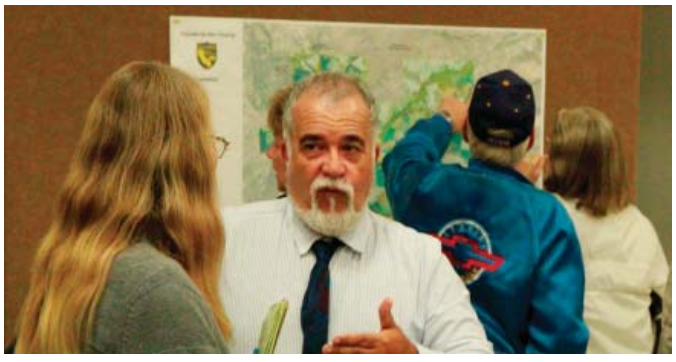
Additionally, participants were referred to the website (dfg.ca.gov/lands/mgmtplans/csv/)* which was established specifically for this LMP process, to obtain project updates, download meeting summaries, and view the summary of resources data.

Letters and emails continued to trickle in throughout the planning process, usually expressing particular interests ranging from bow hunting to dog training to equestrian staging areas. All comments were fully vetted and examined, ensuring the planning process reflects an informed community and statewide-based planning process.

PUBLIC MEETING PARTICIPANTS OCTOBER 2013

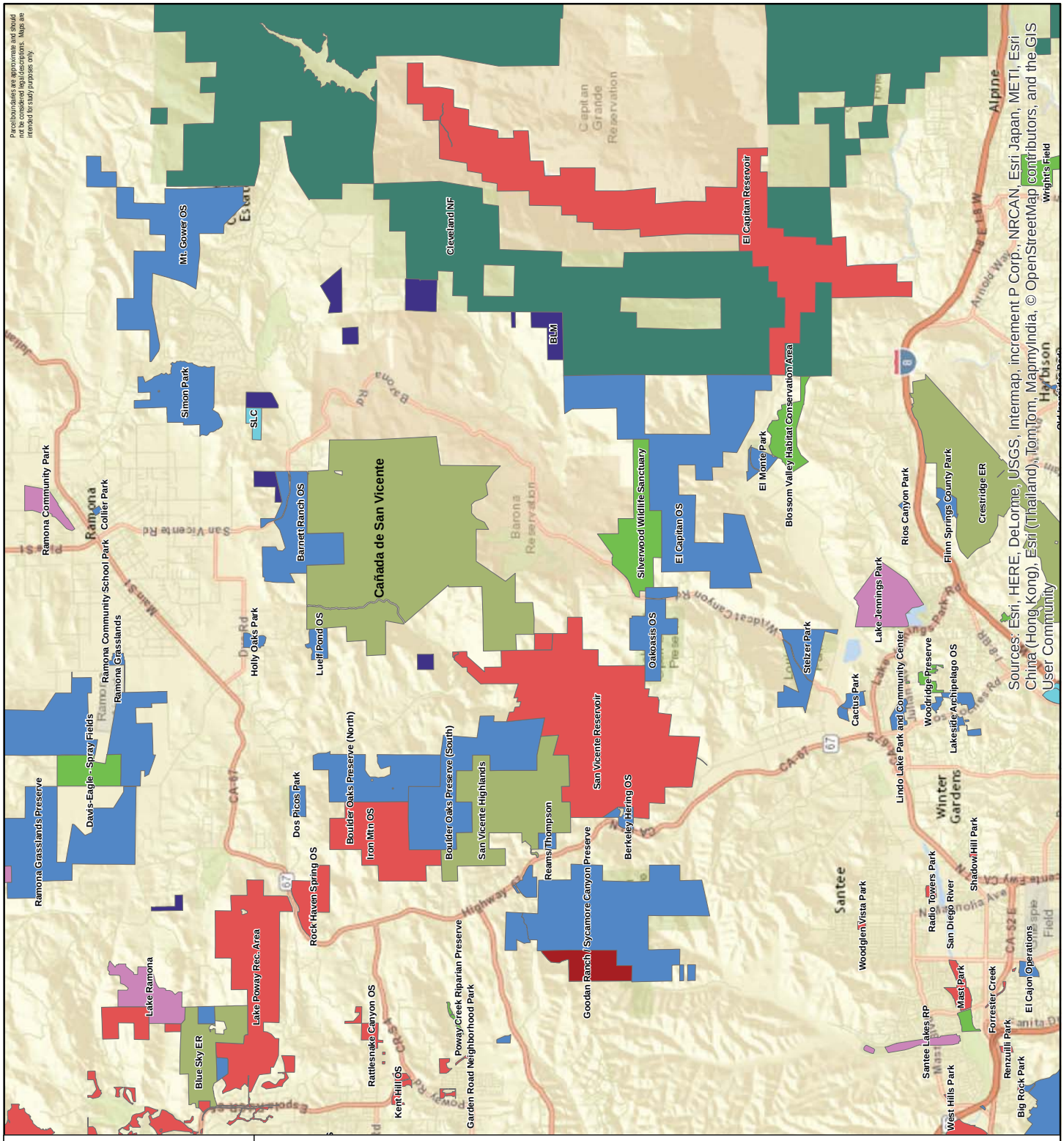
*Current website: https://www.wildlife.ca.gov/Lands/Planning/Canada-de-San-Vicente

RICH BURG
& TERRI STEWART JOIN IN A DISCUSSION ABOUT THE PLAN DURING THE PUBLIC MEETING OCTOBER 2013



ALEX BEVIL (HISTORIAN) EXPLAINS ELEMENTS OF THE PLAN OCTOBER 2013

2 PROPERTY DESCRIPTION


Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.
Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Mt. Gower OS
Cleveland NF
El Capitan Reservoir
BLM
Simon Park
SLC
Cañada de San Vicente
Barnett Ranch OS
Ramona Community Park
Collier Park
Ramona Community School Park
Ramona Grasslands
Holly Oaks Park
Luelf Pond OS
Silverwood Wildlife Sanctuary
El Capitan OS
El Monte Park
Blossom Valley Habitat Conservation Area
Oakoasis OS
Stetzer Park
Rios Canyon Park
Flinn Springs County Park
Crestridge ER
Lake Jennings Park
Cactus Park
Lindo Lake Park and Community Center
Woodridge Preserve
Lakeside Archipelago OS
Davis-Eagle - Spray Fields
Ramona Grasslands Preserve
Dos Picos Park
Boulder Oaks Preserve (North)
Iron Mtn OS
Boulder Oaks Preserve (South)
San Vicente Highlands
San Vicente Reservoir
Reams/Thompson
Berkeley Hering OS
Rock Haven Spring OS
Goodan Ranch/Sycamore Canyon Preserve
Woodglen Vista Park
Radio Towers Park
San Diego River
Shadow Hill Park
Mast Park
Forrester Creek
El Cajon Operations
Santee Lakes RP
Renziulli Park
West Hills Park
Big Rock Park
Lake Ramona
Lake Poway Rec. Area
Blue Sky ER
Rattlesnake Canyon OS
Kent Hill OS
Poway Creek Riparian Preserve
Garden Road Neighborhood Park
Date: 8/5/2015
Cañada de San Vicente
Figure 2
Regional Map
Legend
California Department of Fish and Wildlife (CDFW)
City (San Diego or Poway)
Joint CDFW, County, City
County
Non Governmental Organization
Other State
Special District
US Bureau of Land Management
US Forest Service
0 500 1,000 2,000 Feet

2 Property Description

2.1 Geographical Setting

The western portion of the Cañada de San Vicente Reserve is located in Township 14 South, Range 01 East, Sections 4, 5, 9, and 16. The eastern portion of the Reserve, having no township, range, or section designation, lies within the land grant of Cañada de San Vicente y Mesa Del Padre Barona. The Reserve crosses two United States Geological Survey (USGS) 7.5 minute quadrangles – San Vicente Reservoir and El Cajon Mountain. It is situated in the foothills of eastern San Diego County, where elevations range from 880' – 1,910'. San Vicente Creek, which supports designated critical habitat for the arroyo toad, runs through the Reserve in a southwesterly direction.

2.2 Boundaries and Adjacent Land Use

Cañada de San Vicente is a 5,014-acre Reserve located in the unincorporated town of Ramona, San Diego County. It lies southeast of Highway 67, northwest of the Barona Indian Reservation, and northeast of San Vicente Reservoir.

Immediately adjacent to the north and northwest of the Reserve, is Barnett Ranch OSP (728 acres) and Luelf Pond OSP (87 acres). To the south and east are tribal reservation lands owned by the Barona band of Mission Indians. Private lands are located to the northeast, northwest, and west.

San Vicente Creek and Daney Canyon Creek tributaries flow through the Reserve. The Daney Canyon Creek is also known as the San Vicente transfer (owned by the City of San Diego Public Utilities Department) and runs north/south. Also a 3.7-acre private in-holding exists within the northeast section of the Reserve.

Currently, no public access is allowed onto the Reserve and the main vehicular access point is located in the northeast corner of the Reserve via Chuck Wagon Road, a county road that branches off of San Vicente Road.

2.3 Easements

Easements and rights-of-way are legally recorded documents that run with the deed of the Reserve and are transferred with the Reserve from owner to owner. Easements typically preserve the rights of an entity other than the landowner. The Reserve has a small number of active easements.

San Diego Gas and Electric (SDG&E)

SDG&E holds two easements within the Reserve, one along the western edge and another through the center portion of the Reserve, to allow for placement and necessary maintenance of the electric transmission lines through the Reserve.

2.4 Existing Facilities/Uses

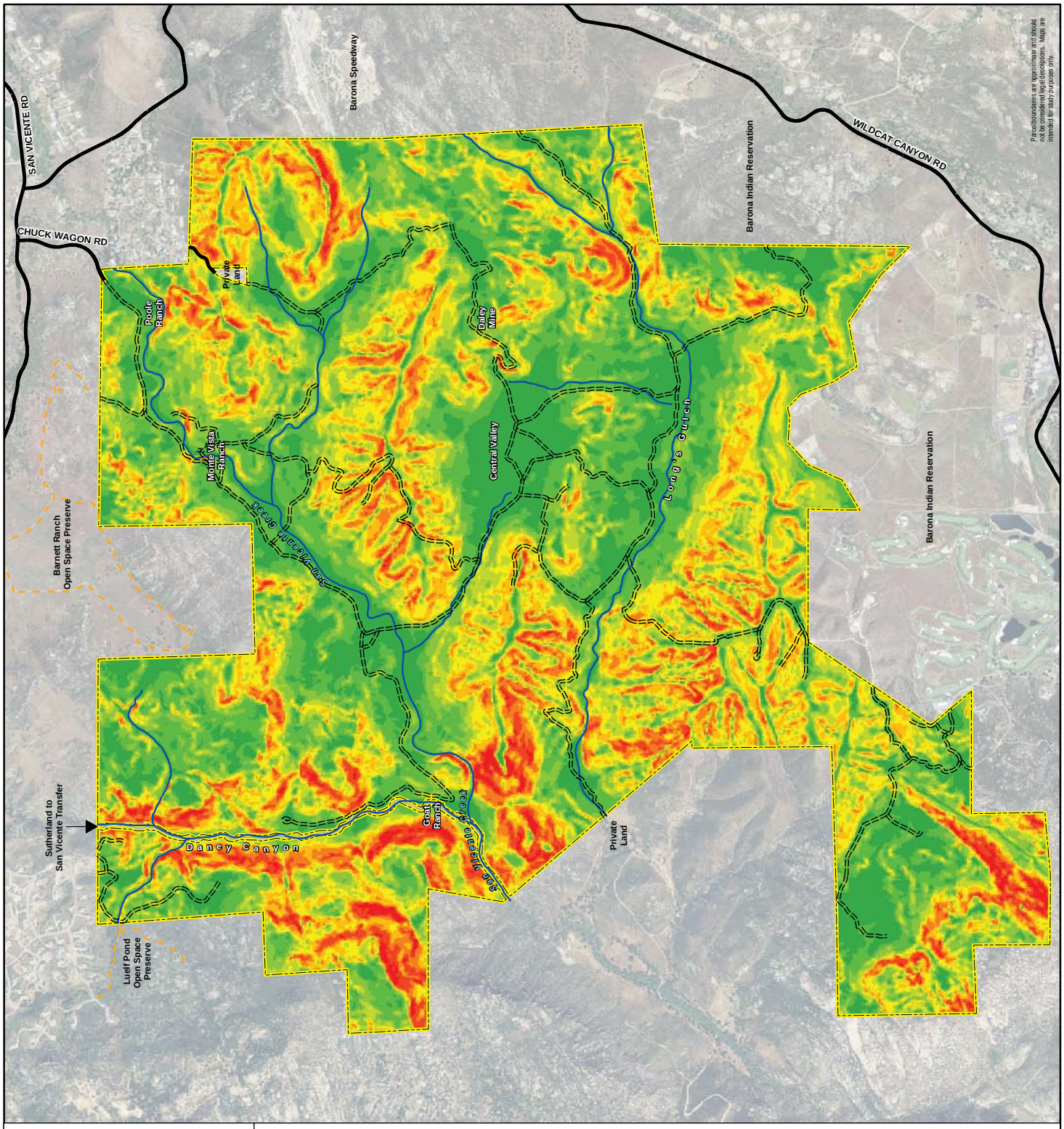
Existing facilities (structures remaining from the previous land owners/operators) are currently being used by CDFW for operations/maintenance and staff residences. Facilities include residences/offices, sheds, a barn, tool shop, swimming pool, and various other small structures. Also, spread across the Reserve, are historic remnants dating back to the ranching and mining periods. Refer to the Historic Resources section for additional historic information.

Circulation through the Reserve is on unpaved maintenance and fire roads, with no designated trailheads or trails.

2.5 Geology and Geomorphology

The Reserve is located on the western slopes of the Peninsular Ranges. Topographic relief is diverse and in some cases extreme. The following information on geology and geomorphology was obtained from the *Geology of Southern California* (DeCourten 2009).

The California portion of the Peninsular Ranges province extends for 125 miles south, from the Transverse Ranges to the Mexican border. However, it continues south into the Baja Peninsula of Mexico, its namesake, for more than 700 miles, making it one of the longest physiographic provinces in North America. The Peninsular Ranges consist of several mountain ranges such as the San Jacinto Mountains, Santa Ana, and Cuyamaca Ranges. In general, the highest peaks are toward the east where the Peninsular Ranges meet the Colorado Desert. Reminiscent of the Sierra Nevada, the western slope of the Peninsular Ranges descends gradually through a foothills zone to the coastal plain of southern California. Rivers such as the San Luis Rey, Santa Margarita, and San Dieguito flow west through the foothills zone in scenic canyons similar to those in the Sierra Nevada foothills. In fact, the Peninsular Ranges and the Sierra Nevada appear to have more in common than just their overall physiography. The bedrock patterns of the two regions are also similar, suggesting some parallels in the geologic history.



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Cañada de San Vicente

Figure 3
Slope Map

Legend

- 200ft Contours
- Paved Roads
- Existing Equestrian Trails
- CDFW Maintenance Roads
- Creeks and Drainages
- CDFW Lands

Slope (percent)

- 0 - 10
- 10.1 - 18.6
- 18.7 - 27.2
- 27.3 - 35.3
- 35.4 - 42.9
- 43 - 50.4
- 50.5 - 59
- 59.1 - 70.6
- 70.7 - 128.7

0 500 1,000 2,000 Feet

2.6 Soils

The United States Department of Agriculture's (USDA), Natural Resource Conservation Service (NRCS) has mapped nine soil series consisting of 14 soil-mapping units in the Reserve (*Figure 4*) (USDA 1973). These soils vary widely in depth, fertility, permeability, and other important characteristics. There are no listed hydric soils identified within the Reserve boundaries. The following soil series descriptions were obtained from the NRCS website (https://soilseries.sc.egov.usda.gov/osdlist.asp) and from the *Soil Survey San Diego Area, California* (USDA 1973).

Acid Igneous Rock

Acid igneous rock land is comprised of low hills to steep mountains with large boulders and rock outcrops of granite, granodiorite, tonalite, quartz diorite, gabbro, basalt, or gabbro diorite covering 50 to 90 percent of the total area. Vegetation is variable depending on elevation and climate. Vegetation primarily consists of sumac, sage, chamise, and ceanothus. The acid igneous land is of little agricultural use, but is used for wildlife habitat and watershed.

Cieneba

The Cieneba series are excessively drained, consisting of very shallow to shallow soils that formed in material weathered from granitic rock. Cieneba soils are found on hills and mountains that have slopes from 2 to 75 percent. The mean annual precipitation is 14 to 20 inches, and the mean annual air temperature, between 60°F to 62°F. Vegetation within the Cieneba soil areas consist of chaparral mainly composed of chamise, buckwheat, sage, and widely spread oak trees. Primary uses within these areas include rangeland, wildlife habitat, and watershed.

Cieneba Fallbrook

The Cieneba Fallbrook series consists of both Cieneba and Fallbrook soils. These soils are either well or excessively drained, consisting of shallow soils that formed in material weathered from granitic rock with moderate slopes. Erosion hazard is medium to high with moderate to moderately slow permeability. Vegetation within the Cieneba soil areas consists of chaparral, chamise, annual grasses, and oaks. Primary uses within these areas include agriculture (avocados), wildlife habitat, and watershed.

Fallbrook

The Fallbrook series consists of well drained, deep sandy loams soils that formed in material from weathered granitic rocks. Fallbrook soils are found on rolling hills and have slopes ranging from 2 to 20 percent. The mean annual precipitation is between 12 to 18 inches, while the mean annual air temperature range is 61°F to 64°F. Vegetation found within the Fallbrook soil series areas consist of annual grasses and forbs with oak and broadleaf chaparral mixed with intermittent chamise. Primary uses within

these areas include agriculture (including avocado, citrus, tomatoes, grains, pasture), and wildlife habitat.

Greenfield

The Greenfield soil series consists of well drained, deep soils formed in moderately coarse to coarse textured alluvium derived out of granitic and mixed rock sources. Greenfield soils are found on alluvial fans and terraces consisting of slopes ranging from 0 to 15 percent. Mean annual precipitation is between 14 to 18 inches with a mean annual air temperature of around 62°F. Natural vegetation found on Greenfield soil consists of annual grasses, forbs, shrubs, and scattered coast live oaks. Primary uses within these areas include rangeland, improved pasture, citrus, avocados, and wildlife habitat.

Olivenhain

The Olivenhain soil series consist of well drained moderately to deep cobbly loams with very cobbly clay subsoils. The soils were formed in a cobbly alluvium and found on dissected marine terraces having slopes ranging from 2 to 50 percent. The mean annual precipitation is about 12 to 16 inches with a mean annual air temperature of about 61°F. Vegetation on Olivenhain soils tends to consist of buckwheat, chamise, scrub oak, filaree, and cactus. The Olivenhain soils are mostly used for rangeland, watershed, and wildlife habitat.

Riverwash

Riverwash occurs in intermittent stream channels. The material is typically sandy, gravelly, or cobbly and therefore rapidly permeable. Vegetation consists of sycamores and oaks that grow along the banks of streams. In many places these soils are used for sand and gravel mining.

Visalia

The Visalia series consists of moderately well drained, very deep sandy loams derived from granitic alluvium. These soils are characteristically found on alluvial fans and flood plains with slopes of 0 to 15 percent at elevations of 400 to 2,000 feet. Precipitation ranges from 14 to 18 inches with annual mean air temperature of about 61°F. Visalia soils are used for avocados, citrus, walnuts, pasture, and wildlife habitat.

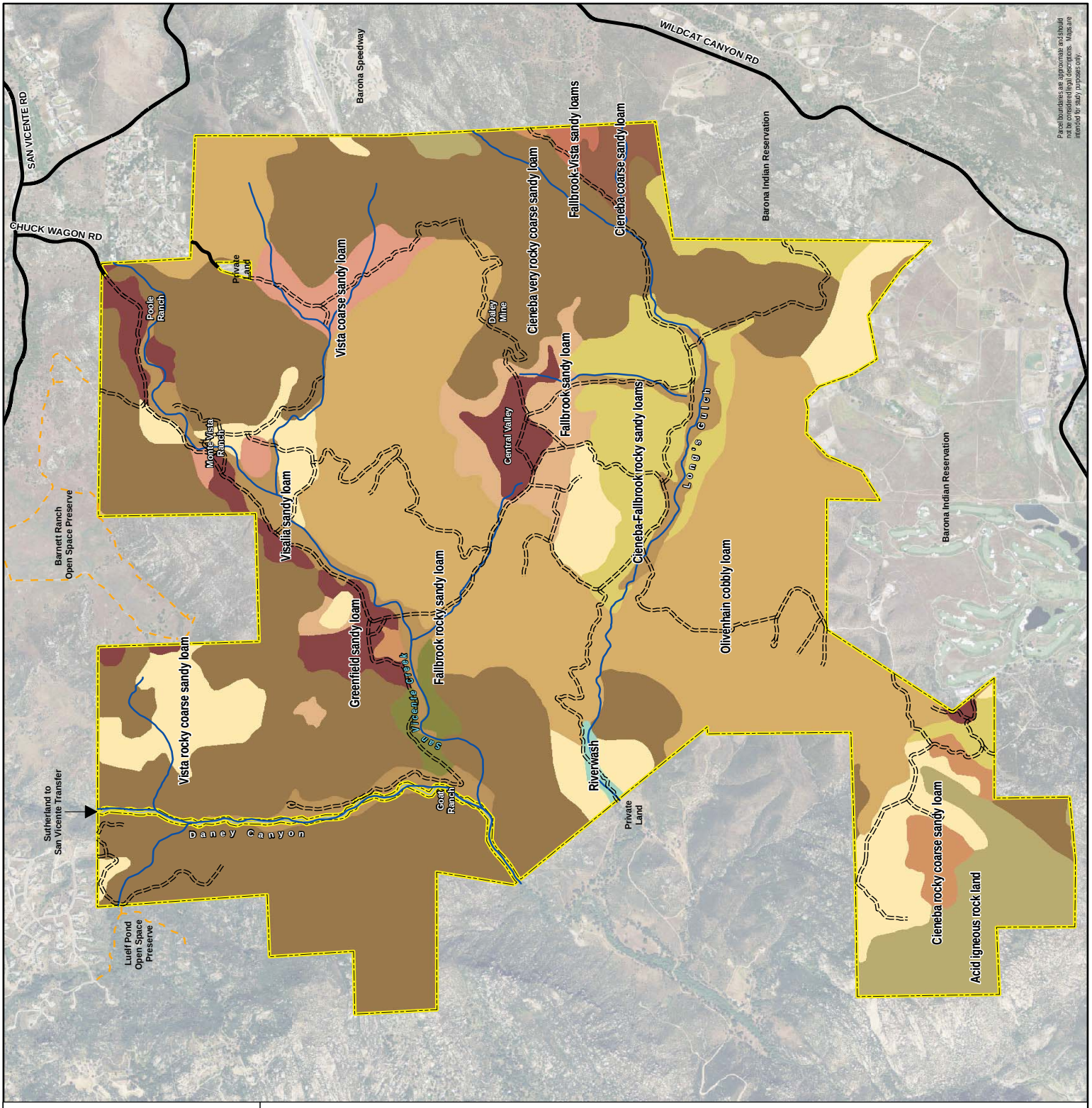
Vista

The Vista series consists of well drained moderately deep soils that formed in material weathered from granodiorite or quartz diorite. Vista soils are found on hills and mountainous uplands and have slopes ranging from 5 to 65 percent. The mean annual precipitation ranges between 14 to 18 inches, with a mean annual air temperature of about 61°F. The Vista soil series contains mixed vegetation of grasses, forbs, and shrubs, such as California sage, scrub oak, lilac, chamise, laurel sumac, and buckwheat. Vista soils are primarily used for avocado, citrus, rangeland, wildlife habitat, and housing development.

CEANOTHUS SP.

2.7 Climate

The Reserve is located in a rural and incorporated portion of San Diego County in the California Floristic Province, Southwest Region, Peninsular Ranges Subregion (Hickman 1993). The climate is considered Mediterranean and fluctuates with seasons of hot dry summers and mild wet winters. Average annual rainfall is 16 inches, which falls as rain primarily in the winter. Temperatures range from highs of 67°F to 100+°F and lows from 37°F to 57°F. The freeze-free period is from 275 to 350 days (Miles and Goudey 1997).



Date: 8/5/2015

Cañada de San Vicente

Figure 4
Soils Map

Legend

- Paved Roads
- Existing Equestrian Trails
- CDFW Unpaved Roads
- Creeks and Drainages
- CDFW Lands

Soils

- Acid igneous rock land
- Cieneba coarse sandy loam
- Cieneba rocky coarse sandy loam
- Cieneba very rocky coarse sandy loam
- Cieneba-Fallbrook rocky sandy loams
- Fallbrook rocky sandy loam
- Fallbrook sandy loam
- Fallbrook-Vista sandy loams
- Greenfield sandy loam
- Olivenhain cobbly loam
- Riverwash
- Visalia sandy loam
- Vista coarse sandy loam
- Vista rocky coarse sandy loam

0 500 1,000 2,000 Feet

2.8 Hydrology/Watershed

The Reserve is located within the San Vicente Hydrologic Area (*Figure 5*) which covers approximately 47,624 acres. Most surface runoff from this watershed is impounded by three reservoirs including San Vicente Reservoir. Approximately 16 miles of San Vicente Creek running through the Reserve is listed on the Clean Water Act (CWA) 303(d) list of impaired water bodies for ammonia as nitrogen, benthic community effects, total nitrogen as N, and toxicity.

Surface Waters

Water sources range from ephemeral drainages, year around springs along fault lines, and seasonal seeps which flow only in high rainfall years, to deep rocky basins known as *tenajas*, which may hold water for a few weeks.

Streams

Approximately 13.3 miles of perennial and intermittent streams have been mapped within the Reserve and are delineated on USGS topographic quadrangle sheets. There are few intermittent, ephemeral, and no perennial drainages within the Reserve. San Vicente Creek and Long's Gulch are the two largest ephemeral drainages in the Reserve.

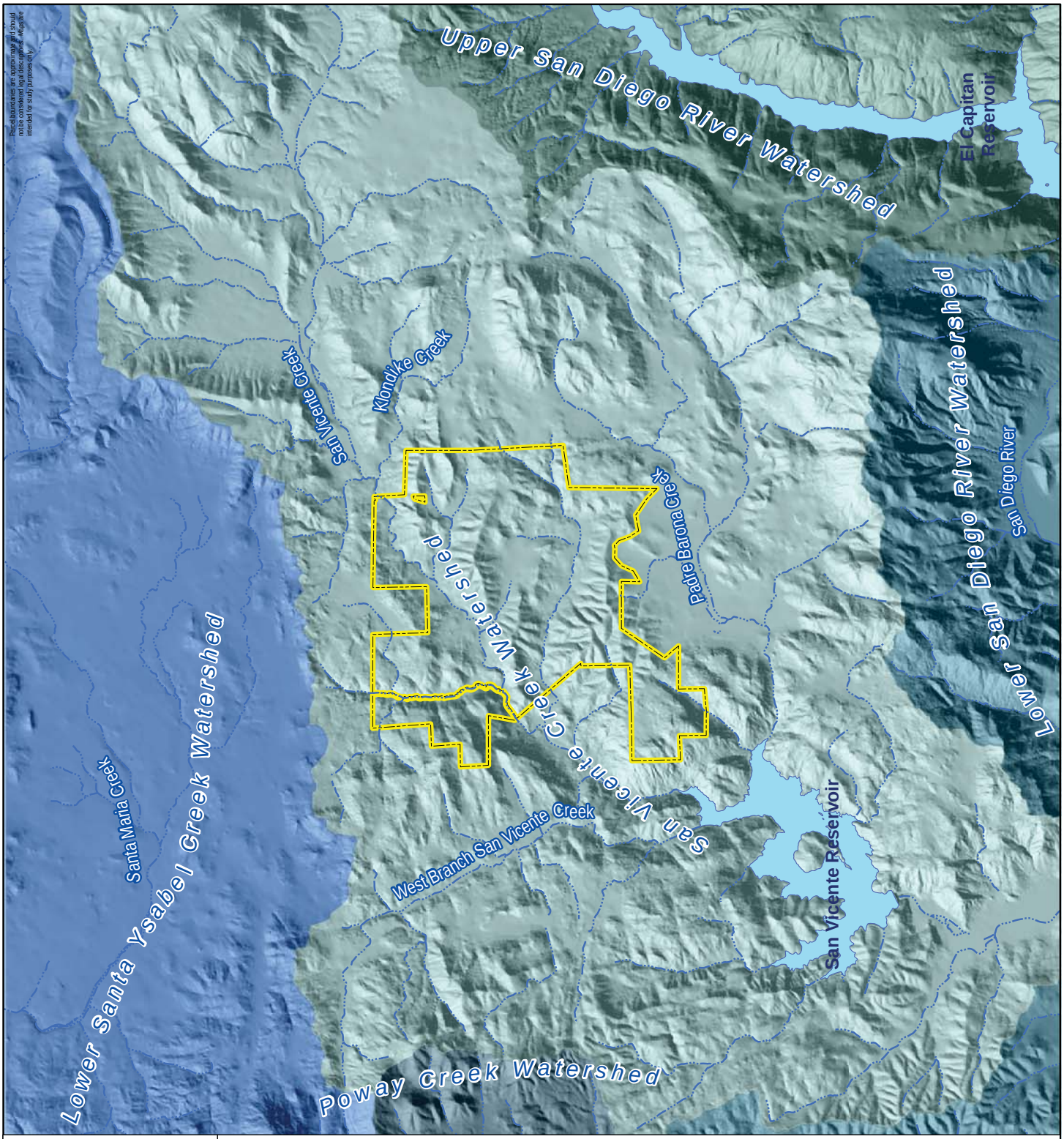
SEEPS AND SPRINGS

Springs and Seeps

Springs are a concentrated discharge of groundwater, appearing at the ground surface with a current of flowing water. To be distinguished from springs are seepage areas, which indicate a slow movement of groundwater to the surface (*Todd 1980*). A few springs and seeps are found throughout the Reserve and are often associated with geological formations such as faults.

2.8.1 Water Conveyance

A water transfer system operated by the City of San Diego Public Utilities Department is located along the western edge of the Reserve. This system conveys water from Lake Sutherland to San Vicente Reservoir via the Sutherland-San Vicente Pipeline. This pipeline ends within the Reserve, where water is conveyed along Daney Canyon, a tributary of San Vicente Creek, into San Vicente Reservoir.



Date: 8/5/2015

Cañada de San Vicente

Figure 5
Hydrography Map

Legend

- CDFW Lands
- Creeks and Drainages
- Reservoirs

Watersheds

- Lower San Diego River
- Lower Santa Ysabel Creek
- Poway Creek
- San Vicente Creek
- Upper San Diego River

0 500 1,000 2,000 Feet

2.9 Cultural Resources

The Cultural Resources of the Reserve include archaeological artifacts, features, and sites of both the Native American and historic periods, as well as traditional cultural places and resources, and historic buildings, structures, landscapes, and sites. These resources were researched, documented, and inventoried by CSP archaeologists and historians as part of a cultural resources inventory.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted in 2013, requesting a search of the sacred-lands files and a contact list of interested parties for the Reserve area. Although the files indicated no previously recorded traditional cultural places within the Reserve, the NAHC supplied a list of 18 Native American contacts for the area.

Letters were sent and follow-up phone calls extended to all of the 18 contacts explaining the management plan project and requesting comments, input, or concerns. There were 10 respondents in all which included representatives for the Viejas Band of Kumeyaay Indians (Viejas), and the Intertribal Cultural Resource Protection Council, Barona Band of Mission Indians (Barona), Campo Kumeyaay Nation, Ewiiaapaayp Band of Kumeyaay Indians, Iipay Nation of Santa Ysabel, Kumeyaay Cultural Repatriation Committee [KCRC], Kwaaymii Laguna, La Posta Band of Mission Indians, and Viejas. Most deferred to Barona as the adjacent property owner to provide comments and concerns. However, concern was expressed about the proximity of the Reserve to the Barona reservation and the potential for incompatible uses between the two. In addition, there was an interest for more information and a site visit. Therefore, two on-site meetings were held, each included a brief overview of the background and known cultural resources of the Reserve, followed by a tour of some of the archaeological sites on the Reserve.

MANO IN GRINDING BASIN

For planning and management purposes, it is important to know what archaeological and historic sites exist within the Reserve, where they exist, what condition they are in, and what threats they face. Threats to both the known and undocumented archaeological and historical sites include erosion, fire, project impacts, unauthorized trails and use, as well as vandalism (including artifact collection).

2.9.1 Archaeological and Ethnographic Overview

The cultural story of this landscape starts long ago. The Kumeyaay believe that their ancestors were placed in this area by the creator and they have been here since time began. Scientific evidence, such as radiocarbon dating, indicates that people have been living in southern California for more than 9,000 years, with some evidence from the Channel Islands showing humans have been in this area for over 13,000 years. The resources of the Reserve include plants and animals, rocks and minerals, shelters, and water sources that made this area ideal for habitation and procurement activities.

Archaeological Resources

Previous archaeological recordation work at the Cañada de San Vicente Reserve has been minimal. Only 13 archaeological sites had been recorded within the Reserve prior to the start of the current project and most of the previous work was done in the 1970s and 1990s when the Reserve was being considered for development. The archaeological resources inventory conducted for the current LMP consisted of identification and documentation of known and suspected archaeological sites within the Reserve. CDFW staff observed certain areas that appeared to contain archaeological features and artifacts. These locations were shown to CSP archaeologists; whereby, the team documented and recorded the sites, features, and artifacts that were present. Although only about 1.7 percent of the Reserve was examined as a result of this work, the count of known and recorded archaeological sites and isolates within the Reserve was raised to 53. However, much of the Reserve has not been examined, and very little of it has been systematically surveyed for archaeological resources, so it is anticipated that additional resources are present within the Reserve.

Of the 53 recorded cultural resources within the Reserve, 37 are Native American archaeological sites or isolates. These include rock shelters, stacked rock enclosures, rockwork foundations for large storage baskets, bedrock grinding features, resource procurement areas, stone tool manufacturing sites, camps, habitation sites, and lithic artifacts.

2.9.2 Historic Archaeological Resources

In addition to the Native American sites, there are 17 sites containing at least one historic feature, and one historic isolate. The historic sites consist of mining, ranching, habitation, and water supply sites including building and structure foundations, fence lines, corrals, guzzlers, cisterns, tanks, historic vegetation, and other remnants of previous land uses within the Reserve.

Historic Resources

The majority of the Reserve's study area is located within the Reserve's former Monte Vista Ranch, which CDFW acquired between 2005 and 2008. The approximately 4,450-acre parcel was part of the 13,316-acre *Rancho Cañada de San Vicente y Mesa del Padre Barona* (*Spanish for* "The Glen of Saint Vincent and the Padre Barona Plateau") that Mexican Governor Pío Pico granted to Juan Bautista Lopez in 1846. However, the rancho's *diseño* (*Spanish for* "map") shows a bifurcating trail that Spanish padres and soldiers may have used via San Vicente Creek or Wildcat Canyon traveling between Mission San Diego de Alcalá and the mission's asistencia or sub-mission at Santa Ysabel as early as 1818. Between 1846 and 1868, the rancho's grantee, Don Juan Lopez (1846-1850), and later absentee owner Don Domingo Yorba (1850-1868), raised horses and cattle on this well-watered sprawling ranch.

An 1869 land survey map indicates that several important roads and trails crisscrossed the rancho, providing access from New San Diego to Santa Ysabel, Ballena, and Santa María (Ramona) through Long's Gulch and San Vicente Valley. After Yorba sold the ranch in 1868, it was subsequently cut up into separate holdings. Among these was the 4,000-acre Barona Indian Reservation which shares the Reserve's south and eastern boundaries.

"L.A.P.B. CO." BRICK MADE BY LA PRESSED BRICK COMPANY

While most land owners of the Reserve after 1868 were San Francisco land speculators, a few became permanent settlers. For example, from 1881 to 1883, B. S. Sargent owned and operated a 200-acre ranch in Long's Gulch, where he raised cattle, horses, and grew alfalfa. Bees from Sargent's apiaries produced some of the world's finest honey from pollen they gathered from the ranch's thousands of acres of black sage and wild buckwheat. During the early 1900s, James and Minnie Poole operated one of the County's largest honey-producing apiaries in the Reserve's northeast corner. The Gillespie family was also involved with the Reserve from 1913 to 1926; however, there is no trace of the family's ranch house, having been destroyed in the 2003 Cedar Fire.

Around 1885, owner Thomas J. Daley discovered a 'blowout' of copper ore on the lee side of a rocky ridge overlooking a high central valley. The Daley or Barona Copper Mine, which also produced traces of gold and silver ore, was in sporadic operation until 1930. The remains of an additional mining test trench or 'adit' exists on a hillock overlooking Long's Gulch.

Other remnants of historic land use include stone and concrete cisterns associated with the area's ranching history.

While traditionally used to raise herds of cattle and horses during the 1920s, the Goat Ranch was an abortive attempt to raise angora goats at the mouth of Daney Canyon. The latter, named after a local Ramona family, is also associated with the 244-year old developmental history of the City of San Diego's water storage and delivery system which served as an open course for the transference of water from the Sutherland to San Vicente reservoirs beginning in 1953.

A cluster of rustic, wood-frame ranch buildings now used as CDFW staff residences are associated with the study area's namesake: Monte Vista Ranch. In 1938, owners Frederick and Ruth Williamson contracted local Ramona contractor Burch Telford to improve the Ranch's residential area. The latter included three small 1-story residences, mechanical equipment shed, elevated water storage tank tower, and spring house. It is not known if the Williamsons were permanent residents, or used the Reserve as a vacation/guest ranch until Frederick's death in 1945. The subsequent absentee owners, William D. and C. Wesley Buerkle of Bakersfield, employed a foreman to run cattle on the Reserve and also used the ranch as vacation property until 1956. From 1956 to 1998, local real estate development companies acquired and planned to develop the renamed Mirasol Ranch (*Spanish for* "Sunflower Ranch") into residential tract housing. They included Donald J. Sass (1956-1959), then William R. Hawn and Harry L. Summers (1959-1998). Sass, Hawn, and Summers never initiated the wide-spread conversion of the Reserve into housing tracts; but continued to operate it as a cattle ranch for approximately 20 years. In 1998, the San Pedro-based Monte Vista Oaks Corporation purchased the ranch with the hope of developing sections into large parcels for "country estate" homes. The company was also responsible for restoring, converting, and operating the former Monte Vista Ranch residential cabins into the *Rancho Cañada Bed and Breakfast* in 2003. In 2007, 392 acres were transferred to the CDFW by the SDCWA to provide additional conservation acreage for its NCCP/HCP Preserve Area and mitigation for the San Vicente Dam, Raise Project. Following the transfer, the CDFW occupied the former bed and breakfast cabins as staff housing. In 2009, TNC sold approximately 4,100 acres of the former ranch to the CDFW. In 2010, CDFW acquired an additional 311-acre parcel west of Daney Canyon (from the adjacent Spitsbergen/Emerald Oaks parcel). After the transfer, the CDFW occupied the former bed and breakfast cabins as staff housing.

Historical Inventory

1. Rancho de Cañada de San Vicente y Barona (site)
   This approximately 4,450-acre parcel was part of the 13,316-acre Rancho *Cañada de San Vicente y Mesa del Padre Barona* (*Spanish for* "The Glen of Saint Vincent and the Padre Barona Plateau") that Mexican Governor Pío Pico granted to Juan Bautista Lopez in 1846. Between 1846 and 1868, Don Lopez, and later absentee

owner Don Domingo Yorba, raised horses and cattle on this well-watered and sprawling Mexican-era ranch.

2. San Vicente Creek Wagon Road (site)
A bifurcating trail that Spanish padres and soldiers may have used to travel from Mission San Diego de Alcalá (via El Cajon Rancho) along San Vicente Creek to the mission's asistencia or sub-mission at Santa Ysabel as early as 1818. The trail may also have been a direct link from Mexican-era rancho to Old Town San Diego from 1833 to 1850. Later, it was a segment of a wagon road connecting New San Diego via Mussey Grade to Santa María (Ramona), Warner's Ranch, and Julian via Santa Ysabel after 1869.

3. Long's Gulch Wagon Road (site)
Historic maps indicate a segment of the wagon road connecting New San Diego to the San Vicente Creek Trail as early as 1869. A junction at the southwest entrance into Wildcat Canyon linked the trail to additional wagon roads to Santa María and Santa Ysabel (via Ballena).

4. Sargent Ranch (site)
Benjamin S. Sargent owned and operated a 200-acre ranch in Long's Gulch, where he and his family raised cattle and horses, grew alfalfa, and produced honey from apiaries between 1881 and 1883. The location of the ranch house and other improvements is unknown at this time.

5. Poole Ranch (site)
During the early 1900s, James and Minnie Poole operated one of the county's largest honey-producing apiaries at the northeast corner of the Reserve. The Gillespie family was also involved with the Reserve property from 1913 to 1926. Unfortunately, the ranch house was destroyed by the 2003 Cedar Fire.

POOLE RANCH HOUSE -- 1997

6. Daley Mine (site)
This site contains evidence of the Daley or Barona Copper Mine. Around 1885, rancher Thomas J. Daley discovered a blowout of copper ore on the lee side of a rocky ridge overlooking a high central valley. The mine, which consists of vertical and horizontal shafts, also produced traces of gold and silver ore in sporadic operations until 1930.

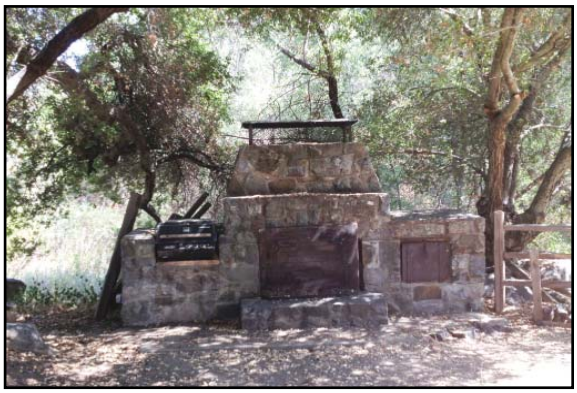
7. Long's Gulch Adit (site)
   At this location, the remains of an additional mining test trench or adit still exist on a hillock overlooking the Long's Gulch Wagon Road.

8. Goat Ranch (site)
   Located near the junction of Daney Canyon and San Vicente Creek, this is the site of a ranch house associated with an abortive attempt by lessees to raise angora goats during the 1920s.

9. Daney Canyon (site)
   Named after a local Ramona family, the canyon is also associated with the 244-year-old developmental history of the City of San Diego's water storage and delivery system. It served as an open course for the transference of water from the Sutherland to San Vicente reservoirs beginning in 1953.

10. Cisterns (structures)
    These landscape features consist of several stone and concrete cisterns associated with the area's ranching history.

11. Monte Vista Ranch Complex (district)
    In 1938, ranch owners Frederick and Ruth Williamson contracted local Ramona contractor Burch Telford to erect this grouping of rustic-looking cabins, mechanical equipment shed, elevated water storage tank tower, and spring house along the San Vicente Creek Wagon Road. The complex served as the Monte Vista Ranch's administrative and residential core until the Buerkle family purchased the property in 1945. While the Buerkles still operated it as a working cattle ranch, the family also used the complex as a seasonal vacation retreat until 1956. CDFW currently uses the recently restored buildings as staff housing, meeting rooms, and equipment storage facilities.



B.B.Q. AT MONTE VISTA RANCH COMPLEX

2.10 Aesthetics/Visual Resources

Cañada de San Vicente Reserve is characterized by wooded areas and open valleys. Although secluded by its seeming remoteness, the land is not far from the town of Ramona. It is a place where the night sky is dark, and the silence gives way to a calm, peaceful 'sense of place.'

Inhabitants vary from painted lady butterflies, to red-tailed hawks and the diversity of plants ranges from delicate Clarkia to Engelmann oaks.

Within the landscape are evidences of native people, ranchers, and miners, as well as more modern usage. Due to the gentle use of the land, its resilience shows. Remnants of the past and proof of the present give way to the future, indicating that change over time can be managed to allow varied uses of the land.

The mission of CDFW which evokes the managing of such diverse natural resources with managed public access, along with this LMP, will maintain this wonderful 'sense of place.'

OVERLOOK WITHIN CAÑADA DE SAN VICENTE

3 HABITAT AND SPECIES DESCRIPTION

3 Habitat and Species Description

3.1 Vegetation Communities and Habitats

In 2009, 2011, and 2012 the CDFW conducted vegetation surveys (rapid assessments, field reconnaissance, and verification surveys) and analysis to document the vegetation types found within Cañada de San Vicente (*Figure 6* and *Appendix 8.1*). The resulting classification followed the hierarchical *National Vegetation Classification System* (Jennings et al. 2009) and *A Manual of California* (Sawyer et al. 2009). This system classifies vegetation at the alliance and association levels. Within the boundaries of Cañada de San Vicente, 38 rapid assessment surveys and 111 reconnaissance points were conducted during this effort.

The following vegetation alliance descriptions are summaries of combined detailed accounts presented in the *Classification of the Vegetation Alliances and Associations of Western San Diego County* (Sproul et. al. 2011). Not all species included in these summaries are found within the Reserve but rather, are general descriptions.

Adenostoma fasciculatum Alliance (Chamise Chaparral)

Throughout its range, chamise (*Adenostoma fasciculatum*) is dominant in the shrub canopy and depending upon the location, may have ribbonwood (*A. sparsifolium*), eastwood Manzanita (*Arctostaphylos glandulosa*), common manzanita (*A. manzanita*), whiteleaf manzanita (*A. viscida*), *Ceanothus* spp., sticky monkeyflower (*Diplacus aurantiacus*), California yerba santa (*Eriodictyon californicum*), California buckwheat (*Eriogonum fasciculatum*), chaparral yucca (*Hesperoyucca whipplei*), toyon (*Heteromeles arbutifolia*), California scrub oak (*Q. berberidifolia*), scrub live oak (*Q. wislizeni*), white sage (*Salvia apiana*), purple sage (*S. leucophylla*), black sage (*S. mellifera*), and poison oak (*Toxicodendron diversilobum*). Emergent trees may be present at low cover. Shrubs are typically less than 13 feet tall; the canopy is intermittent to continuous, and the herbaceous layer is sparse to intermittent.

As a result of extensive high-frequency and high-intensity fires in Western San Diego County over the past few decades, this alliance is now poorly represented as mature stands. There is evidence of type conversion to post-fire alliance stands of laurel sumac (*Malosma laurina)* and deerweed *(Lotus scoparius)*, in addition to largely annual non-native grasslands.

Adenostoma fasciculatum-Xylococcus bicolor Alliance (Chamise-Mission Manzanita Chaparral)

In this alliance, chamise and mission manzanita (*Xylococcus bicolor*) are co-dominants in the shrub canopy and may co-occur with hoaryleaf ceanothus (*C. crassifolius*), Ramona Lilac (*C. tomentosus*), wart-stem ceanothus (*C. verrucosus*), bush-rue (*Cneoridium dumosum*), chaparral yucca, toyon, laural sumac, California scrub oak, holly-leaf redberry (*Rhamnus*

ilicifolia), sugar bush (*Rhus ovata*), white sage, and black sage. Shrubs are usually less than 10 feet tall; and the canopy is intermittent to continuous. The herbaceous layer is sparse to intermittent.

This chaparral, characterized by the mixture of chamise and mission manzanita, is endemic to the south coast of California and adjacent northern Baja California. Like chamise, manzanita is a resprouter following fires, but is typically representative of more mesic settings than where chamise is the sole dominant.

Artemisia californica-Eriogonum fasciculatum Alliance (California Sagebrush-California Buckwheat Scrub)

This alliance occurs from Northern Baja California to the Mount Diablo Range of central California. It is made up of two associations locally. One, the California sage (*Artemisia californica*) - California buckwheat - laurel sumac is typical of drier coastal sage scrub slopes at lower and mid-elevations, usually away from the immediate coast. A second, the California sage - California buckwheat - coast prickly pear (*Opuntia littoralis*)/ladyfingers (*Dudleya edulis*) association has been recently defined from coastal San Diego County using data from this study and the Cabrillo National Monument project (Sproul, et. al. 2011).

This alliance is often found in drier and more exposed settings either adjacent to California sage alliance stands or farther inland away from direct maritime fog influence. The alliance is characterized by California sage and California buckwheat as co-dominants in the shrub canopy and may include lower cover of chamise, sticky monkeyflower, California joint fir (*Ephedra californica*), interior goldenbush (*Ericameria linearifolia*), chaparral yucca, deerweed, laurel sumac, lemonade berry (*Rhus integrifolia*), sugar bush, and/or white sage. Most shrubs are less than 7 feet in height. Some emergent large shrubs are up to 16 feet tall. The canopy can be one or two tiered, and ranges from intermittent to continuous cover. An herbaceous layer is present and dominated by spring annuals but may have some perennial grasses and geophytes.

Baccharis salicifolia Alliance (Mulefat Thickets)

Mulefat forms scraggly stands in both seasonally or intermittently flooded habitats, such as canyon bottoms, floodplains, irrigation ditches, lake margins, and stream channels. Stands are inherently variable depending on the amount of inundation and scouring. Stands usually form open shrublands or thickets in riparian corridors and along lake margins. The alliance is widespread throughout the warmer parts of California and the Southwest.

State-wide, mulefat (*Baccharis salicifolia*) is dominant or co-dominant in the shrub canopy with few to relatively numerous associated shrubs depending on location. These can include California sage, Emory's baccharis (*B. emoryi*), coyote bush (*B. pilularis*), tree tobacco (*Nicotiana glauca*), laurel sumac, arrow weed (*Pluchea sericea*), blackberry species (*Rubus spp.*), sandbar willow (*Salix exigua*), arroyo willow (*S. lasiolepis*), black elderberry (*Sambucus nigra*), and tamarisk (*Tamarix* spp). Emergent grey pine (*Pinus sabiniana*), California sycamore (*Platanus*

racemosa), western cottonwood (*P. fremontii*), oak species (*Quercus* spp.), and willow species (*salix* spp.) may be present in some stands. Shrubs are generally less than 16 feet tall, with the canopy open to continuous. The herbaceous layer is usually sparse.

Bromus (diandrus, hordeaceus)-Brachypodium distachyon Alliance (Annual Brome Grasslands)

In cismontane California, nonnative bromes (*Bromus* spp.) and other "false" bromes have become abundant and may strongly dominate in areas where the natural ecology of vegetation has been altered by high fire frequency, deposition, deep soil tilling, and/or intensive grazing. Many stands with ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), or false brome (*Brachypodium distachyon*) are dominant or dominant with nonnatives in the herbaceous layer. Sometimes emergent trees and shrubs may be present at low cover. The herb layer is typically less than 30 inches in height and cover is intermittent to continuous.

Californian Warm Temperate Marsh/Seep Group

This is a group level classification of an herbaceous stand located in a wetland or seasonally moist to dry area, with soils moist through the growing season due to flooding or high water table. Generally consists of native obligate or facultative wetland perennial plants, including sedge species (*Carex* spp.), Rush species (*Juncus* spp.), deer grass (*Muhlenbergia rigens*), monkeyflower species (*Mimulus* spp.), or other herbs. Stands are typically less than 5 feet tall.

Ceanothus crassifolius Alliance (Hoaryleaf Ceanothus Chaparral)

Hoaryleaf is an obligate seeder that produces a long-persisting seed bank. Monotypic stands of hoaryleaf occur in post-fire situations where the fire cycle ranges between 20 and 60 years, although individuals may live for over 90 years. Since stands are identified by strong dominance of hoaryleaf, most stands sampled in the area have likely experienced fire relatively recently. Fires occurring at short intervals have the potential to cause significant changes in species density and composition.

In general, the alliance is characterized by hoaryleaf as the dominant or co-dominant in the shrub canopy with chamise, big-berry manzanita (*A. glauca*), chaparral mountain mohogany (*Cercocarpus montanus*), chaparral whitethorn (*C. leucodermis*) sticky monkeyflower, California buckwheat, chaparral yucca, toyon, yellow bush-penstemon (*Keckiella antirrhinoides*), laurel sumac, California

SNAPDRAGON PENSTEMON (*KECKIELLA ANTIRRHINOIDES*)

(inland) scrub oak, sugar bush, and/or black sage. Emergent coast live oak (Q. *agrifolia*) and other trees may be present at low cover. Shrubs are usually less than 11 feet tall, with the canopy intermittent to continuous. In mature stands the herbaceous layer is open.

Ceanothus leucodermis Alliance (Chaparral Whitethorn Chaparral)

Stands of chaparral whitethorn are found at elevations that are moderate to high for chaparral in early post-fire sites, and they appear longer-lived in coastal settings as compared to desert exposures. Shrubs experience moderate to high mortality in mature stands, especially those unburned for more than 40 years. Chaparral whitethorn rapidly sprouts from root crowns when branches are removed by fire (or other disturbance), but also seeds readily after fires. Stands form at transitions between coastal scrub, chaparral, and conifer-oak forests.

In general, stands of this alliance are characterized by having chaparral whitethorn dominant in the shrub canopy with lesser cover of chamise, big-berry manzanita, deer brush (*C. integerrimus*), yerba santa species (*Eriodictyon* spp.), chaparral yucca, toyon, California scrub oak, skunk bush (*Rhus trilobata*), and/or poison-oak. In some stands emergent canyon live oak (*Q. chrysolepis*), black oak (*Q. kelloggii*), or scrub live oak trees may be present at low cover. The shrub stratum is less than 13 feet in height, the canopy is intermittent to continuous, and the herbaceous layer is typically sparse.

Ceanothus tomentosus Alliance (Woolyleaf Ceanothus)

Woolyleaf (*C. tomentosus*) is dominant or co-dominant in the shrub canopy with chamise, ribbonwood, eastwood manzanita, big-pod ceanothus (*C. megacarpus*), hairy-leaf ceanothus (*C. oliganthus*), toyon, California scrub oak, sugar bush, black sage, poison oak, and mission manzanita. Emergent coast live oak, canyon live oak, scrub live oak, and pepperwood (*Umbellularia californica*) trees may be present at low cover. Shrubs are generally less than 13 feet tall, the canopy is continuous to intermittent, and the herbaceous layer is sparse in mature stands.

Corethrogyne filaginifolia Provisional Alliance (Sand aster Patches)

Sand aster (*Corethrogyne filaginifolia,* a.k.a. *Lessingia filaginifolia*) is a perennial herb characteristic of relatively dry settings on slopes throughout much of California. It is particularly common in the south coastal regions where it forms open stands with mixtures of native and nonnative herbs at the margins of post-fire recovering coastal scrub and chaparral stands, often adjacent to grasslands or other openings. Most stands are small and less than 2.5 acres in size.

Eriogonum fasciculatum Alliance (California Buckwheat Scrub)

California buckwheat is one of the most diagnostic species of the Californian Mediterranean drought deciduous scrub macrogroup. It dominates or co-dominates many thousands of acres from the San Francisco Bay region south to northern coastal Baja California. Stands do well on rocky sites and in shallow soils, and they establish after disturbance by fire or flood or after heavy grazing. In southern coastal California, this alliance is usually one of the first of the coastal scrubs to establish in mechanically disturbed areas, such as road cuts or slope failures, and it persists in areas with light to moderate grazing.

In general, stands of this alliance are characterized by California buckwheat as dominant or co-dominant in the shrub canopy in the cismontane stands with California sage, big sagebrush (*A. tridentata*), coyote bush, sticky monkeyflower, bush sunflower (*Encelia californica*), brittlebush (*E. farinosa*), San Diego goldenbush (*Isocoma menziesii*), deer weed, coastal bushmallow (*Malacothamnus fasciculatus*), white sage, and black sage. In the transmontane stands with burro bush (*Ambrosia dumosa*), cheese bush (*A. salsola*), blackbush (*Coleogyne ramosissima*), mormon tea (*E. nevadensis*), green rabbitbrush (*Ericameria teretifolia*), creosote bush (*Larrea tridentata*), bladder sage (*Salazaria mexicana*), jojoba "goat nut" (*Simmondsia chinensis*), and desert sunflower (*Viguiera parishii*). Shrubs are typically less than 7 feet tall and the canopy is continuous or intermittent. The herbaceous layer is variable and it may be grassy.

Eriogonum fasciculatum-Salvia apiana Alliance (California Buckwheat-White Sage Scrub)

The California Buckwheat – White sage alliance is limited to southern California and adjacent Baja California, Mexico. It differs from the previous California buckwheat alliance, by having white sage co-dominant. It typically occupies relatively well drained, coarse – textured soils inland from the coast to the desert margins of the eastern side of the Peninsular Ranges.

In general, stands of this alliance are characterized by California buckwheat and white sage as a co-dominant in the shrub canopy with California sage, chamise, desert ceanothus (*C. greggii*), chaparral whitethorn, snakeweed (*Gutierrezia sarothrae*), chaparral yucca, toyon, yellow bush-penstemon, deerweed, laurel sumac and/or California scrub oak sometimes present. Emergent coastal live oak trees may be present at low cover. Shrub canopy is usually less than 8 feet tall; and is intermittent. The herbaceous layer is variable and may be grassy.

***CHAPARRAL YUCCA* (HESPEROYUCCA WHIPPLEI)**

Lotus scoparius Alliance (Deerweed Scrub)

Deerweed is a short lived perennial shrub which typically colonizes slopes after fires in chaparral and coastal sage scrub throughout much of California. The alliance is an indicator of post-fire (or occasionally, other disturbance) conditions. Stands tend to persist for only a few years before other longer-lived woody species germinate or resprout, forming enough cover to convert to longer-persisting vegetation types.

In general, the characteristics of this alliance include: deerweed as the dominant or co-dominant in the shrub canopy with chamise, California sage, coyote bush, California joint fir, interior goldenbush, California yerba santa, California Buckwheat, sawtooth goldenbush (*Hazardia squarrosa*), sand aster, chaparral bushmallow, desert apricot (*Prunus fremontii*), sugar bush, oak "golden" gooseberry (*Ribes quercetorum*), and white sage. Shrubs are usually less than 7 feet tall and the canopy is open to intermittent and often two tiered. The herbaceous layer may be sparse to intermittent.

Malosma laurina Alliance (Laurel Sumac Scrub)

Laurel sumac is a large evergreen, sclerophyllous shrub that occurs along the coast from Santa Barbara County south into north western Baja California. It is frost sensitive and its presence generally signifies the warm coastal regions of southern California. The shrub is a consummate resprouter, and can regularly resprout from its deep rootcrown multiple times in short succession following fires.

In general, the characteristics of the alliance as sampled so far include: laurel sumac dominant or co-dominant in the shrub canopy with California sage, big-pod ceanothus, sticky monkeyflower, bush sunflower, Coastal buckwheat (*E. cinereum*), California buckwheat, toyon, chaparral yucca, yellow bush-penstemon, holly-leaf redberry, lemonade berry, sugar bush, purple sage, black sage, pary tetracoccus (*Tetracoccus dioicus*), and/or poison oak. Emergent trees such as coastal live oak, or California sycamore may be present. Shrubs are usually less than 16 feet in height and the canopy is open to continuous. The herbaceous layer ranges from sparse to grassy. As a result of high frequency fires in the past few decades, this alliance has become more common in many areas of western San Diego County.

Mediterranean California Naturalized Annual and Perennial Grassland Group

The description is based on the group level (i.e., hierarchical level above the alliance) as classification to an alliance is not possible. Nonnative grasses and forbs are dominant over the native species, but none of the following nonnative species are clearly dominant or co-dominant: *Avena* spp., *Bromus* [ripgut, soft chess, red foxtail (rubens)], false brome, rye (*Lolium*), [rye grass (*perenne*), (*multiflorum*), (*temulentum*)], fountain grass (*Pennisetum* spp.), black mustard (*Brassica nigra*), poison hemlock (*Conium maculatum*), and/or crown daisy (*Glebionis coronaria*).

These species, though, may be present without dominance in a mixed assemblage that could include other naturalized, ruderal species, such as Agrostis Pacific bentgrass (*avenacea*, *desertorum*, creeping bentgrass (*stolonifera*), bentgrass (*viridis*), tall fescue (*Festuca arundinacea*), crab grass (*Digitaria* spp.), Russian thistle "tumbleweed" (*Salsola* spp.), filaree (*Erodium* spp.), Johnson grass (*Sorghum* spp.), thistle species (*Centaurea* spp.), Bermuda grass species (*Cynodon* spp.), Mediterranean grass (*Schismus* spp.), and milk thistle (*Silybum marianum*). This vegetation type is widespread and highly variable, and representative of general situations where ruderal plants have replaced natives through repeated soil disturbance and introduction of nonnative plants.

***Platanus racemosa Alliance* (California Sycamore Woodlands Alliance)**

Sycamore stands are common along many of the streams. They may have mixtures of coast live oak and other trees, but are characterized by the presence of sycamores regularly spaced throughout the stands. In general the alliance is characterized by: California sycamore dominant or co-dominant in the tree canopy with white alder (*Alnus rhombifolia*), California black walnut (*Juglans californica*), western cottonwood, coast live oak, valley oak (*Q. lobata*), sandbar willow, black willow (*S. gooddingii*), red willow (*S. laevigata*), arroyo willow (*S. lasiolepis*), yellow willow (*S. lutea*), Peruvian pepper tree (*Schinus molle*), and pepperwood. Trees are the dominant layer and are generally less than 115 feet in height. The canopy is open to intermittent and the shrub layer is open to intermittent with the herbaceous layer ranging from sparse to grassy.

CALIFORNIA SYCAMORE
(PLATANUS RACEMOSA)

Quercus agrifolia Alliance (Coast Live Oak Woodland)

In general, characteristics of the alliance on a state-wide basis include: coast live oak dominant or co-dominant in the tree canopy with big-leaf maple (*Acer macrophyllum*), California box-elder (*A. negundo*), Pacific madrone (*Arbutus menziesii*), California black walnut, California sycamore, western cottonwood, blue oak (*Q. douglasii*), valley oak, *Engelmann oak* (*Q. engelmannii*), black oak, arroyo willow, and/or pepperwood. Trees are generally less than 98 feet tall and the canopy is open to continuous. The shrub layer is sparse to intermittent, and the herbaceous layer is sparse to grassy.

COAST LIVE OAK WOODLAND

Quercus berberidifolia Alliance (Scrub Oak Chaparral)

Scrub oak is a general term representing multiple taxa of largely evergreen oaks that do not typically attain tree size in California. Taxonomic confusion abounds with many of these species. In the past decade most scrub oaks west of the desert margins have been called California scrub oak. However, hybridization between Engelmann oak and desert "muller" scrub oak (*Q. cornelius-mulleri*), normally found east of the vegetation study area, has led to progeny Torrey's hybrid oak (*Q. x acutidens*) that ecologically and somewhat physiognomically resemble California scrub oak. In this report we treat all the stands of scrub oak – characterized vegetation as members of the California scrub oak alliance, fully acknowledging the taxonomic issues at hand. In deference to this, we name the associations with regard to the likely regular presence of these Torrey's hybrid oaks, *Q. x acutidens* hybrids.

In general, stands of this alliance state-wide can be characterized by: California scrub oak dominant or co-dominant in the shrub canopy with chamise, ribbonwood, eastwood manzanita, big-berry manzanita, chaparral whitethorn, desert ceanothus, blueblossom (*C. thyrsiflorus*), California coffeeberry (*Frangula californica*), California ash (*Fraxinus dipetala*), toyon, chararral pea (*Pickeringia montana*), holly-leaf cherry (*Prunus ilicifolia*), scrub live oak, holly-leaf redberry, sugar bush, and/or poison oak. Emergent trees such as California buckeye (*Aesculus californica*), coast live oak, and grey pine may be present. The shrub layer is generally less than 20 feet tall and the canopy is intermittent or continuous (especially in mature stands). The herbaceous layer is generally sparse.

Quercus berberidifolia-Adenostoma fasciculatum Alliance (Scrub Oak-Chamise Chaparral)

This alliance is related to the California scrub oak alliance, but tends to occupy mid to upper slope positions where vegetation is transitional between xeric and mesic. It covers extensive areas of the lower montane and foothill belt of the Transverse and Peninsular Ranges in southern California.

In general, statewide, this alliance is characterized by California scrub oak and chamise co-dominant in the shrub canopy with manzanita species, hoaryleaf ceanothus, desert ceanothus, chaparral whitethorn, mountain mahogany, toyon, holly-leaf redberry, and/or mission manzanita. Emergent coast live oak, or Engelmann oak trees may be present. Typically shrubs are relatively tall in mature stands, but usually less than 20 feet in height and the canopy is open to continuous. The herbaceous layer is sparse under mature stands.

Quercus engelmannii Alliance (Engelmann Oak Woodland)

Engelmann Oak is endemic to south coastal California and adjacent Baja California Norte. It is a sub-tropical oak that is partially drought deciduous. Engelmann oak occupies interior portions of the Reserve and only a few individuals and no stands are known less than five miles from the coast. Recent fires in San Diego County have had varied effects on Engelmann oak, including variable mortality in mature trees. Stands with grassy understories tend to suffer minimal damage, while trees in stands with shrubby understories are top-killed, but they may sprout and survive.

In general, stands diagnostic of the alliance have Engelmann oak dominant or co-dominant in the tree canopy with coast live oak and black oak sometimes present. Trees are usually less than 59 feet tall and the canopy may be open to closed. The shrub layer is sparse to intermittent and the herbaceous layer is sparse or grassy.

Salix lasiolepis Alliance (Arroyo Willow Thickets)

Arroyo willow is an extremely variable species. It is probably the most abundant single riparian willow in California and comprises among the most extensive riparian scrub alliances in the state. Arroyo willow grows on seasonally or intermittently flooded sites. Some plants in southern California stands are sufficiently tall to be called trees. However, plants are typically shrubby and multi-branched.

In general, stands of this alliance in California have arroyo willow dominant or co-dominant in the shrub or tree canopy with big-leaf maple, coyote bush, mulefat, common button bush (*Cephalanthus occidentalis*), Greek dogwood (*Cornus sericea*), California wax myrtle (*Morella californica*), California sycamore, black cottonwood (*Populus trichocarpa*), western cottonwood, willow species, and/or blue elderberry. As a shrubland, emergent trees may be present at low cover. Plants are generally less than 33 feet tall and the canopy is open to continuous. The herbaceous layer is variable.

***Salvia apiana* Alliance (White Sage Scrub)**

Stands of white sage occur on coastal mountain slopes and benches, sometimes on alluvial fans, well inland in the Peninsular and Transverse ranges. The term "interior sage scrub" or "Riversidian sage scrub" has been used to categorize the vegetation commonly including this alliance. At semi-desert localities or extremely xeric, well-drained sites, stands shift to the California buckwheat alliance and may also be associated with the brittlebush alliance.

In general, stands of this alliance in California have the following characteristics: white sage is dominant or co-dominant in the shrub canopy with California sage, sticky monkeyflower, brittlebush, *Ericameria* spp., California buckwheat, chaparral yucca, San Diego goldenbush, coast bushmallow, laurel sumac, and/or *Rhus* spp. Most shrubs are less than 7 feet, some less than 2 feet tall. The canopy is intermittent to continuous and often two tiered. The herbaceous layer is variable. Stands in western San Diego County are generally uncommon, occurring on the hottest exposures further inland.

3.2 Botanical Resources

Research was conducted to determine the sensitive vegetation communities and plants that could potentially occur at Cañada de San Vicente (*Appendix 8.2*). This research involved queries of the CDFW *California Natural Diversity Database* (CNDDB) (*RareFind database*, Version 3.0.5 – CDFG 2014), and California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants* (online edition, v8-02) (CNPS 2014), review of published and unpublished material, and Department communications with CDFW staff. The San Vicente Reservoir and El Cajon Mountain USGS 7.5-minute quadrangles were used to query all databases and other sources.

Emphasis was placed on the special status species that may occur. Some of the plants, which were considered, though not formally listed as rare or endangered under the California Endangered Species Act, meet the definitions of Section 1901, Chapter 10 (*Native Plant Protection*) of the California FGC, and are eligible for State listing. In addition, species designated by the CNPS as rare, threatened or endangered in California, but common elsewhere were also considered. Plants on the CNPS List 1 or 2 are legally protected under the provisions of CEQA and CEQA Guidelines. Special-status plants that are known to occur, or that have the potential to occur based on the presence of suitable habitat, are discussed below.

3.3 Sensitive Botanical Resources

A total of 31 special status plant species and two rare natural communities were identified as occurring in the San Vicente Reservoir and El Cajon Mountain USGS 7.5-minute quadrangles (*Appendix 8.3*). An expanded discussion is provided for those sensitive or protected species with known occurrences or where habitat may exist within the Reserve. Known occurrences for any special status plant species were obtained from the CDFW CNDDB RareFind database, and from CDFW files and staff discussions (*Appendices section 8*).

San Diego thornmint:
San Diego thornmint (*Acanthomintha ilicifolia*) is an endemic perennial herb occurring in chaparral, coastal scrub, valley and foothill grasslands, and vernal pools in vertisol clay soils at 33 feet to 3117 feet in elevation. The flowers bloom from April to June.

Potential Presence in the Reserve:
There are two known occurrences of San Diego thornmint in the Daney Canyon and Long's Gulch areas of the Reserve.

SAN DIEGO THORNMINT (*ACANTHOMINTHA ILICIFOLIA*)

Dean's milk-vetch:
Dean's milk-vetch (*Astragalus deanei*) is a perennial herb occurring in chaparral, cismontane woodland, coastal scrub, and riparian forest habitats. The species is found from 246 feet to 2,280 feet, with flowers blooming from February to May.

Potential Presence in the Reserve:
There are no known occurrences of Dean's milk vetch within the Reserve, although potential habitat does exist here.

San Diego milk-vetch:
San Diego milk-vetch (*Astragalus oocarpus*) is a perennial herb occurring in cismontane woodland and chaparral habitats. It is found from 1,001 feet to 5,000 feet in elevation. The flowers bloom from May to August.

Potential Presence in the Reserve:
There are no known occurrences of San Diego milk-vetch within the Reserve, although potential habitat does exist here.

Encinitas baccharis:
Encinitas baccharis (*Baccharis vanessae*) is a perennial deciduous shrub occurring in cismontane woodland and maritime chaparral habitats. The species is often associated with sandstone soils found at 197 feet to 2,362 feet, with flowers blooming from August to November.

Potential Presence in the Reserve:
There are no known occurrences of Encinitas baccharis within the Reserve, although potential habitat does exist here.

San Diego goldenstar:
San Diego goldenstar (*Bloomeria clevelandii*) is a perennial bulbiferous herb occurring in chaparral, coastal scrub, valley and foothill grassland and vernal pool habitats. It is often associated with clay soils at elevations of 164 feet to 1,526 feet. The flowers bloom from April to May.

Potential Presence in the Reserve:
There are no known occurrences of San Diego goldenstar within the Reserve, although potential habitat does exist here.

Thread-leaved brodiaea:
Thread-leaved brodiaea (*Brodiaea filifolia*) is a bulbiferous herb occurring in chaparral, cismontane woodlands, coastal scrub, valley and foothill grassland, and alkali grassland habitats. The species is associated with heavy clay, loamy sand, or alkaline silty-clay soils that are typically located at from 82 feet to 4003 feet in elevation. The flowers bloom from March to June.

Potential Presence in the Reserve:
There are no known occurrences of thread-leaved brodiaea within the Reserve, although potential habitat does exist here.

Orcutt's brodiaea:
Orcutt's brodiaea (*Brodiaea orcuttii*) is a perennial bulbiferous herb occurring in closed-cone coniferous forest, chaparral, meadows and seeps, vernal pools, cismontane woodland and valley and foothill grassland habitats. The species is often associated with mesic, clay, and sometimes serpentine soils found at elevations of 98 feet to 5,551 feet. The flowers bloom from May to July.

Potential Presence in the Reserve:
There are no known occurrences of Orcutt's brodiaea within the Reserve; however, CNDDB has a record of a small colony in the hills northwest of the Barona Indian Reservation, although no specific location was identified.

Dunn's mariposa lily:
Dunn's mariposa lily (*Calochortus dunnii*) is a perennial bulbiferous herb occurring in closed-cone coniferous forest, chaparral, and valley and foothill grassland habitats. It is often associated with gabbroic or metavolcanic, rocky soils located at 607 feet to 6,004 feet. The flowers bloom from February to June.

Potential Presence in the Reserve:
There are no known occurrences of Dunn's mariposa lily within the Reserve, although potential habitat does exist here.

Round-leaved filaree:
Round-leaved filaree (*California macrophyllum*) is an annual herb occurring in cismontane woodland and valley and foothill grassland habitats. This species is often associated with clay soils from 49 feet to 937 feet, with flowers blooming from March to May.

Potential Presence in the Reserve:
There are no known occurrences of round-leaved filaree within the Reserve, although potential habitat does exist here.

Lakeside ceanothus:
Lakeside ceanothus (*Ceanothus cyaneus*) is a perennial evergreen shrub occurring in closed-cone coniferous forest and chaparral habitats. It is found at elevations between 771 feet to 2,477 feet and flowers from April to June.

Potential Presence in the Reserve:
There are known occurrences of Lakeside ceanothus within the Reserve; CNDDB has a record of the species in the Barona Valley.

Wart-stemmed ceanothus:
Wart-stemmed ceanothus (*Ceanothus verrucosus*) is an evergreen shrub occurring in chaparral habitats within San Diego County. The flowers bloom from December to April at elevations of 3 feet to 1247 feet. This species is endemic to San Diego County.

Potential Presence in the Reserve:
There are no known occurrences of wart-stemmed ceanothus within the Reserve, although potential habitat does exist here.

Long-spined spineflower:
Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) is an annual herb occurring in chaparral, coastal scrub, meadows and seeps, vernal pools, and valley and foothill grassland habitats. The species is often associated with clay soils found at 98 feet to 5,020 feet, with flowers from April to July.

Potential Presence in the Reserve:
There are no known occurrences of long-spined spineflower within the Reserve, although potential habitat does exist here.

Delicate clarkia:
Delicate clarkia (*Clarkia delicata*) is an annual herb occurring in cismontane woodland, and valley and foothill grassland habitats. It is found at elevations between 771 feet to 3,281 feet and flowers from April to June.

Potential Presence in the Reserve:
There are numerous known occurrences of delicate clarkia documented throughout the Reserve; with the majority recorded in the central and northern portions of the Reserve; including along Long's Gulch and two populations in Daney Canyon.

DELICATE CLARKIA (*CLARKIA DELICATA*)

San Miguel savory:
San Miguel savory (*Clinopodium chandleri*) is a perennial shrub occurring in chaparral, coastal scrub, riparian woodland, cismontane woodland, and valley and foothill grassland habitats. The species is often associated with rocky, gabbroic or metavolcanic soils found at 94 feet to 3,527 feet, and flowers from March to July.

Potential Presence in the Reserve:
There are no known occurrences of San Miguel savory within the Reserve although potential habitat does exist here.

Summer holly:
Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*) is an evergreen shrub occurring in chaparral and cismontane woodland at elevations of 98 feet to 1804 feet. The flowers bloom from April to June.

Potential Presence in the Reserve:
There are no known occurrences of summer holly within the Reserve, although potential habitat does exist here.

Variegated dudleya:
Variegated dudleya (*Dudleya variegata*) is a perennial herb occurring in chaparral, coastal scrub, vernal pools, cismontane woodland, and valley and foothill grassland habitats. It is often associated with clay soils found at 10 feet to 1,903 feet, and flowers from April to June.

Potential Presence in the Reserve:
There are no known occurrences of variegated dudleya within the Reserve, although potential habitat does exist here.

Palmer's goldenbush:
Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*) is a perennial evergreen shrub occurring in chaparral and coastal scrub habitats. The species is found at elevations between 98 feet to 1,968 feet, with flowers blooming from July to November.

Potential Presence in the Reserve:
There are no known occurrences of Palmer's goldenbush within the Reserve, although potential habitat does exist here.

San Diego button-celery:
San Diego button-celery (*Eryngium aristulatum* var. *parishii*) is an annual/perennial herb occurring in coastal scrub, vernal pools, as well as valley and foothill grassland habitats. The species is often associated with clay soils found at 66 feet to 2,034 feet, with flowers blooming from April to June.

Potential Presence in the Reserve:
There are no known occurrences of San Diego button-celery within the Reserve and potential habitat for the species is extremely limited here.

San Diego barrel cactus:
San Diego barrel cactus (*Ferocactus viridescens*) is found at elevations from 10 feet to 1,591 feet in chaparral, Diegan coastal scrub, valley and foothill grassland communities. The species occurs on exposed, level, or south-sloping areas, often in coastal scrub near the crest of slopes. In California, this barrel cactus is known only from San Diego County.

Potential Presence in the Reserve:
There are no known occurrences of San Diego barrel cactus within the Reserve, although potential habitat does exist here.

Ramona horkelia:
Ramona horkelia (*Horkelia truncata*) is a perennial herb occurring in chaparral and cismontane woodland habitats. It is found at elevations between 1,312 feet to 4,265 feet and flowers from May to June.

Potential Presence in the Reserve:
There are no known occurrences of Ramona horkelia within the Reserve, although habitat does exist here.

Decumbent goldenbush:
Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*) is a perennial shrub occurring in chaparral and disturbed coastal scrub habitats. The species is found at elevations between 33 feet to 443 feet and flowers from April to November.

Potential Presence in Reserve:
There are no known occurrences of decumbent goldenbush within the Reserve, although potential habitat does exist here.

Heart-leaved pitcher sage:
Heart-leaved monardella pitcher sage (*Lepechinia cardiophylla*) is a perennial shrub occurring in chaparral, closed-cone coniferous forest, and cismontane woodland habitats. It is found at elevations between 1,706 feet to 4,495 feet and flowers from April to July.

Potential Presence in the Reserve:
There are no known occurrences of heart-leaved pitcher sage within the Reserve, although potential habitat does exist here.

Felt-leaved monardella:
Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*) is a perennial rhizomatous herb occurring in chaparral and cismontane woodland habitats. The species is found at elevations between 984 feet to 5,167 feet. The flowers bloom from June to August.

FELT-LEAVED MONARDELLA (*MONARDELLA HYPOLEUCA* SSP. *LANTANA*)

Potential Presence in the Reserve:
There are known occurrences of Felt-leaved monardella in the Long's Gulch area of the Reserve.

Willowy monardella:
Willowy monardella (*Monardella viminea*) is a perennial herb occurring in chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland habitats. It is often associated with alluvial ephemeral washes found at 164 feet to 738 feet in elevation. Flowers bloom from June to August.

Potential Presence in the Reserve:
There are no known occurrences of Willowy monardella within the Reserve, although potential habitat does exist here.

Gander's ragwort:
Gander's ragwort (*Packera ganderi*) is a perennial herb associated with burns and gabbroic outcrops in chaparral habitats. The species is found at elevations between 1,312 feet to 3,937 feet and flowers from April to June.

Potential Presence in the Reserve:
There are no known occurrences of Gander's ragwort within the Reserve, although potential habitat does exist here.

San Diego mesa mint:
San Diego mesa mint (*Pogogyne abramsii*) is endemic to San Diego County vernal pools. These vernal pools are generally found within grasslands, chamise chaparral or coastal sage scrub communities from 295 feet to 656 feet in elevation.

Potential Presence in the Reserve:
There are no known occurrences of San Diego mesa mint within the Reserve and no documented presence of vernal pools here.

Cedros Island oak:
Cedros Island oak (*Quercus cedrosensis*) is a perennial evergreen tree occurring in closed-cone coniferous forest, chaparral, and coastal scrub habitats. The species is found at elevations between 37 feet to 3,150 feet and flowers from April to May.

Potential Presence in the Reserve:
There are no known occurrences of Cedros Island oak within the Reserve, although potential habitat does exist here.

Engelmann oak:
Engelmann oak (*Q. engelmannii*) is a perennial deciduous tree occurring in chaparral, cismontane woodland, riparian woodland, and valley and foothill grasslands. This species is found at elevations between 164 feet to 4,265 feet. The blooming period is from March to June.

Potential Presence in the Reserve:
There are known occurrences of Engelmann oaks within the Reserve.

Moreno currant:
Moreno currant (*Ribes canthariforme*) is a perennial deciduous shrub occurring in chaparral and riparian scrub habitats. It is found at elevations between 1,115 feet to 3,937 feet and flowers from February to April.

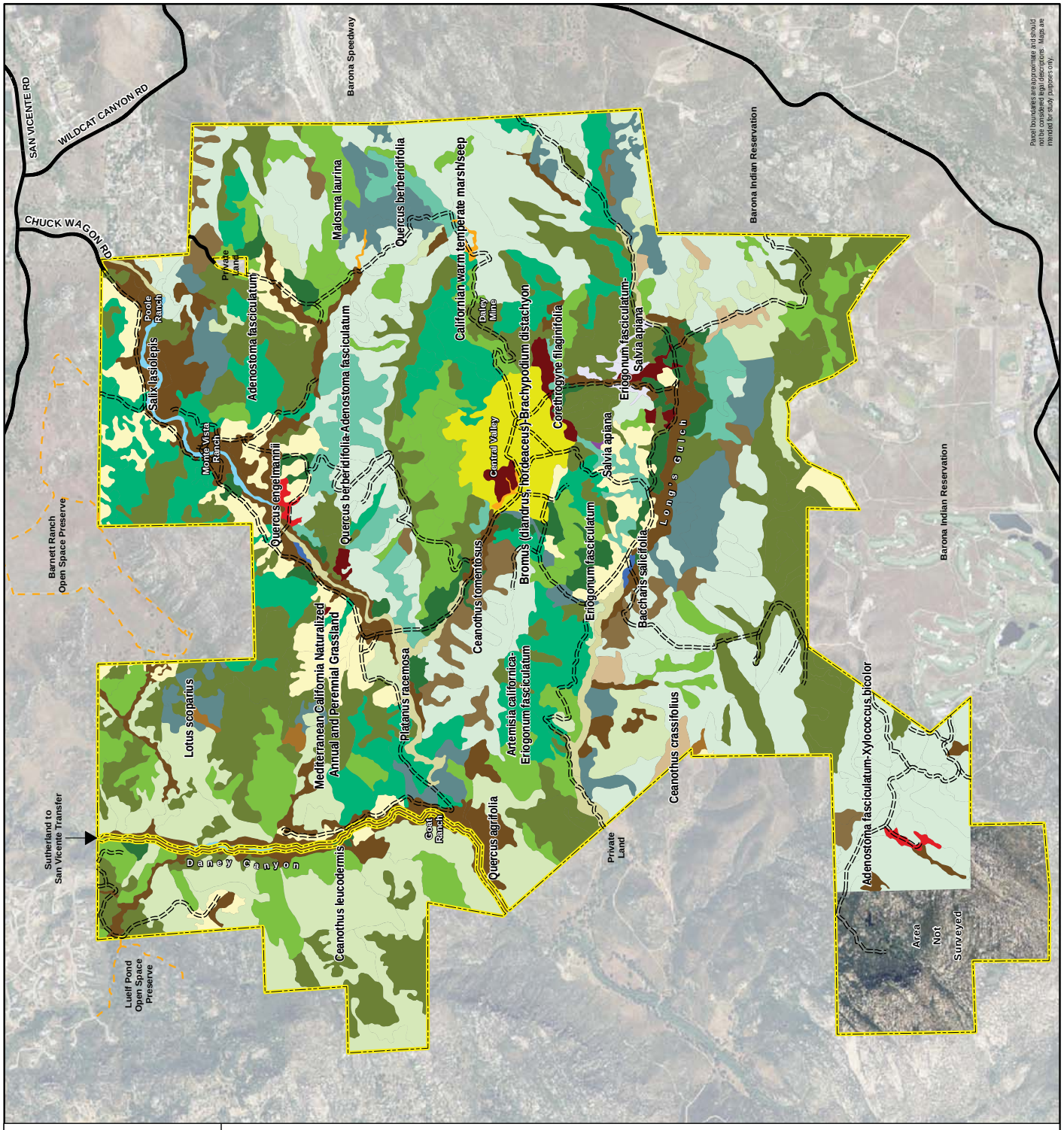
Potential Presence in the Reserve:
There are no known occurrences of Moreno currant within the Reserve, although potential habitat does exist here.

Parry's tetracoccus:
Parry's tetracoccus (*Tetracoccus dioicus*) is a perennial deciduous shrub occurring in chaparral and coastal scrub habitats. The species is found at elevations from 541 feet to 3,281 feet and flowers from April to May.

Potential Presence in the Reserve:
There are no known occurrences of Parry's tetracoccus within the Reserve; however, CNDDB has records of the species in the Barona Valley and near the intersection of Wildcat Canyon Road and San Vicente Creek.

Coastal triquetrella:
Coastal triquetrella (*Triquetrella californica*) is a moss occurring in coastal bluff scrub and coastal scrub habitats. It is found at elevations from 33 feet to 328 feet.

Potential Presence in the Reserve:
There are no known occurrences of the coastal triquetrella within the Reserve. Although potential habitat exists on-site, the Reserve is located at higher elevations than are suitable for the species.



Date: 8/5/2015

Cañada de San Vicente

Figure 6
Vegetation Map

Legend

- Paved Roads
- Existing Equestrian Trails
- CDFW Unpaved Roads
- CDFW Lands

Vegetation (VegCAMP Alliance)

- Adenostoma fasciculatum
- Adenostoma fasciculatum-Xylococcus bicolor
- Artemisia californica-Eriogonum fasciculatum
- Baccharis salicifolia
- Bromus (diandrus, hordeaceus)-Brachypodium distachyon
- Californian Warm Temperate Marsh/Seep*
- Ceanothus crassifolius
- Ceanothus leucodermis
- Ceanothus tomentosus
- Corethrogyne filaginifolia
- Eriogonum fasciculatum
- Eriogonum fasciculatum-Salvia apiana
- Lotus scoparius
- Malosma laurina
- Mediterranean California Naturalized Annual and Perennial Grassland*
- Platanus racemosa
- Quercus agrifolia
- Quercus berberidifolia
- Quercus berberidifolia-Adenostoma fasciculatum
- Quercus engelmannii
- Salix lasiolepis
- Salvia apiana

* Denotes Group Level

0 500 1,000 2,000 Feet

3.4 Wildlife Resources

The LMP was developed based on all currently available information (biological and otherwise) collected over the years. This includes but is not limited to arroyo toad presence/absence surveys (2008, 2009, 2010, 2012, 2014, 2015), habitat steam survey 2012, small mammal trapping (2008 & 2013), bat surveys (2009 & 2015), Quino checkerspot butterfly observations (2009-2010), reptile/amphibian observations (2007-2015) and vegetation surveys (2009-10) conducted by the CDFW, TNC (2004 -2006), private consultants (Merkel & Associates 1999 and 2004), EDAW environmental consulting, The San Diego Natural History Museum, and other researchers including staff from the USGS (golden eagle /American badger surveys) and UC Davis (mountain lion). Depending on available funding, staffing, and/or CDFW expertise, surveys for species not yet inventoried will be initiated and continued as needed for those previously surveyed. All surveys will follow the best and most appropriate available scientific protocol available. See *Appendix 8.4* for a list of all reptile, amphibian, and mammal species known to occur on the Reserve.

3.5 Sensitive Wildlife Resources

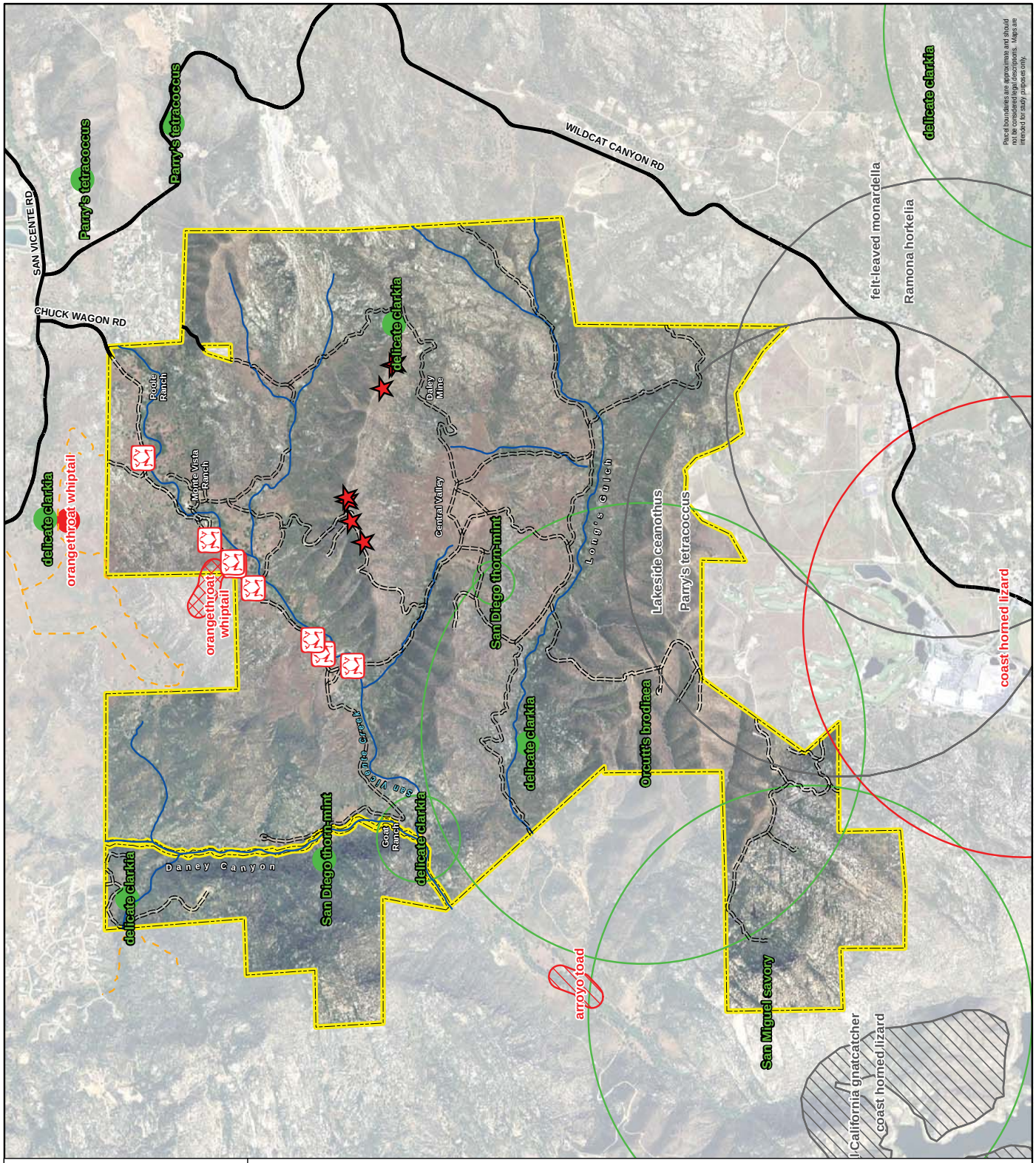
The CNDDB Version 3.1.0 (CDFW 2014) was queried to compile a list of possible special status wildlife and fish species present in the project area. A total of 27 special status wildlife species, were identified within the San Vicente Reservoir and El Cajon Mountain 7.5-minute quadrangles (*Appendix 8.5*).

CDFW Environmental Scientists compared specific habitat requirements, life history notes, elevation, species distribution, and species lists to determine if any special status species may be present within the Reserve. An expanded discussion is provided for those sensitive or protected species where habitat may exist on-site and for any species with a known occurrence within the Reserve.

The following accounts were obtained from CWHR (Zeiner et al. 1990a, b, c) unless otherwise cited, and include generalized habitat associations, food habits, cover, along with reproduction and reproduction requirements, seasonal movements, and any known locations within the project area. All known occurrences for any special status wildlife species were obtained from the CNDDB RareFind database (*Appendix 8.5*), previous survey results, and CDFW personnel.

Quino Checkerspot Butterfly:
The quino checkerspot butterfly (*Euphydryas editha quino)* is listed as federally endangered by the USFWS. The quino checkerspot is restricted to open grasslands and sunny openings within shrubland habitats of the interior foothills of southwestern California and northwestern Baja California, Mexico (Federal Register 1997). Its distribution is defined primarily by that of its principal larval host plant, plantain (*Plantago erecta*), but it's further restricted by other factors. The flight period for this butterfly is generally in February, March and April.

Potential Presence in Reserve:
There are known occurrences of quino checkerspot butterfly within the Reserve; suitable breeding and foraging habitat does exist here.



Date: 8/28/2015

Cañada de San Vicente

Figure 7
Sensitive Species

Legend

- Paved Roads
- Existing Equestrian Trails
- CDFW Maintenance Roads
- Creeks and Drainages
- CDFW Lands

CNDDB

- Plant (80m)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Multiple (non-specific)
- Multiple (circular)

- Arroyo Toad
- Quino Checkerspot Butterfly

0 500 1,000 2,000 Feet

3.5.1 BIRDS

Grasshopper sparrow:
The grasshopper sparrow (*Ammodramus savannarum*) is a CDFW Species of Special Concern that is an uncommon, localized summer resident and a very rare winter visitor. The species occurs in areas of tall grass, often mixed with a few shrubs typical of coastal sage scrub, such as flat-topped buckwheat (*Eriogonum fasciculatum*). Localities of the bird are scattered throughout the inland valleys of the coastal lowland.

Diet of the grasshopper sparrow includes invertebrates, grass, and forb seeds. The extent of suitable grasshopper sparrow habitat in San Diego County is diminishing rapidly with urban development of the coastal lowland (Unitt 1984).

Potential Presence in the Reserve:
There are known occurrences of grasshopper sparrow, along with suitable breeding and foraging habitat within the Reserve.

Golden eagle:
The golden eagle (*Aquila chrysaetos*) is on the CDFW Watch List. The raptor is a year-round resident in southern California and can be found from sea level to 11,500 feet in rolling foothills, open mountain slopes with cliffs and rocks, sage-juniper flats, and desert vegetation communities.

GOLDEN EAGLE
(AQUILA CHRYSAETOS)

Diet consists primarily of *lagomorphs* (rabbits) and rodents, but the species also preys on other mammals, birds, reptiles, and carrion. The golden eagle nests on cliffs and in large trees. Breeding occurs from late January to August, with peak activity occurring from March to July. Clutch size is one to three, with an average clutch of two eggs. Eggs are incubated for 43 to 45 days. The golden eagle may desert the nest in early incubation, if disturbed by humans.

Potential Presence in the Reserve:
There are known occurrences of golden eagles foraging within the Reserve, no known nests on the Reserve, but foraging and potential breeding habitat is present here.

Burrowing owl:
The Burrowing owl (*Athene cunicularia*) is a CDFW Species of Special Concern. The species is a year-round resident in southern California and can be found from sea level up to 5,300 feet in open dry grassland, deserts, open stages of pinyon-juniper, and ponderosa pine communities.

Diet consists primarily of insects, but also small mammals, reptiles, birds, and carrion. The burrowing owl uses rodent and other burrows for roosting and nesting. Breeding occurs from January to August, with peak activity in April and May. Clutch size is 2 to 10 with an average of five to six eggs. Conversion of grassland to agriculture, urbanization, and poisoning of ground squirrels has reduced burrowing owl numbers in recent decades.

Potential Presence in the Reserve:
Wintering burrowing owls have been observed within the Reserve and suitable breeding and foraging habitat also exists here.

Northern harrier:
The northern harrier (*Circus cyaneus*) is a CDFW Species of Special Concern. The species occurs in annual grasslands to lodgepole pine and alpine meadow habitats up to elevations of 10,000 feet. Mostly found in flat open areas of tall dense grasses, moist or dry shrubs, and open edges where suitable habitat is available. The northern harrier is seldom observed in wooded areas. Breeding habitat is much reduced due to loss of wetlands, native grasslands, moist meadows, and burning and plowing of breeding areas.

Diet consists primarily of small mammals, but birds, frogs, small reptiles, insects, and occasionally fish are also eaten. This species roosts and nests on the ground, using tall grasses and forbs for cover. Breeding occurs from April to September, with peak activity in June and July. Clutch size ranges from four to nine with an average of five eggs. Eggs are incubated in 30 to 32 days and chicks fledge in 30 to 35 days.

Potential Presence in the Reserve:
There are known occurrences of northern harrier foraging within the Reserve, with potential breeding and foraging habitat also present here.

NORTHERN HARRIER
(CIRCUS CYANEUS)

Olive-sided flycatcher:
The olive-sided flycatcher (*Contopus cooperi*) is a CDFW Species of Special Concern found in a wide variety of forest and woodland habitats at elevations above 9,000 feet throughout California. The species is associated with edges and openings usually preferring tall trees from which to perch.

Diet consists of insects and bees that are foraged using high, conspicuous perches overlooking adjacent shrub-covered slopes, meadows, and clearings. Breeding occurs from early June to early July, with a clutch size of three to six (average four to five eggs). Predators include small mammals, accipiters, corvids, and snakes. Cowbird parasitism is common.

Potential Presence in the Reserve:
There are known occurrences of olive-sided flycatcher, along with suitable breeding and foraging habitat, within the Reserve.

Yellow warbler:
The Yellow warbler (*Dendroica petechia brewsteri*) is a CDFW Species of Special Concern and is associated with riparian woodlands dominated by willows, cottonwoods, sycamores, alders, mature chaparral, or shrubbery in open coniferous forests. The species frequent medium-density woodlands and forest with a heavy brush understory. Populations have been reduced due to habitat loss.

YELLOW WARBLER
(DENDROICA PETECHIA BREWSTERI)

Diet consists of insects and spiders, which are primarily gleaned from the upper canopy. Yellow warblers occasionally eat berries or hawk insects in flight. Breeds from April through early August, with a clutch size of three to six (average four to five eggs). Predators include small mammals, accipiters, corvids, and snakes. Cowbird parasitism is common.

Potential Presence in the Reserve:
There are known occurrence of yellow warbler along San Vicente Creek within the Reserve. Breeding and foraging habitat is also present here.

White-tailed kite:
The white-tailed kite (*Elanus leucurus*) is a CDFW Fully Protected species typically associated with open stages of most habitats, primarily in cismontane California. The birds are residents throughout most of their breeding range and prefer agricultural areas due to prey abundance.

Diet consists of small mammals of the genera *Microtus*, *Mus*, and *Reithrodontomys*. White-tailed kites nest in dense tree stands usually 20 feet to 100 feet above ground. Breeding occurs from February to October, with a peak period in March and April. The clutch size ranges from three to six, with an average of four eggs. Eggs are incubated by the female for only 28 to 32 days and fledge in 35 to 40 days. Great horned owls may prey on adults and young.

Potential Presence in the Reserve:
There are known occurrences of white-tailed kites, along with suitable breeding and foraging habitat, within the Reserve.

Southwestern willow flycatcher:
The southwestern willow flycatcher (*Empidonax traillii extimus*) was federally listed as endangered on February 27, 1995. On January 3, 2013 the USFWS designated a total of 1,227 mi. of stream and river in California, Nevada, Utah, Arizona, and New Mexico as critical habitat for the southwestern willow flycatcher (Fed Reg 2013).

Willow flycatchers are summer residents, restricted to dense thickets in riparian woodland habitats in southern California, southern Nevada, southern Utah, Arizona, New Mexico, western Texas, southwestern Colorado, and northwestern Mexico. Habitat characteristics such as dominant plant species, size and shape of habitat patch, tree canopy structure, vegetation height, and vegetation density vary widely among breeding sites (Fed Reg 2013).

Willow flycatchers are insectivores. Dominant prey taxa, both in total numbers and in frequency of occurrence, were true bugs (Hemiptera), flies (Diptera), and beetles (Coleoptera). Leafhoppers Homoptera: Cicadellidae), spiders, bees and wasps (Hymenoptera), and dragonflies and damselflies (Odonata) were also common items (Drost et al 2001). Willow flycatchers hunt using exposed perches in willow thickets or low perches in adjacent open areas.

Potential Presence in the Reserve
There are no known occurrences of southwestern willow flycatcher within the Reserve; however, breeding and foraging habitat does exist here.

Yellow-breasted chat:
The yellow-breasted chat (*Icteria virens*) is a CDFW Species of Special Concern. The species is associated with brushy dense thickets near water in riparian woodlands. Populations have declined in California primarily due to loss of riparian habitat and cowbird parasitism.

Diet consists primarily of insects and spiders gleaned from the foliage of shrubs and low trees. Nests are placed 2 feet to 8 feet above ground in dense shrubs along a stream or river. The species breeds from early May to early August, with peak activity in June. Three to six eggs are laid and incubated for 11 to 15 days. Chicks are fledged in 8 to 11 days.

Potential Presence in the Reserve:
There are known occurrences of yellow-breasted chat along San Vicente Creek within the Reserve. Breeding and foraging habitat is also present on-site.

Loggerhead shrike:
The loggerhead shrike (*Lanius ludovicianus*) is a CDFW Species of Special Concern frequenting open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low or sparse herbaceous cover. In San Diego County this species is associated with grassland or open habitats with bare ground and sparse shrub and/or tree cover for nesting and perching.

Diet consists mostly of large insects, but loggerhead shrikes will also take small birds, mammals, amphibians, reptiles, and other invertebrates. The birds frequently skewer prey on

thorns, sharp twigs, barbed wire, or forces the prey into a tree crotch to feed on or cache for later feeding. They breed from March through May, with a clutch size of four to eight eggs.

Potential Presence in the Reserve:
There are known occurrences of loggerhead shrike, along with breeding and foraging habitat, within the Reserve.

Coastal California gnatcatcher:
The coastal California gnatcatcher (*Polioptila californica californica*) was federally-listed as threatened on March 23, 1993. In 2007, approximately 197,303 acres of habitat in San Diego, Orange, Riverside, San Bernardino, Los Angeles, and Ventura were designated as critical habitat. This species is closely associated with California sagebrush (*Artemisia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*). The primary cause of this species' decline is the cumulative loss of coastal sage scrub habitat due to urban and agricultural development.

Diet consists of spiders and insects primarily gleaned from the foliage of shrubs primarily. The birds construct small, deep-cup nests that are typically placed in shrubs about 2 feet to 3 feet above the ground. The species breeds from April–August, with peak period in May. Gnatcatchers lay three to four eggs, which are incubated by both the male and female for 10-14 days. Both parents feed the young which fledge in 14-15 days. The most common cause of nest failure is predation.

Potential Presence in the Reserve:
There are no known occurrences of the coastal California gnatcatcher within the Reserve, although suitable breeding and foraging habitat does exist here.

Least Bell's vireo:
The least Bell's vireo (*Vireo bellii pusillus*) is both a federally and state listed endangered species. On February 2, 1994, a total of 38,000 acres of critical habitat was designated for the species (USFWS 1994). The vireo is an uncommon and much localized summer resident, and a very rare migrant and winter visitor in San Diego County. The species was formerly common or even abundant locally under favorable conditions of habitat.

The least Bell's vireo is restricted in its breeding range to primarily dense riparian vegetation, such as southern willow scrub that is dominated by willows, with a lush understory of vegetation generally found within the coastal lowlands. Vireos prefer low, riparian habitat either in the vicinity of water or along dry river bottoms. The majority of the species' activity occurs within 3.28 feet to 9.84 feet of the ground, in the fairly open canopy below the foliage of willow and cottonwoods. Diet consists of a variety of insects gleaned from leaves and branches.

Vireos breed in southern California and northwestern Baja California, Mexico. Peak egg laying occurs from May to early June, with an average clutch size of four eggs (range three to five). Nests consist of open cups of bark, grasses, and plant down that are frequently placed along the margins of bushes or on twigs projecting into pathways. The most typical plants being used for nesting include, willows (*Salix* spp.), mule's fat (*Baccharis salicifolia*), and California blackberry (*Rubus ursinus*). Nests are heavily parasitized by cowbirds.

Potential Presence in the Reserve:
No least Bell's vireo was detected during surveys in 2000. In 2013, two protocol presence/absence surveys and one play-back call survey along San Vicente Creek did not detect and any least Bell's vireo. However, breeding and foraging habitat does exist along San Vicente Creek.

3.5.2 MAMMALS

BAT SPECIES

California provides habitat for 25 bat species in the families Phyllostomidae, Vespertillionidae, and Mollossidae with 23 known to occur within San Diego County (Erickson et al. 2002, Johnston et al. 2004, Stokes et al. 2005) (*Appendix 8.6*). Fifteen bats are rare and/or considered Mammal Species of Special Concern by CDFW, Species of Concern by the USFWS or the United States Forest Service (USFS) (Erickson et al. 2002).

BAT ROOST

Townsend's big-eared bat:
The Townsend's big-eared bat (*Corynorhinus townsendii*) is a CDFW Species of Special Concern. This species was once common, but is now considered uncommon throughout California. The Townsend's beg-eared bat occurs in all but alpine and subalpine habitats, and can be found during any season.

The bat's diet consists primarily of moths taken on-the-fly by echolocation, but the species will also glean prey from foliage and eat a variety of soft-bodied insects and beetles. The Townsend's big-eared bat requires caves, mines, tunnels, buildings, or other human-made structure for roosting and breeding. The species breeds from November to February, with sperm stored until ovulation in the spring and births occurring in May and June. Litter size consists of one pup that is weaned in six weeks and flies in two and a half to three weeks. This species is very sensitive to disturbance of roosting sites. Numbers have declined steeply in California due to human disturbance.

Potential Presence in the Reserve:
There are known occurrences of Townsend's big-eared bat, along with suitable breeding and foraging habitat, within the Reserve.

Western mastiff bat:
The western mastiff bat (*Eumops perotis californicus*) is a CDFW Species of Special Concern. This species occurs in a variety of open semi-arid to arid habitats including hardwood-conifer, mixed and montane chaparral, desert scrub, coastal scrub, perennial grasslands, and urban.

The western mastiff is the largest native bat and roosts in cliff faces, high buildings, trees, and tunnels. Diet includes moths and other insects caught in flight. The species breeds in early spring and has a gestation period of approximately 80 to 90 days produces one young per female in early summer. Potential threats to the bat include pest control operations and recreational climbing.

Potential Presence in the Reserve:
There are known occurrences of western mastiff bats within the Reserve along with suitable breeding and foraging habitat.

Western red bat:
The western red bat (*Lasiurus blossevillii*) is a CDFW Species of Special Concern. They are associated with riparian and wooded habitats at elevations up to 8,000 ft. Cliffs provide optimal roosting habitat for this species but occasionally it can be found roosting in caves and buildings. It is a year round resident in California. The western red bat is most commonly observed in California during its migration, August through September (Jameson and Peeters 1988).

The western red bat feeds over water and along washes. This species flies early in the evening, before dark, feeding primarily on moths and some terrestrial insects (Jameson and Peeters 1988). This species roosts singly and prefers trees as roost sites. Births occur in June with a litter size of one to five.

Potential Presence in the Reserve:
There are no known occurrences of western red bat within the Reserve; however, breeding and foraging habitat does exist here.

Pallid Bat
The pallid bat (*Antrozous pallidus*) is a California species of special concern. This species is considered locally common throughout most of California. The coastal pallid bat's distribution has become restricted and population size may have declined (Stokes et. al. 2005). It occurs in a wide variety of habitats, including grasslands, scrub, woodlands, and forests. It prefers rocky outcrops, cliffs, and crevices with access to open habitat for foraging. Colonies can often be found roosting in rural human-made structures, such as barns and other infrequently used buildings (Stokes et al. 2005).

The bat's diet consists primarily of terrestrial arthropods that it tackles on the ground, but it will also consume flying insects (Stokes et al. 2005). The pallid bat mates from October to February with delayed fertilization. This species is very sensitive to disturbance of roosting sites. On the Property, the pallid bat was observed in the woodland habitat of San Vicente Creek.

Potential Presence in the Reserve:
There are known occurrences of pallid bat, along with suitable breeding and foraging habitat, within the Reserve.

Pocketed free-tailed bat:
The pocketed free-tailed bat (*Nyctinomops femorosaccus*) is a CDFW Species of Special Concern. This species was once considered common but is now rare throughout southern California. The pocketed free-tailed bat occurs primarily in pinyon-juniper woodlands, desert scrub, desert succulent scrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis habitats.

This bat's diet consists primarily of large moths taken on-the-fly by echolocation; however, the species will also eat a wide variety of insects. The pocketed free-tailed bat prefers rocky crevices, but will also use caverns and buildings for roosting and breeding. Births occur in July usually with a litter size of one. The status of this species is poorly known.

Potential Presence in the Reserve:
There are known occurrences of pocketed free-tailed bats, along with suitable breeding and foraging habitat, within the Reserve boundaries.

OTHER SMALL MAMMALS

Dulzura pocket mouse:
The Dulzura pocket mouse (*Chaetodipus californicus femoralis*) is a CDFW Species of Special Concern found in a variety of habitats, including coastal sage scrub, grassland, chaparral, and grass-chaparral edges in San Diego County.

Diet consists primarily of the seeds of annual grasses and forbs; and the species may compete with other granivores for food. Generally, the Dulzura pocket mouse forages on the ground, but will climb into shrubs. The mammal is nocturnal and shows reduced activity above ground during winter months. Young are born between April and July with an average litter size of four. Predators include coyotes, bobcats, owls, and snakes.

Potential Presence in the Reserve:
Occurrences of the Dulzura pocket mouse were documented during the 2013 small mammal trapping surveys conducted by CDFW.

Northwestern San Diego pocket mouse:
The northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) is a CDFW Species of Special Concern that ranges from southern San Bernardino County southward through western Riverside and San Diego counties into west-central Baja California, Mexico. The northwestern San Diego pocket mouse inhabits various sparse or disturbed coastal sage scrub, mixed chaparral, chamise red-shank chaparral, desert wash, desert scrub, or grasslands with sandy soils. The species requires soils suitable for burrows and occurs primarily in areas where the substrate is sandy or course gravely.

Diet consists primarily of seeds, which the northwestern San Diego pocket mouse transports in fur-lined cheek pouches and subsequently stores in burrows. Breeding occurs generally from March to May with a gestation period of 24 to 26 days.

Potential Presence in the Reserve:
Occurrences of northwestern San Diego pocket mouse were documented during the 2008 small mammal trapping surveys conducted by CDWF. Suitable breeding and foraging habitat also occurs here.

San Diego Black-tailed Jackrabbit:
The black-tailed jackrabbit (*Lepus californicus bennettii*) is a CDFW Species of Special Concern. The species is found at lower elevations in open sage scrub habitat, grassland, mixed chaparral, and early forest stages.

Jackrabbits are herbivorous and prefer grasses and forbs, but will eat most available vegetation that occurs in the area. Diet changes with forage availability throughout the year. The black-tailed jackrabbit breeds throughout the year with the greatest number of births occurring from April through May. Gestation is approximately 43 days with up to four litters of three to four young produced each year.

Predators include coyotes, barn owls, and various snakes. Competitors include other grazers and browsers. This subspecies is threatened by habitat loss due to development.

Potential Presence in the Reserve:
There are known occurrences of San Diego black-tailed jackrabbit, along with suitable breeding and foraging habitat, within the Reserve.

San Diego Desert Woodrat:
The desert woodrat (*Neotoma lepida* ssp. *intermedia*) is a CDFW Species of Special Concern. The species is found in coastal southern California from San Luis Obispo County to San Diego County and is often associated with rock outcrops, as well as rocky cliffs and slopes with moderate to dense canopy cover.

Diet consists of buds, fruits, seeds, bark, leaves, and young shoots of numerous plant species. The woodrat prefers chamise, live oak, and buckwheat in coastal scrub habitats. Large houses are constructed of twigs, sticks, and rocks usually against a rock crevice. The species breeds from October to May and commonly has a litter of one to five young. Predators include snakes, owls, and various mammals. No seasonal movements have been noted, but the desert woodrat may move locally due to food resources. Threats to the species include habitat destruction from development in the coastal plain.

Potential Presence in the Reserve:
Occurrences of San Diego desert woodrat were documented during the 2008 small mammal trapping surveys conducted by CDFW in both the coastal sage and oak woodland.

American Badger
The American badger (*Taxidea taxus*) is considered a regionally sensitive species by the USFWS and a target species by the Multiple Species Conservation Program. Badgers are found throughout the state except in the north coast area and are most abundant in drier open stages of shrub, forest, and herbaceous habitats with friable soils.

Badgers are active yearlong and are both nocturnal and diurnal. Diet consists primarily of small mammals such as rats, mice, chipmunks, and especially ground squirrels. Their diet will shift depending on prey availability. Badgers mate in summer through early fall and young are born the following spring with average litter size ranging from 2-3.

Potential Presence in the Reserve:
There are no documented occurrences within the Reserve. No badgers were detected during a 2014 survey conducted by the USGS. Breeding and foraging habitat does exist within the Reserve.

3.5.3 REPTILES AND AMPHIBIANS

Arroyo toad:
The arroyo toad (*Anaxyrus californicus*) was listed as federally endangered on December 16, 1994 (Federal Register 1994). On February 9, 2011, a total of 98,366 acres of habitat in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties was designated as critical habitat for the arroyo toad (Federal Register 2011). The arroyo toad is also a CDFW Species of Special Concern and is listed as a target species by the MSCP.

The species requires shallow, slow-moving streams and riparian habitat with regular disturbance patterns (flooding). Arroyo toads may be active throughout the year, depending on rainfall and temperatures (USFWS 1999). Though usually found along sandy stream courses, arroyo toads may disperse up to two miles from the stream into upland habitats, such as coastal sage scrub, mixed chaparral, annual grassland, or coastal oak woodlands (USFWS 1999).

ARROYO TOAD
(ANAXYRUS CALIFORNICUS)

Open sites such as overflow pools, old flood channels, and pools with shallow margins on streams are used for breeding (Sweet 1992). Arroyo toads breed from January to July. Females lay from 2,000 to 10,000 eggs on sand, gravel, cobble, or mud substrates, generally located away from vegetation in the shallow margins of the pool (Sweet 1992). Tadpoles require 65 to 85 days to metamorphosis, depending on water temperatures. Juvenile arroyo toads may remain along the margins of the breeding pools for up to six months (Sweet 1992).

In the spring of 2008, CDFW began an arroyo toad-monitoring program by conducting basic nighttime presence/absence surveys. In 2012, CDFW expanded this effort to include daytime surveys that included searching for tadpoles and newly metamorphosed young.

The Department's conservation strategy for the arroyo toad-monitoring program by at the Reserve is to maintain the metapopulation by protecting and enhancing the breeding and non-

breeding habitats, monitoring the population to ensure recovery actions are successful, and obtaining research data to further guide management efforts to benefit arroyo toad recovery.

Current threats to the arroyo toad along San Vicente Creek include drought, wildfire, large flood events, and the presence of nonnative animal and plant species. Mosquito fish (*Gambusia* spp.), green sunfish (*Lepomis cyanellus*), and crayfish (*Procambarus* spp.) are present within San Vicente Creek; however, their populations are largely under control to the extent feasible, by ongoing Department management actions. Active protection of the arroyo toad metapopulation primarily includes control of non-native predators and reduction of exotic plant species which adversely affect breeding and non-breeding habitats of arroyo toad.

Potential Presence in the Reserve:
There are known occurrences of arroyo toad (along San Vicente Creek) as well as suitable breeding and foraging habitat within the Reserve.

Belding's orange-throated whiptail:
The orange-throated whiptail (*Cnemodophorus hyperythrus beldingi*) is a CDFW Species of Special Concern, and also listed as a target species by the MSCP. The whiptail prefers loose sandy soil in coastal sage scrub, mixed chaparral, chamise-redshank chaparral, valley-foothill hardwood, and riparian habitats from sea level to about 3,000 feet. They prefer large areas with no vegetation in which to forage.

BELDING'S ORANGE-THROATED WHIPTAIL *(CNEMODOPHORUS HYPERYTHRUS BELDINGI)*

The species actively forages on the surface and will scratch through surface debris. Diet consists of a variety of small arthropods, especially termites. The orange-throated whiptail digs burrows in the soil or will use existing burrows of other small animals. Juveniles have been reported to frequent grassy areas. Common predators include diurnal snakes and various birds. The orange-throated whiptail has declined within its range as a result of habitat loss.

Potential Presence in the Reserve:
There are known occurrences of orange-throated whiptails within the Reserve; as are breeding and foraging habitat.

Red-diamond rattlesnake:
The red-diamond rattlesnake (*Crotalus ruber ruber*) is a CDFW Species of Special Concern. Found in chaparral, woodland, arid desert habitats (rocky areas), and dense vegetation, this subspecies ranges from sea level to 3,000 feet.

Diet consists primarily of small mammals, birds, and other snakes. The species breeds in March and April, with young born live from August to October. Litter size ranges from 5 to 13 with an average of eight young. Red-diamond rattlesnakes are most active during the morning and evening hours. Common predators include roadrunners, kingsnakes, and owls. The species' numbers are in decline because of habitat loss and extermination from human habitations.

Potential Presence in the Reserve:
There are known occurrences of red diamond rattlesnake, along with suitable breeding and foraging habitat, within the Reserve boundaries.

San Diego ringneck snake:
The San Diego ringneck snake (*Diadophis punctatus similes*) is a *Category 2* candidate for listing as threatened or endangered by the USFWS. This small, slender snake prefers moist habitats, but can be found in grasslands, coastal sage scrub, or chaparral communities along the coast. The range of this subspecies is restricted to extreme southwestern California and extreme northwestern Baja California. Because of its secretive nature, these snakes are usually found in areas with a cover of leaf litter under bark, logs, stones, or boards. Ringneck snakes eat salamanders, small frogs, lizards, small snakes, worms, and slugs.

Potential Presence in the Reserve:
There are known occurrences of San Diego ringneck snake, along with suitable breeding and foraging habitat, within the Reserve boundaries.

Coast horned lizard:
The coast horned lizard (*Phrynosoma coronatum*) is a CDFW Species of Special Concern. This species is found only in southwestern California from the coast to the foothills and valleys of the Peninsular Ranges. The coast horned lizard occurs in annual grassland, coastal sage scrub, valley-foothill hardwood, and conifer habitats. The species requires open areas of sandy soil within these habitats for foraging.

COAST HORNED LIZARD (*PHRYNOSOMA CORONATUM*)

Diet consists primarily of ants of the genus *Pogonomyrmex* (harvester ants). Other insects include small beetles, wasps, grasshoppers, flies, and caterpillars. The species breeds from late May through June, with clutch size varying from 6-16 and an average of 13 eggs.

Coast horned lizards are active during the early morning and late afternoon. Individuals are relatively sedentary and forage by sitting and waiting, often near an ant nest. Predators include leopard lizards, sidewinders, loggerhead shrikes, and various hawks. Populations have been reduced by loss of habitat, and past commercial or hobby collection.

Potential Presence in the Reserve:
There are known occurrences of coast horned lizard, along with suitable breeding and foraging habitat within the Reserve.

Coronado Island skink:
The Coronado skink (*Eumeces skiltonianus interparietalis*) is a CDFW Species of Special Concern. The species frequents grassland, chaparral, pinyon juniper and juniper-sage woodland, open pine-oak and pine forests. The skink seems to prefer rocky habitat near streams, but can also be found on dry hillsides. Dense brush and forested areas are generally avoided. This species' range includes southern British Colombia to the tip of Baja, California and throughout most of the Great Basin to extreme northern Arizona.

Skinks forage actively through leaf litter and occasionally dig in loose soil. Diet includes insect eggs, adult and larval beetles, caterpillars, moths, grasshoppers, crickets, ants, sow bugs, and spiders. The breeding season varies depending on local conditions. Mating likely occurs in the spring soon after emergence. Clutch size ranges from two to six eggs. Common predators include numerous diurnal snakes, mammals, and various birds. The orange-throated whiptail has declined within its range as a result of habitat loss.

Potential Presence in the Reserve:
There are known occurrences of the Coronado Island skink, along with suitable breeding and foraging habitat, within the Reserve.

Coast patch-nosed snake:
The coast patch-nosed snake (*Salvadora hexalepis virgultea*) is a CDFW Species of Special Concern. This subspecies occurs along the coast from San Luis Obispo County, California to El Rosario in northern Baja California, Mexico. The snake can be found in many habitats including grassland, chaparral, and sagebrush, typically in rocky or sandy areas. Coast patch-nosed snakes are diurnal and usually keep to the ground, but occasionally will climb vegetation. This species eats small mammals, lizards, and reptile eggs (Stebbins 1985).

COAST PATCH-NOSED SNAKE
(SALVADORA HEXALEPIS VIRGULTEA)

Potential Presence in the Reserve:
There are no known occurrences of coast patch nose snake within the Reserve, although breeding and foraging habitat does exist on-site.

Western spadefoot toad:
The western spadefoot (*Scaphiopus hammondii*) is a CDFW Species of Special Concern. The species is found throughout the Central Valley, surrounding foothills, and in the Coast Ranges from Santa Barbara south to the Mexico border primarily in grasslands, but also in valley-foothill hardwood woodlands and orchard-vineyards.

Scaphiopus are rarely found on the surface spending most of the year in underground burrows. Typically, western spadefoots eat a variety of insects, worms, and other invertebrates. Breeding and egg-laying occur from late winter to the end of March in shallow, temporary pools. Egg masses are attached to plant material and usually hatch within two weeks. Juveniles and tadpoles are preyed upon by a variety of vertebrate predators including bullfrogs, wading birds, garter snakes, and mammals.

WESTERN SPADEFOOT TOAD (*SCAPHIOPUS HAMMONDII*)

Potential Presence in the Reserve:
There are known occurrences of western spadefoot, along with suitable breeding and foraging habitat, within the Reserve.

Two-striped garter snake:
The two-striped garter snake (*Thamnophis hammondii*) is a CDFW Species of Special Concern distributed in the Coast and Transverse ranges from Kern County to the Mexican border, and on Santa Catalina Island. The species is associated with permanent or semi-permanent bodies of water bordered by dense vegetation in a variety of habitats from sea level to 8,000 feet.

Two-striped garter snakes forage primarily in and along streams. Their diet consists of fishes, amphibians, amphibian larvae, leeches, and earthworms. Breeding occurs in spring and with young born live in late summer. Two-striped garter snakes are diurnal and can be found basking on streamside rocks or on densely vegetated stream banks. When disturbed, the snake retreats rapidly to water. Little is known about this snake.

Potential Presence in the Reserve:
There are known occurrences of the two-striped garter snake, along with suitable breeding and foraging habitat, within the Reserve.

4 MANAGEMENT GOALS, TASKS, AND ENVIRONMENTAL IMPACTS

4 Management Goals, Tasks, and Environmental Impacts

This Section describes the management direction and CEQA documentation for management actions on this Reserve through the development of management-zones as well as management goals and tasks associated with each element. In general, goals and tasks for the Reserve are structured to promote best management practices (BMPs) and, where appropriate, are coordinated with larger regional planning goals.

4.1 ELEMENTS OF THE LMP

Elements relate to broad categories of consideration, goals define the purposes within these elements, and tasks establish the specific actions required to attain those management goals. Together, elements, goals, and tasks express the policy direction that guides the management of the Reserve. An element, as defined by the *Guide and Annotated Outline for Writing Land Management Plans* CDFW (2013), refers to any biological unit, public use activity, or facility maintenance program, cultural resource protection activity, or resource coordination effort as defined within this LMP for which goals and tasks have been prepared specific to that element. This LMP includes the following elements:

- **Biological Elements:** The Biological Elements refers to species, vegetation communities, and ecological processes for which specific management goals and objectives have been developed.
- **Biological Monitoring Elements:** These Elements refer to adaptive management strategies for continually improving the diversity, habitat integrity, and environmental health of the Biological Elements identified in this LMP.
- **Public Use Elements:** These Elements consists of recreational, scientific, or other use activity appropriate to and compatible with the purpose(s) for which the Reserve was acquired.
- **Facility Maintenance Elements:** These elements describe the general maintenance and administrative program which helps maintain orderly, efficient, and beneficial management of the Reserve.
- **Cultural Resource Elements:** The Cultural Resource Elements refer to the protection of significant historical and archaeological resources that may be present and that may yield information important to the prehistory or history of the Reserve.

4.2 Goals and Tasks Within the LMP

4.2.1 Goals

Goals are broad, concise, visionary statements that set overall direction for management and monitoring, while well-defined tasks enable a land manager to meet the goal. This LMP includes the following Goals:

- **Biological Goal:** A biological goal is a statement describing management and intended long-term results for a Biological Element. A biological monitoring goal is a statement describing adaptive management and intended implementation results for a phase of a biological monitoring element.
- **Public Use Goal:** A public use goal is a statement describing the type and level of public use that is compatible with the Biological Element goals specified in this LMP.
- **Facility Maintenance Goal:** A facility maintenance goal is a statement describing the type and level of grounds and facility maintenance that is needed to attain the goals for the biological and Public Use Elements specified in this LMP.
- **Cultural Resource Goal:** A cultural resource goal is a statement describing the management and intended results for the Cultural Resources Element.
- **Resource Coordination Goal:** A resource coordination goal is a statement describing the type and level of management coordination activities needed to achieve the goals specified in this LMP.

4.2.2 Tasks

Tasks are the individual projects or work elements that implement the goals and objectives specified in this LMP. They should be used to develop both immediate and long-term operation and maintenance schedules and budgets for the Reserve.

Adaptive management is a dynamic strategy in which management efforts are monitored regularly to assess their status and effectiveness. Adaptive management begins with collecting baseline data and testing long-term strategies for monitoring and evaluating changes to the baseline. Information and knowledge gained in this process are used to update management goals and tasks. The goal of adaptive management is continual improvement and long-term sustainability. An adaptive management approach has been applied to all elements within this LMP.

Each element includes a section on the potential environmental impacts that may occur as a result of the proposed management goals and tasks. Through the development of Impact Tasks noted in each element, CDFW attempts to avoid and/or minimize these potential impacts.

4.3 Management-Zones

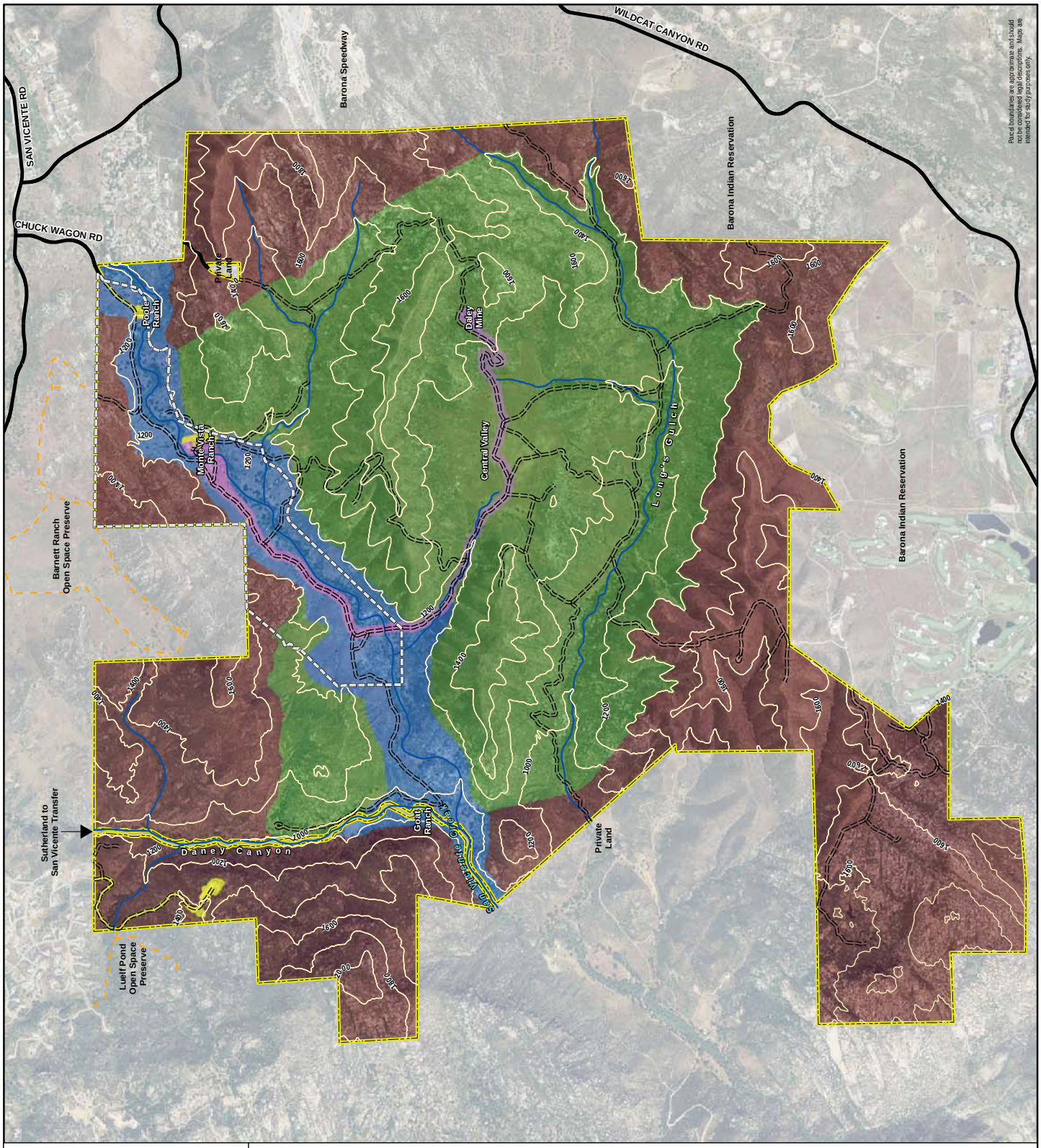
As part of this LMP process, management-zones were developed as a general attempt to spatially define the management concepts of the Reserve based upon their geographical, natural/biological, cultural, aesthetic, resource-sensitive, and public use values. These management-zones take into consideration all the elements as defined by the LMP guidelines and as noted in the following sections.

Within the management-zones depicted in this LMP (*Figure 8*), the desired resource character, level of use, and range of possible features were determined by careful and detailed analysis of the resource inventories, public input, and consultation with the appropriate adjoining agencies.

Five management-zones were created, developed, and identified as: ***Limited Hunting Zone***, ***Backcountry Zone***, ***San Vicente Arroyo Toad Habitat Zone***, ***Educational and Interpretive Zone***, and ***Operational Zone***. All the management-zones will adhere to the appropriate goals and tasks found within each element and the Planning Matrix (*Table A*). See section 4.5 for specific Goals, Tasks, and Impact Guidelines related to the public use elements.

TABLE A: Management Zones Matrix

	LIMITED HUNTING ZONE	BACKCOUNTRY ZONE	SAN VICENTE ARROYO TOAD HABITAT ZONE	EDUCATIONAL/ INTERPRETIVE ZONE	OPERATIONAL ZONE
DESCRIPTION	Designated area for hunting game, as well as adjacent areas used during the "off-seasons" for educational purposes	Buffer area surrounding the core of the land, comprised of generally steep terrain	Vegetated areas and waters associated with San Vicente Creek and adjoining uplands, which serve to support listed/ sensitive species, associated upland habitat, and provide a corridor for wildlife	Natural and cultural resource educational areas where organizations and school groups may be taken on guided hikes/tours	Poole Ranch, Monte Vista Ranch
MANAGEMENT and RESOURCE CHARACTER	Seasonal hunting; Maintenance and restoration of the land for hunting as well as native habitat enhancement; some areas signed or fenced (off limits) to protect resources	Scientific research and restoration	Primarily for the management and conservation of listed/ sensitive species; seasonal hunting managed to avoid impacts to arroyo toad breeding habitat (e.g. signage).	Educational and Interpretation focused	DFW operational and maintenance component.
TYPES/LEVEL OF USE	Permitted hunting during appropriate season ; hunter-safety education; Scientific research and restoration	No hunting; Restoration of habitat; Scientific research	Permitted hunting during appropriate season; Scientific research and restoration	No hunting; Scientific research, educational use, hunter- safety education; Guided/organized tours and hikes	No hunting; Educational, DFW training, DFW invitational meetings.
	Medium level of use	Low level of use	Low level of use	Medium level of use	High level of use
RANGE OF POSSIBLE FEATURES	Trails; Roads; Pedestrian/vehicular crossings; Temporary facilities may be set up for scientific studies; Interpretive signs; No new Permanent structures	Trails; Roads; Pedestrian/vehicular crossings; Temporary facilities may be set up for scientific studies; No new Permanent structures	Trails; Roads; Pedestrian/vehicular crossings; Temporary facilities may be set up for scientific studies; No new Permanent structures	Trails; Roads; Parking; Pedestrian/vehicular crossings; Temporary facilities may be set up for scientific studies; Interpretive signs and program support facilities	Roads, Pedestrian/vehicular crossings; permanent structures (overnight use)



Date: 8/28/2015

Cañada de San Vicente

Figure 8
Management Zones Map

Legend

- 200ft Contours
- Paved Roads
- Existing Equestrian Trails
- CDFW Maintenance Roads
- Creeks and Drainages
- CDFW Lands
- SDCWA Mitigation Section

Management Zones

- Limited Hunting Zone
- Backcountry Zone
- San Vicente Arroyo Toad Critical Habitat Zone
- Educational/Interpretive Zone
- Operational Zone

N

0 500 1,000 2,000 Feet

4.4 BIOLOGICAL ELEMENTS: Goals, Tasks, and Impact Guidelines

The overall biological management goal for CDFW Ecological Reserves is to optimize ecological and habitat productivity for all species, in balance with the needs of the public. To accomplish this, the department strives to protect and maintain the physical processes that contribute to the ecological productivity of its flora and fauna, with an emphasis on habitat management programs.

The Biological Elements are divided into two categories: **1)** Habitat Management and **2)** Species Management. Biological Elements are further broken down into goals and tasks which are organized around improving ecosystems. Biocorridors and buffers have been included in the Habitat Management category.

Baseline inventories for arroyo toad, small mammals, and vegetation communities have been conducted over the past six years. Other inventories have been completed for invertebrates or fish species. Depending on available funding and/or CDFW expertise, surveys for species not yet inventoried will be initiated and continued as needed for those previously surveyed. All surveys will follow the best available scientific protocol available.

4.4.1 Habitat Management

Habitat Management is a high priority for CDFW and includes the conservation, enhancement, and restoration of the terrestrial and wetland habitats on the Reserve. Improving the quality of the habitat will ensure that the Reserve continues to support healthy populations of native species, prevent the proliferation of wild pigs within the Reserve, and continues to function both as an important wildlife core and corridor. Habitat Management includes three vegetation communities: **1)** Riparian and Other Wetland Communities; **2)** Oak Woodland; and **3)** Chaparral, Scrub, and Grasslands.

Riparian and Other Wetland Communities

This community includes the California Sycamore, Willow (Shrub), Baccharis (Riparian), and Wet Meadows found on the Reserve encompassing approximately 76 acres. These vegetation communities occur in all of the management-zones, with most of the habitat associated with San Vicente Creek and its tributaries. Overall, riparian areas provide food, water, cover, and migration and dispersal corridors for an abundance of wildlife, including the federally listed arroyo toad. Other special-status species that occur in these habitats include the Western spadefoot toad, two-striped garter snake, yellow warbler, pallid bat, and western mastiff bat. Approximately half of the 104 avian species observed on the Reserve were detected in riparian vegetation. Game species found in these habitats include wild turkey, mourning dove, quail, deer and rabbits. Public access is a possible management concern; however, this will be discussed in *Section 4.5. Public Use Element: Goals, Tasks, and Impact Guidelines*. Other management concerns include the potential for undercutting along riparian corridors due to erosion, sediment transport, and nonnative plant and animal species.

California Department of Fish and Wildlife began controlling nonnative plants along portions of San Vicente Creek when the agency started managing the Reserve in 2007. Initially, CDFW prioritized and targeted larger, nonnative species such as eucalyptus (*Eucalyptus* sp.), tamarisk (*Tamarix ramosissima*), and Mexican fan palm (*Washingtonia robusta*), but as these have been mostly eliminated, the focus has shifted to nonnative grasses and more herbaceous species. The majority of tamarisk and eucalyptus were removed from San Vicente Creek, but some tamarisks were also eradicated in Long's Gulch. Additionally, Mexican fan palms were removed in and around the compound including four large fan palms that were planted as landscape trees and approximately 75 small (1 1/2 feet to 6 feet tall) volunteer palm sprouts (1 foot to 6 feet tall). Currently, seedlings of tamarisk, fan palm, and eucalyptus are being treated in San Vicente Creek on a one- to two-year cycle.

SAN VICENTE CREEK

Goals

1. Conserve the riparian and wetland communities as essential features of the watershed ecosystem.
2. Maintain and enhance riparian vegetation communities in order to help sustain populations of special-status species that rely on the habitat for foraging, breeding, and roosting. Such activities will also benefit the non-listed, wildlife species that also use these riparian areas.
3. Maintain and enhance native riparian vegetation along San Vicente Creek for use as a wildlife movement corridor.
4. Control or reduce cover and distribution extent of invasive plants (as well as future weed populations) identified as management concerns.
5. Minimize the introduction of new invasive plant infestations.

Tasks

1. Map and maintain a list of invasive plants.

2. Map and maintain a list of invasive plants of management concern that threaten the integrity and persistence of riparian and wetland habitats.
3. Every five years or following a disturbance event, map areas of high risk for degradation and/or conversion.
4. Continue to implement nonnative plant control on an annual basis and target nuisance species, such as tamarisk and nonnative herbaceous and grass species in riparian and wetland habitats.
5. Target new infestations of invasive plants that can be eradicated before they become established.
6. Conduct a tracking study of wildlife within San Vicente Creek to determine whether the drainage is maintaining functionality as a wildlife movement corridor. The study would be updated as needed or based on available funding.
7. Assess the beds and banks of the riparian channels after 10-year (or greater) storm events to determine whether erosion and undercutting are degrading riparian habitat, causing excess sedimentation downstream, or threatening the existing infrastructure needed to maintain the Reserve. If needed, appropriate erosion control measures will be installed to stabilize and prevent further damage.
8. Utilize BMPs to minimize the introduction and spread of invasive plant species. (BMPs for land managers in: http://www.cal-ipc.org/ip/prevention/landmanagers.php)

Oak Woodland Communities

Oak woodlands occur in or adjacent to all of the Management-Zones. Although oak woodlands are considered terrestrial plant communities, much of the habitat on the Reserve is associated with drainages and functions like the riparian communities discussed above, especially the oak woodlands adjacent to San Vicente Creek, its tributaries, and the drainage that runs through Long's Gulch. Approximately 339 acres of oak woodland includes a combination of coast live oak (330 acres) and Engelmann oak (9 acres). Engelmann oaks are rare, with a limited distribution throughout California and the County. The Reserve's oak woodlands support a broad range of bird and mammal species, including game species such as deer, quail, and wild turkey. A statewide management concern regarding oak woodland is that certain species (e.g., Engelmann oak) are not regenerating adequately to sustain populations (University of California 2014). Locally, other potential management concerns are heightened fire risk due to the prevalence of nonnative grasses in the understory and the proximity of oak woodland to chaparral and scrub habitats with high fuel loads and potential for Golden Spotted Oak Borer.

Goals

1. Conserve oak woodland habitat as an important component of the unique mosaic of habitat types in the Reserve.
2. Protect and manage oak woodlands for species abundance and richness.
3. Maintain and enhance the quality and features of the woodlands that will benefit special-status and game species.

OASIS OF OAKS

4. Ensure that Engelmann oak woodland persists on the Reserve.
5. Control or reduce cover and distribution of invasive plants of management concern.

Tasks

1. Map and maintain a list of invasive plants of management concern which threaten the integrity and persistence of oak woodlands.
2. Provide appropriate habitat conditions, such that Engelmann oak persists on the Reserve.
3. Continue to implement nonnative plant control on an annual basis and target nuisance species such as nonnative herbaceous and grass species affecting oak woodland habitats.
4. Target new invasive plant infestations before they become established.
5. Complete a comprehensive assessment survey of the condition of the oak woodlands on the Reserve and update the assessment information, as needed. The assessment survey would identify seral stage, canopy cover, dominant tree species, understory species, dead or dying trees, occurrence and density of

nonnative plants, opportunities for habitat enhancement and restoration, as well as problems that require monitoring or remediation.

6. Compile an inventory of the individual Engelmann oaks on the Reserve (i.e., locations, DBH, canopy, seedling/sapling counts, and health of individual trees) as part of the oak woodland assessment. If needed, initiate an Engelmann oak planting program to enhance/augment the on-site population.
7. Regularly monitor oaks for potential pests (e.g., gold spotted oak borer) and initiate measures to prevent the spread of harmful insects that could damage/destroy the trees.
8. Utilize BMPs to minimize the introduction and spread of invasive plant species. (BMPs for land managers in: http://www.cal-ipc.org/ip/prevention/landmanagers.php)

Chaparral, Scrub, and Grasslands

Chaparral, scrub, and grasslands are the predominant vegetation communities on the Reserve and occur in all of the Management-Zones. Many of the special-status and covered plant and animal species that are present on the Reserve occur in these communities. These areas also support game species such as quail, mourning dove, jackrabbit, cottontail, and mule deer. Management concerns regarding chaparral and scrub include the occurrence and spread of invasive nonnative species in areas burned during the Cedar Fire.

Since 2012, approximately 60 acres of nonnative grassland species have been treated with herbicide to eliminate the exotic grasses and nonnative vetch in an effort to restore the native grasses, forbs, and chaparral-associated species. Most of these treatments were conducted in Daney Canyon, Central Valley , and in upland habitat immediately adjacent to San Vicente Creek.

Goals

1. Conserve the terrestrial upland vegetation communities as foraging, breeding, and sheltering habitat for the special-status, and covered, and game species that occur within them.
2. Manage the annual grasslands to control the spread of nonnative grasses into other habitat types and reduce the potential for wildfire fuels.
3. Prevent expansion, or reduce cover and distribution extent of invasive plants of management concern. Eradicate new infestations of invasive plants before they become established.

Tasks

1. Map and maintain a list of invasive plants of management concern that threaten the integrity and persistence of terrestrial habitats native to the upland communities.
2. Update the Classification and Assessment with Landsat of Visible Ecological Groupings (CalVEG) assessment every 10 years and after a major disaster, (such as the Cedar Fire) ; thus allowing for determination that native plant communities' persistence, species composition, and species diversity are being retained.
3. Continue to implement nonnative plant control on an annual basis and target nuisance species, such as nonnative herbaceous and grass species.
4. Promote the recovery of stand structure, species composition, and wildlife habitat functions of the chaparral and scrub habitats burned in the Cedar Fire and in any future wildfires.
5. Manage the natural succession of species composition and structure of the communities to maintain and enhance conditions that will benefit special-status and game species. Management may include, but would not be limited to grazing, mechanical methods, or fire.
6. Utilize BMPs to minimize the introduction and spread of invasive plant species. (BMPs for land managers in: http://www.cal-ipc.org/ip/prevention/landmanagers.php)

4.4.1.1 Biocorridors

Biocorridors or linkages are interconnected tracts of land characterized by significant natural resource value through which native species can disperse. Corridors provide pathways for gene flow, seed dispersal, daily movement between habitats (home range movements), migration (seasonal or altitudinal), and dispersal habitat for juveniles. Corridors can function at various temporal and spatial scales. Temporally, it allows for both daily and seasonal movements, as well as movements over many generations. Spatially, corridors can function on a large regional, or landscape/ecosystem scale (landscape size can vary) or at smaller scale, such as home range.

Though natural landscapes have an inherent degree of connectivity, recently (within the past 50 years) habitat alteration has greatly reduced this connectivity (Penrod et al. 2005). Establishing connections between isolated or fragmented habitat patches is essential for sustaining natural ecological processes, population viability, and biological diversity (Noss and Cooperrider 1994). The Reserve functions as part of a regional biocorridor complex. The Science and Collaboration for Connected Wildlands (formerly the South Coast Wildlands), working with various federal, state, and local agencies has identified the San Diego Foothill Corridor ($SC_0 6$) as a medium priority landscape linkage for numerous wildlife and plant species (Penrod et. al. 2001). Cañada de San Vicente is aligned within this linkage.

Goals

1. Facilitate the movement/dispersal of plants and animals within the Reserve to preserve the natural ecosystem dynamics and regional biodiversity.
2. Work towards the preservation, protection, enhancement, and identification of regional landscape linkages that connect the Reserve to other wildland areas.
3. Ensure San Vicente Creek and its tributaries continue to function as a movement corridor.
4. Maintain ecosystem health and biodiversity by protecting plant and animal habitat as well as dispersal corridors within the Reserve.

Tasks

1. Continue to coordinate with local communities, county, state, and federal agencies, research institutions, and relevant organizations to develop an ecologically sound regional biocorridor system. In addition, CDFW will discourage urban, suburban, and infrastructure planning that does not prevent, through avoidance or mitigation, the degradation and fragmentation of habitat.
2. Actively work with or coordinate with other agencies and Reserve owners to acquire or secure land acquisitions to ensure key biocorridors are preserved or enhanced.
3. Promote natural resource conservation by recognizing the importance of sustainable species populations and their genetic diversity. Inventory and monitoring of the Reserve's natural resources and human impacts will be done at regular intervals to assess and document the health of species that rely on large areas to live, hunt, and disperse. Furthermore, CDFW will participate with government agencies and research institutions in regional resource monitoring.
4. Interpret for visitors the ecological significance of biocorridors, with emphasis on the Reserve and the surrounding region.
5. Install cameras at various locations within the creek to monitor wildlife movement.

4.4.1.2 Buffers

Buffers, such as dedicated municipal open space (Barnett Ranch OSP, Luelf Pond OSP), are relatively low-use areas between adjacent developments and the Reserve boundaries. Buffers separate conflicting land uses (like residential and Reserve lands), and protect adjacent natural habitats from potentially destructive impacts.

Some types of land use outside of the Reserve's boundaries cause significantly negative impacts to the Reserve. Impacts may include exotic species invasion; the spread of wildfire; air, soil, and water pollution; noise pollution; predation and competition for resources by domestic pets; and the loss of habitat for plants and animals that would otherwise occur outside the boundaries of the Reserve.

Goal

1. As regional development pressures increase, establish, maintain, and protect buffers adjacent to the Reserve.

Tasks

1. Obtain, as necessary, and review regional conservation plans pertaining to land use in the vicinity of the Reserve. Collaboration with the agencies and groups responsible for implementing these plans will help optimize the value of CDFW land acquisitions, management of critical habitat, and restoration activities.
2. Plan with neighboring land and business owners, communities, and governmental agencies to develop and maintain a buffer system along the outer edge of the Reserve boundaries.

4.4.2 Species Management

Many sensitive species occur on the Reserve including species with federal and state designations such as the arroyo toad, as well as species that are covered by local conservation planning efforts. Since the passing of the NCCPA in 1991, State and County conservation efforts have focused on ecosystem and multi-species protection. This has led to the preservation of large, intact areas of sensitive habitats, such as Cañada de San Vicente. Management actions have also begun to focus more on habitats and less on individual species, based on the theory that healthy habitats will support and sustain healthy populations of plant and animal species. If we extrapolate this theory to the Reserve, then the tasks undertaken to improve the quality of the on-site habitats will also benefit the sensitive species these habitats support. Therefore, additional management objectives will not be identified for the following sensitive plant and animal species. The following sensitive plants and wildlife, which occur on the Reserve, are currently covered under an existing conservation plan or addressed in the proposed Habitat Management section and therefore, no specific management objectives will be proposed or implemented for these species:

ENGELMANN OAK
(QUERCUS ENGELMANNII)

- Engelmann oak
- Brewer's calandrinia
- San Diego banded gecko

- Western skink
- Coast horned lizard
- Coastal western whiptail
- California legless lizard
- Orange-throated whiptail
- Coastal rosy boa
- San Diego ringneck snake
- Coast patch-nosed snake
- Two-striped garter snake
- Red diamond rattlesnake
- Cooper's hawk
- Olive-sided flycatcher
- Loggerhead shrike
- Horned lark
- Western bluebird
- Yellow warbler
- Bell's sparrow
- Grasshopper sparrow
- Spotted bat
- Western red bat
- Fringed myotis
- Western mastiff bat
- Pocket free-tailed bat
- Big free-tailed bat
- American badger
- Mule deer
- Desert woodrat
- Southern grasshopper mouse
- Black-tailed jackrabbit

COOPER'S HAWK (*ACCIPITER COOPERII*)

Management of listed and MSCP-covered species has continued to change since 1996, based upon on-going research efforts in San Diego County. Under the original biological monitoring plan for the MSCP, monitoring of focal wildlife populations was prioritized towards "indicator" species with a goal of being able to detect significant long-term declines in populations (Ogden 1996). More recently, the *Management Strategic Plan for Conserved Lands in Western San Diego County, Vol. 1* (Strategic Plan, *SDMMP 2013*) (MSP) was prepared for SanDAG, focusing on a comprehensive approach for managing multiple plant and animal species within San Diego County.

The MSP is a compilation of other strategic plans completed or currently in progress, and presents priorities, goals, and objectives that are intended to enable a coordinated effort to assist in the development of management plans. The MSP categorizes and prioritizes species and vegetation communities, identifies geographic locations for management actions, provides specific timelines for implementation, and establishes a process for coordination and implementation. The MSP divided the MSCP planning

area into eight Management Units (MU)s. Within each unit certain species were designated as high priority management concerns. The Reserve falls within MU 4.

Monitoring efforts will focus on the below listed species and would be implemented per available funding and staffing. These species are known to occur within the Reserve and are either ranked in Risk Group 1, 2, or 3 as designated by Regan et al. (2006), or are listed as SL, SO, or VF in Appendix 1D of the MSP. Though mule deer are also listed in Risk Group 3 and population studies are proposed, they are not listed below since they are a game species and managed statewide by the CDFW.

- San Diego thornmint
- Delicate clarkia
- Lakeside ceanothus
- Quino checkerspot butterfly
- Arroyo toad
- Burrowing owl
- Golden eagle
- Ferruginous hawk
- Northern harrier
- California Rufous-crowned sparrow
- Pallid bat
- Townsend's big-eared bat
- Mountain lion

WESTERN BLUEBIRD (SIALIA MEXICANA)

SAN DIEGO THORNMINT

Goals

1. Ensure the persistence of suitable habitat for this species on the Reserve in areas where it has been previously documented.
2. Minimize the potential threats to the species including competition with nonnative species.
3. Determine current extent on the Reserve.

Tasks

1. Conduct focused surveys for thornmint in areas of previously known occurrence every year for five years to determine the continued presence/absence of San Diego thornmint. If thornmint is found, survey every three to five years to ensure persistence of the species and to identify potential threats.
2. Conduct routine monitoring to ensure species persistence and identify management issues.

3. Where San Diego thornmint is redetected on the Reserve, CDFW will update occurrence information.
4. Continue to implement nonnative plant control on an annual basis and target nuisance species, such as nonnative herbaceous and grass species, in areas of the Reserve where San Diego thornmint habitat occurs.
5. Work with experts to determine whether reintroduction, translocation, or other propagation of thornmint currently or historically present within the Reserve should be implemented to aid in the recovery of the species.
6. Identify potential threats to focal habitat patches from public use activities and take appropriate actions to alleviate these threats (i.e. fencing, signage, enforcement).
7. Support research related to this species and its habitat that would assist the Department in the management and recovery of the species.
8. Conduct baseline surveys to determine San Diego thornmint spatial distribution.
9. Rank and identify area specific threats to San Diego thornmint occurrence/ population.

DELICATE CLARKIA

Goals

1. Ensure the persistence of suitable habitat for this species on the Reserve in areas where it has been previously documented.
2. Minimize the potential threats to the species including competition with nonnative species.
3. Determine current extent on the Reserve.
4. Conduct routine monitoring to ensure species persistence and identify management issues.

Tasks

1. Conduct focused surveys for delicate clarkia in areas of previously known occurrences every year for five years to determine the continued presence/ absence. If delicate clarkia is found, survey every three to five years to ensure persistence of the species and to identify potential threats
2. Conduct routine monitoring to ensure species persistence and identify management issues.
3. Map and take population counts of delicate clarkia every three to five years as funding and staffing allows.

4. Continue to implement nonnative plant control on an annual basis and target nuisance species, such as nonnative herbaceous and grass species, in areas of the Reserve where delicate clarkia has been observed.
5. Identify potential threats to focal habitat patches from public use activities and take appropriate actions to alleviate these threats (i.e. fencing, signage, enforcement)
6. Support research related to this species and its habitat that would assist the Department in the management and recovery of the species.
7. Rank and identify area specific threats to delicate clarkia occurrence/population.

LAKESIDE CEANOTHUS

Goals

1. Ensure the persistence of suitable habitat for this species on the Reserve in areas where it has been previously documented.
2. Minimize the potential threats to the species including competition with nonnative species.
3. Determine current extent on the Reserve.

Tasks

1. Conduct focused surveys for Lakeside ceanothus in areas of previously known occurrences every year for five years to determine the continued presence/absence. If Lakeside ceanothus is found, survey every three to five years to ensure persistence of the species and to identify potential threats.
2. Conduct routine monitoring to ensure species persistence and identify management issues.
3. Map populations of Lakeside ceanothus every three to five years as funding and staffing allows.
4. Continue to implement nonnative plant control on an annual basis and target nuisance species, such as nonnative herbaceous and grass species, in areas of the Reserve where Lakeside ceanothus has been observed.
5. Identify potential threats to focal habitat patches from public use activities and take appropriate actions to alleviate these threats (i.e. fencing, signage, enforcement).
6. Support research related to this species and its habitat that would assist the Department in the management and recovery of the species.

QUINO CHECKERSPOT BUTTERFLY

Goals

QUINO CHECKERSPOT BUTTERFLY (EUPHYDRYAS EDITHA QUINO)

1. Over the next 15 years, protect and maintain known Quino checkerspot focal habitat patches, consisting of hilltop or ridge top areas supporting at least 200 square meters of contiguous, high-quality open-canopy coastal sage scrub or chamise chaparral habitat that include primary and secondary larval host plants, multiple species of annual nectar plants for adult feeding, and bare soil overlain with cryptobiotic crust.
2. Survey previously unsurveyed hilltops to determine if additional breeding locations for Quino checkerspot butterfly exist.
3. Identify and rank the potential threats to Quino checkerspot butterfly habitat within known/potential occupied habitat.

Tasks

1. Conduct a habitat assessment in areas of current and past occupation by Quino checkerspot butterfly.
2. Conduct focused surveys for Quino checkerspot butterfly every three to five years as funding and staffing levels allow.
3. Identify areas to enhance openings in appropriate unoccupied habitat to encourage the growth and spread of primary and secondary larval host plants and other native plant species.
4. Enhance habitat and perform pre-fire management actions in previously occupied habitat by controlling nonnative herbaceous plant species and removing thatch on an annual basis through the use of herbicide and other methods such as hand pulling.
5. Regularly maintain and update a GIS (Geographic Information System) database of suitable/occupied Quino checkerspot butterfly habitat and species occurrences.

6. Identify potential threats to focal habitat patches from public use activities and take appropriate actions to alleviate these threats (i.e. fencing, signage, enforcement).
7. Support research related to this species and its habitat that would assist the Department in the management and recovery of the species.

ARROYO TOAD

The following goals, objectives, and tasks meet or are comparable to the Conditions of Coverage for the arroyo toad as stated in the MSCP and SDCWA NCCP/HCP.

The Department's conservation strategy for the arroyo toad at the Reserve is to maintain the metapopulation by protecting and enhancing the breeding and non-breeding habitats, monitoring the population to ensure recovery actions are successful, and obtaining research data to further guide management efforts to benefit arroyo toad recovery. Surveys conducted by CDFW using USGS Aquatic Species and Habitat Assessment Protocol for Southcoast Ecoregion Rivers, Streams, and Creeks (USGS 2006), identified eight 250-meter sections of San Vicente Creek as good habitat, twelve 250-meter sections as moderate habitat, and two 250-meter sections as poor.

Goals

1. Conduct routine monitoring to ensure species persistence and identify management issues.
2. Ensure that the arroyo toad has access to breeding and wintering habitats on the Reserve.
3. Determine the breeding locations/distribution, numbers, and status of arroyo toads. Implement measures to protect breeding areas.
4. Identify and rank threats to the arroyo toad population, and identify management needs to support self-sustaining occurrences.
5. Identify locations along San Vicente Creek that contain dense vegetation (both native and non-native) such that arroyo toads are prevented from moving between their breeding and wintering habitats.

ARROYO TOAD (ANAXYRUS CALIFORNICUS)

Tasks

1. Continue to implement the arroyo toad monitoring program that was initiated in 2008 by the CDFW. This includes, at a minimum, presence/absence surveys every one to two years and a habitat assessment every five years. The assessment would list and rank potential threats to the species.
2. Continue to implement nonnative plant control on an annual basis and target nuisance species, such as nonnative herbaceous and grass species in riparian, wetland, and upland habitats.
3. Maintain the eight 250-meter sections of San Vicente Creek considered good habitat and over the next 10 years evaluate and where possible enhance one to two of the twelve 250-meter sections considered moderate habitat to a level of good habitat.
4. Remove, as needed, dense vegetation that could impede arroyo toad movement between breeding and suspected wintering areas.
5. Control nonnative animal species, such as the bullfrog, crayfish, and nonnative fish species that threaten prey upon the arroyo toad survival on the Reserve.
6. The current turkey population on the Reserve is believed to be small, and it is unknown to what extent turkeys prey upon arroyo toads. If subsequent information becomes available which indicates turkeys pose a threat to the arroyo toad population on the Reserve, the CDWF may implement special hunts or other measures to help control the turkey population.
7. During the breeding season, install signage along San Vicente Creek to alert the public/staff of the sensitivity of the area.
8. Restrict access to known breeding locations during the breeding season.
9. Provide arroyo toad education/training to groups and individuals that recreate on the Reserve.
10. Limit use of roadways or implement reduced speed limits during rain events in areas known to support the arroyo toad to decrease the likelihood of mortality.
11. Support research related to this species and its habitat that would assist the Department in the management and recovery of the species.

BURROWING OWL

The best available habitat for Burrowing Owls is located in the central valley section of the Reserve. This central valley is approximately 60 acres of non-native grasses/vetch mixed with small rocky outcrops and oak trees.

Goals

1. Maintain approximately 40 acres of the central valley section of the Reserve as open grassland/forbs.
2. Provide suitable habitat for breeding and wintering burrowing owls.

Tasks

1. Create and/or maintain suitable breeding habitat that includes ground squirrel burrows and/or artificial burrows.
2. Conduct surveys (every two to three years) to determine the presence/absence of the species and habitat usage on the Reserve.
3. Over the course of the next five years, use herbicide to reduce nonnative vegetation cover of 20 acres of the central valley by 80 percent. Recent use of herbicide in this area has shown good success at reduction of nonnatives and good succession of native grasses/forbs in the absence of nonnatives. Visual estimates will be made each year to determine success.
4. Over the course of the next 10 years, use herbicide to reduce nonnative vegetation cover of 40 acres of the central valley by 80 percent. Visual estimates will be made each year to determine success.

GOLDEN EAGLE

Goal

1. Maintain existing suitable foraging habitat for the Golden eagle and where feasible, improve habitat quality.

Tasks

1. Coordinate with the MSP raptor monitoring efforts throughout the County.
2. Continue to implement nonnative plant control on an annual basis and target nuisance species, such as nonnative herbaceous and grass species in preferred foraging habitat.
3. Explore restricting public use and maintenance activities and/or imposing seasonal restrictions on grassland areas that are foraging habitat.
4. Participate in MSCP raptor monitoring efforts to identify important foraging areas within the Reserve.
5. Support research related to this species and its habitat that would assist the Department in the management and recovery of the species.

FERRUGINOUS HAWK

Goal

1. Maintain existing suitable winter foraging habitat for the Ferruginous hawk and, where feasible, improve habitat quality.

Tasks

1. Coordinate with the MSP raptor monitoring efforts throughout the County.
2. Continue to implement nonnative plant control on an annual basis and target nuisance species, such as nonnative herbaceous and grass species in preferred foraging habitat.
3. Explore restricting public use and maintenance activities and/or imposing seasonal restrictions on areas that are in occupied habitat.
4. Participate in MSCP raptor monitoring efforts.
5. Support research related to this species and its habitat that would assist the Department in the management and recovery of the species.

NORTHERN HARRIER

Goal

1. Maintain existing suitable breeding and foraging habitat for the northern harrier and, where feasible, improve habitat quality.

Tasks

1. Coordinate with the Strategic Plan raptor monitoring efforts throughout the County once goal and objectives have been prepared.
2. Continue to implement nonnative plant control on an annual basis and target nuisance species, such as nonnative herbaceous and grass species in preferred foraging and nesting habitat.
3. Explore restricting public use and maintenance activities and/or imposing seasonal restrictions on grassland areas that are occupied by northern harrier.
4. Participate in MSCP raptor monitoring efforts.

SOUTHERN CALIFORNIA RUFOUS-CROWNED SPARROW

Goal

1. Maintain existing suitable foraging and breading habitat for the Rufous-crowned sparrow and, where feasible, improve habitat quality.

Tasks

1. Continue to implement nonnative plant control on an annual basis and target nuisance species, such as nonnative herbaceous and grass species in coastal sage scrub habitat.
2. Conduct surveys for Rufous crowned sparrowin coastal sage scrub within five years.
3. Support research related to this species and its habitat that would assist the Department in the management and recovery of the species.

MOUNTAIN LION

Goals

1. Maintain the open undeveloped areas of the Reserve to maintain function as a wildlife corridor.
2. Maintain suitable hunting, breeding, and denning habitat for mountain lion within the Reserve.

Tasks

1. Maintain suitable hunting, breeding, and denning habitat by reduction of nonnative plants and the promotion of native plants used by prey species.
2. Conduct mule deer population surveys.
3. Continue cooperation with UC Davis Wildlife Health Center (UC Davis School of Veterinary Medicine) and Western Tracking Institute to monitor species occurrence and movements in rural western San Diego County.
4. Support research related to this species and its habitat that would assist the Department in the management and recovery of the species.

PALLID BAT

Goals

1. Ensure the continued existence of the pallid bat on the Reserve.
2. Protect day, night, and maternity roosts from destruction and human disturbance.
3. Enhance foraging habitat within commuting distance of night and maternity roosts.

Tasks

1. Survey for potential roost/breeding sites to determine status on the Reserve and inspect known roost/breeding sites every five years.
2. Identify potential threats from public use activities and take appropriate actions to alleviate these threats (i.e. restricting public use, fencing, signage, and enforcement) within known day, night, and maternity roosting sites.
3. Participate/coordinate with other land managers in MSCP and the San Diego Natural History Museum in radio-telemetry studies and other bat monitoring efforts to identify nocturnal, diurnal, and maternity roosts and important foraging and water sources.

TOWNSEND'S BIG-EARED BAT

Goals

1. Protect day, night, and maternity roosts of the Townsend's big-eared bat from destruction and human disturbance.
2. Provide artificial roosts when and where feasible.
3. Enhance foraging habitat within commuting distance of night and maternity roosts.
4. Survey for potential roost/breeding sites to determine the status of Townsend's big-eared bat on the Reserve.
5. Participate/coordinate with other land managers in the MSCP radio-telemetry studies and other bat monitoring efforts.

Tasks

1. Inspect roost/breeding sites every five years taking care not to disturb bats.
2. Inspect and maintain CDFW-added bat gates at the Daley Mine. These gates will be inspected and maintained on an annual basis.

3. Identify potential threats from public use activities and take appropriate actions to alleviate these threats (i.e. restricting public use, fencing, signage, and enforcement) within known day, night, and maternity roosting sites.
4. Participate/coordinate with other land managers in MSCP and the San Diego Natural History Museum in radio-telemetry studies and other bat monitoring efforts to identify nocturnal, diurnal, and maternity roosts and important foraging and water sources.

4.4.3 Fully Protected Species

The classification of *Fully Protected* was the State's initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction [FGC sections: 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), 5515 (fish)].

WHITE-TAILED KITE (*ELANUS LEUCURUS*)

Goals

1. Ensure the continued existence of Fully Protected species on the Reserve.
2. Maintain breeding and foraging habitats for the white-tailed kite, golden eagle, and ringtail on the Reserve.
3. Protect and enhance golden eagle active and inactive nest sites that occur on the Reserve.
4. Manage open grassland areas to increase prey for foraging raptors.
5. Conserve woodland habitats and large expanses of chaparral, scrub, and grassland habitats for white-tailed kite, golden eagle, and ringtail.
6. Explore specific recommendations for restoring or enhancing nest sites or providing artificial nesting platforms.

Tasks

1. Coordinate with raptor monitoring efforts throughout the County.

2. Continue to implement nonnative plant control on an annual basis and target nuisance species, such as tamarisk and nonnative herbaceous and grass species in riparian and oak woodland habitats.
3. Complete a comprehensive assessment of the condition of the oak woodlands on the Reserve and update the assessment, as needed.
4. Explore restricting public use and maintenance activities and/or imposing seasonal restrictions on rocky cliff areas on the Reserve that provide suitable nesting sites for the golden eagle.
5. Participate in MSCP raptor monitoring efforts.

4.4.4 CNPS List 1.B Species

Plants with a California Rare Plant Rank of 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. All of the plants constituting California Rare Plant Rank 1B meet the definitions of the California Endangered Species Act of the Fish and Game Code, and are eligible for state listing.

The felt-leaved monardella, delicate clarkia, Lakeside ceanothus, and San Diego thornmint are all CNPS List 1.B species that occur on the Reserve. The felt-leaved monardella, Lakeside ceanothus, and San Diego thornmint are also covered under the MSCP. Threats to these species include urban development and fire.

Goals

1. Ensure the survival of felt-leaved monardella, delicate clarkia and San Diego thornmint on the Reserve.
2. Determine spatial distribution and occurrence of felt-leaved monardella, delicate clarkia, and San Diego thornmint by monitoring annually for five years.

Tasks

1. Rank and identify threats to each of these species' survival and persistence.
2. Conduct rare plant surveys every five years or as appropriate based on the biology of rare plant species known from the area and local environmental conditions to document the presence/absence of sensitive plant species, including felt-leaved monardella, delicate clarkia, and San Diego thornmint. Surveys may be appropriate between five year intervals when extraordinary events occur (e.g., exceptional weather patterns, fire).
3. Update occurrence information every five years.

4. Implement nonnative plant control on an annual basis and target nuisance species, such as nonnative herbaceous and grass species in areas where the three species have been observed on the Reserve.

4.4.5 Game Species

Game species are generally defined as land mammals and birds not normally considered to be domestic animals, which include big game, upland game, and small game. Game species are found in the Limited Hunting, Backcountry, and San Vicente Arroyo Toad Habitat Zones and include mule deer, California quail, wild turkey, mourning dove, and cotton tail rabbit.

Goals

1. Ensure the persistence of native game species on the Reserve.
2. Conduct surveys for game species throughout the Reserve to ensure populations are sustainable and adjust hunting area and number of available hunts according to survey findings.
3. Ensure the availability of water for game and other wildlife species on the Reserve.

CALIFORNIA/VALLEY QUAIL (*CALLIPEPLA CALIFORNICA*)

Tasks

1. Complete an inventory of game species within the Reserve and conduct surveys for game species as needed.
2. Create brush piles to enhance habitats for game and other wildlife species. Material for brush piles will come from, but not be limited to, road maintenance and fire abatement activities.
3. Evaluate and repair/enhance springs, guzzlers, and existing wells to enhance water availability for both game and other wildlife species. If feasible and appropriate, additional wells may be added.
4. To facilitate wildlife movement of species, such as the mule deer, CDFW will survey and evaluate internal fencing needs. Approximately 1 mile of internal, unneeded fencing was identified and has already been removed since the CDFW started managing the Reserve. The removal of unneeded fencing will also benefit larger wildlife species such as the mountain lion and coyote.

Impact Guidelines

In planning and implementing the habitat and species portion of the Biological Elements, CDFW will give priority to management activities that avoid direct impacts to protected resources including, native vegetation communities and the associated species they support. If direct impacts cannot be avoided, then site-specific plans will be prepared for management activities subject to CEQA review and must comply with all applicable regulations. Impact avoidance measures for management activities will include but not be limited to:

- Seasonal closure, signage, fencing, and/or informational kiosks to prevent public use of sensitive areas used for roosting and/or breeding by sensitive species. All structures would be installed outside of the breeding season, and arroyo toad breeding season.
- No vegetation clearing or land disturbance within the stream channels without the requisite authorizations from CDFW, United States Army Corps of Engineers (ACOE), and Regional Water Quality Control Board (RWQCB). Also, any surface-disturbing activities (including vegetation removal) that could potentially impact federally-listed species will be coordinated with the USFWS and formal/informal consultation completed, as necessary.
- Restricted use of pesticides and herbicides in riparian habitat and wetlands (allowed uses will be as determined by herbicide label and subsequent recommendations from CDFW personnel possessing a valid Qualified Applicator License/Qualified Applicator Certificate [QAL/QAC] for herbicide application on the Reserve).
    - Non-native plant species will be controlled using an integrated approach that relies on both non-chemical and chemical (i.e. herbicide) use strategies. The risk that herbicides pose to non-target organisms is a dependent on both exposure and toxicity. This relationship between risk, exposure and toxicity can be assessed using the Hazard Quotient (HQ) method employed by numerous public agencies including the United States Environmental Protection Agency and the USFS. *http://www.fs.fed.us/foresthealth/pesticide/pdfs/PrepEnvironmentalDoc_11-2014.pdf.* With this method, no significant risk to non-target species would be expected when the calculated HQ is below a pre-determined Level of Concern (LOC). To reduce the risk posed to wildlife species at the Reserve, no herbicide will be used unless its calculated HQ value is below the LOC for the appropriate exposure scenario.
    - Additionally, the risk to non-target wildlife and special-status plant species will be reduced by making low-volume, spot-treatments using hand-held equipment targeted specifically at non-native plants. Broadcast applications will be uncommon. Other risk-reduction strategies that may be used include using buffer zones, shields, tarps or other physical barriers to protect non-target plants, using selective rather than non-selective herbicides, and timing herbicide applications

so that they are made when non-target species are in less-susceptible life stages (i.e. dormancy).

- No fence removal during the bird breeding season unless pre-activity surveys have documented the absence of nesting birds in the project area.

4.4.6 Biological Monitoring

- Monitoring habitats and species responses to management tasks and natural disturbances is an integral part of an adaptive management program. Multi-species conservation monitoring programs include three main components: implementation (compliance) monitoring, effectiveness monitoring, and targeted studies (Atkinson et al. 2004). Implementation (compliance) monitoring tracks the status of plan implementation, ensuring that planned actions are executed.
- Effectiveness monitoring evaluates the success of the plan in meeting its stated biological objectives (Noss and Cooperrider, 1994). It includes determining the status and trends of resources (e.g., quantitative data on covered species), the status and trends of known pressures (e.g., invasive species), and the effects of management actions on resources and known pressures (e.g., density of invasive plants measured before and then one to five years after herbicide treatment).
- Targeted studies increase the effectiveness of monitoring and management by improving knowledge about the ecological system and management techniques. Targeted studies may occur for only a short period of time rather than as long-term monitoring and typically are undertaken to resolve critical uncertainties and improving knowledge of natural systems under management (e.g., plant succession and weed dynamics in response to fire).
- The primary purpose of the Monitoring Program is to identify ways to preserve, enhance, and restore the native vegetation communities found on the Reserve; preserve and enhance the capacity of these communities to support populations of native species; and preserve the wildlife movement functions of San Vicente Creek.
- As stated previously, the Reserve is in the planning area of the MSCP and an essential part of the HMA for the SDCWA NCCP/HCP. Both programs require monitoring to determine whether or not specific conservation goals are being met. In an effort to meet the required goals of both the MSCP and SDCWA NCCP/HCP, the Department has incorporated the goals of these plans, where appropriate, into the Monitoring Program for the Reserve. In addition, the Department is also incorporating goals and objectives from the MSP where suitable.

Approximately 76 acres of riparian/wetland vegetation occur within the Reserve representing only 1.5 percent of the total area. Riparian corridors are generally more productive and have higher plant species richness than surrounding upland ecosystems. However, because of naturally high rates of hydrological disturbance and high edge-to-area ratios at both the landscape and localized patch scales, riparian habitat systems are susceptible to invasion by non-native plants, which may constitute 25 to 30 percent of species (Malanson 1993, Planty-Tabacchi et al. 1996). Parameters for monitoring patterns in riparian vegetation include woody and herbaceous plant cover, species richness or composition (including relative importance of non-native and upland species), size/age structure of dominant riparian trees, and total vegetation volume.

Annual grasslands represent approximately seven percent of the total area of the Reserve (approximately 330 acres). Grassland habitats at the Reserve are artifacts of previous land use regimes, including cultivated crops and grazing, and have become dominated by nonnative annual grasses and forbs. In the absence of grazing and fire, annual grasslands require active management to maintain their ecological integrity and structural diversity. Grassland habitat management activities may include prescriptive burning, grazing, mechanical treatments, and/or selective herbicide use. There is

SUNSET FROM DANEY CANYON

an opportunity to establish ecological baseline conditions, develop management scenarios that address long-term biological goals, and monitor the effectiveness of these strategies.

Oak woodlands are among the most biologically diverse habitats, providing nesting habitat, forage, and shelter for a wide variety of wildlife species. Approximately 339 acres of oak dominated vegetation occur within the Reserve representing a small, but important portion of the Reserve (approximately 7 percent).

Approximately 4,010 acres of scrub vegetation consisting of mixed chaparral, chamise-redshank, and coastal scrub Occurs within the Reserve. This represents approximately 84 percent of all vegetation within the Reserve. These habitats are found on xeric substrates and are fire adapted, able to resprout after fire events and through seeding (either producing seeds at an early age or germinating seeds caused by heat of the fire).

Establishing an Adaptive Management Approach

Land managers are frequently confronted with the quandary of how to manage resources with limited funding and incomplete information. One approach to this challenge is to simply begin, then adapt practices as knowledge increases. This approach starts by basing the management plan on the broadest ecological level (habitat), then working towards a comprehensive ecological inventory of the site, integrating data as it becomes available, measuring data against indicators of success, and modifying management strategies as new information is learned. This is the backbone of a comprehensive and adaptive land management plan.

Measuring conditions and responses of the ecosystem to both intentional (e.g., management actions) and natural changes (e.g., flooding) is a critical piece of the adaptive management feedback loop. Over time, monitoring indicates trends in species and habitats (e.g., increasing, decreasing, and static) that may be correlated to specific conservation and management activities.

While some management activities are straight forward (trash removal, sign posting), other management activities produce much greater uncertainty (habitat restoration). Due to the complex variables and uncertainty involved in managing and monitoring ecosystems and special-status species, the development of a biological monitoring and implementation program typically proceeds in the three phases (Atkinson et al. 2004).

Adaptive Management at the Reserve

Conducting Focused Surveys for Special-Status Species

A primary concern of the CDFW is the protection of special-status species and their habitats. Monitoring the presence of special-status species within and adjacent to the Reserve will contribute the scientific understanding of regional population trends for these species and will provide valuable information about the overall health of ecosystems at a larger landscape level.

Since birds occupy a wide variety of ecological niches and are relatively easy to monitor in comparison to other taxa, they are often used as focal species for monitoring. Monitoring their status is key to understanding trends in the health of ecosystems within the Reserve and the region.

Collecting Useful Scientific Data

Data management begins with proper collection and recordkeeping in the field. Inventories and sampling protocols must be established so that different people can gather comparable datasets over time. Protocols should not be overly reliant on technology that is likely to change or become obsolete so that datasets are no longer replicable. Data must also be reported consistently to serve an adaptive management purpose.

Providing Quality Control

CDFW should guide the setup and implementation of the biological monitoring program, including development of the quality assurance program and specific protocols for data sampling. Reserve personnel should also coordinate with larger, regional resource planning to improve the long-term viability of habitats and species while providing access to additional data and technical expertise.

4.4.7 Goals and Tasks

Goal 1

Complete a resources inventory for the four major vegetation communities (riparian, grassland, oak woodland, shrub land) and identify relationships between Biological Elements.

Tasks

1. *Set up permanent plots for vegetation monitoring.* Permanent vegetation monitoring plots provide consistent reference points from which to measure and monitor changes in species distribution, plant density, and canopy cover within a given habitat (Elzinga et al. 2001). These data are especially valuable when undertaking habitat restoration. Permanent vegetation monitoring plots should be established in each of the four major vegetation communities at the Reserve.
2. *Set up permanent photo monitoring stations for annual documentation of habitat conditions.* Photographs are by far the easiest monitoring tool available to a manager. They are an inexpensive visual record of the site over time. Establishing permanent photo points in each of the major vegetation communities at the Reserve will provide another method of documenting changes and compliment other monitoring programs.
3. Conduct presence/absence surveys for special-status species (flora and fauna) using accepted federal and states protocols; and submit occurrence data to CNDDB.

4. *Conduct bat surveys to determine species utilization of the Reserve.* The particular combination of habitats at the Reserve may support numerous bat species.

5. *Inventory and map distributions of invasive non-native plant populations* and integrate data into the GIS database for the Reserve. Mapping invasive plant populations is the first step in prioritizing management activities directed towards controlling their spread.

    - Conduct baseline Benthic Macro-Invertebrate (BMI) sampling along San Vicente Creek using CDFW's protocol for BMI surveys in low gradient streams (CDFG 2003). Using aquatic macro invertebrates to monitor water quality is by far the most popular method used throughout the world. Aquatic macro invertebrates are ubiquitous, relatively stationary and their large species diversity provides a spectrum of responses to environmental stresses. BMI monitoring programs have been developed throughout the United States using citizen volunteers and students (USEPA 2000).

6. *Sample and analyze water quality in San Vicente Creek* (dissolved oxygen, temperature, PH, and turbidity). The general topography of this area of San Diego County slopes south and east toward San Vicente Reservoir which is a major water storage facility for the City of San Diego. It is important to monitor water quality as it moves through the creek to understand and quantify potential water quality issues related to management of the Reserve.

ANNUAL BROME GRASSLAND

Goal 2

Test long-term monitoring strategies and resolve critical management uncertainties.

Tasks

1. Establish cooperative agreements with local and regional conservation groups and resource agencies to enhance special-status species habitats and monitor regional special-status species populations. Monitoring populations of special-status species should be conducted periodically to assess overall habitat

integrity, detect changes in distribution and abundance, and detect positive and adverse effects of management activities, human use, and/or nonnative species.

2. Explore option of grazing as use for potentially beneficial grassland management practice within the Reserve. Any subsequent grazing would require additional environmental review process under CEQA.
3. Monitor species diversity and abundance of BMIs along San Vicente Creek.
4. Establish long-term monitoring protocols for all vegetation after evaluating monitoring strategies and environmental responses to management practices. Phase 3 of adaptive management planning should address any changing conditions and include periodic evaluation and refinement of the monitoring program.
5. Evaluate monitoring strategies periodically to identify and report changes that are warranted to maintain consistency with Reserve goals. This evaluation could include a review of the scientific literature and consultation with species and habitat experts. Compliance monitoring will be conducted using a simple management action tracking system such as a spreadsheet.
6. Coordinate distribution of Reserve annual management reports and any proposed work plans.
7. To the extent practicable, this LMP will complement and utilize existing and developing approaches from the MSCP and Multiple Habitat Conservation Program (MHCP) efforts and will follow the guidance in *Designing Monitoring Programs in an Adaptive Management Context for Regional Multiple Species Conservation Plans*.

For clarity, the Monitoring Program will be presented in tabular format for each Biological Element. Each table will include the tasks, timing of the tasks (e.g., annually, every 5-10 years), any seasonal restrictions for implementation, and proposed protocols/methodologies used for data collection. The protocols/methodologies are only suggestions and will likely be more refined during study design and/or data collection, but will depend on staffing levels and funding.

TABLE B:
Biological Monitoring Element: Riparian and Other Wetland Habitats

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Map and maintain list of invasive plants that threaten persistence of riparian & wetland habitats	Every 3-5 years / when annual nonnative species begin to germinate, typically Mar-May	Conduct annual, visual inspections in areas previously treated or areas suspected to have nonnative species (e.g., areas with recent disturbance)
Nonnative plant control	Annually / prior to seed set for annual species	Department's 680 permit
Tracking studies for birds and mammals within San Vicente Creek	Every 5-10 years / bird migration (Mar-May), day and nighttime surveys	Point counts, scat identification, track stations, Anabat
San Vicente Creek bed and bank assessments	After 10-year or greater storm events and post-fire/ Installation of erosion control measures in jurisdictional areas may require permits from CDFW and ACOE; work would occur outside arroyo toad and bird breeding seasons	Visual inspections Installation of appropriate erosion control measures

TABLE C:
Biological Monitoring Element: Oak Woodlands

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Map and maintain list of invasive plants that threaten persistence of oak woodlands	Every 3-5 years / when annual nonnative species begin to germinate; typically Mar-May	Conduct annual, visual inspections in areas previously treated or areas suspected to have nonnative species (e.g., areas with recent disturbance)
Nonnative plant control	Annually / prior to seed set for annual species	Department's 680 permit
Oak woodlands assessment	Every 10 years as needed	Point intercept transects, belt transects, or quadrant sampling
Engelmann oak inventory	Every 10 years as needed	Area searches / patch mapping

TABLE D:
Biological Monitoring Element: Chaparral, Scrub, and Grasslands

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Map and maintain list of invasive plants that threaten persistence of chaparral and scrub habitats	Every 3-5 years / when annual nonnative species begin to germinate; typically Mar-May	Conduct annual, visual inspections in areas previously treated or areas suspected to have nonnative species (e.g., areas with recent disturbance)
Nonnative plant control	Annually / prior to seed set for annual species	Department's 680 permit
Update CalVEG assessment	2020, then every 5-10 years or after major disaster	Sproul et al. 2011; CalVEG

TABLE E:
Biological Monitoring Element:
San Diego Thornmint, delicate clarkia, Lakeside ceanothus, and CNPS List 1.B Species

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Conduct rare plant surveys	2016-2021, then every 3-5 years or as needed for species present on the Property / when annual species are present	Point or belt transect; visual inspections in areas known to have sensitive annual plant species
Map and maintain list of invasive plants that threaten persistence of chaparral and scrub habitats	Annually / when annual nonnative species begin to germinate; typically Mar-May	Conduct annual, visual inspections in areas previously treated or areas suspected to have nonnative species (e.g., areas with recent disturbance)
Nonnative plant control	Annually / prior to seed set for annual species	Department's 680 permit

TABLE F:
Biological Monitoring Element: Quino Checkerspot Butterfly

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Monitoring program	Annually / determined by USFWS	USFWS protocol
Map and maintain list of invasive plants that threaten persistence of Quino habitat	Every 3-5 years / prior to seed set for annual species	Conduct annual, visual inspections in areas previously treated or areas suspected to have nonnative species (e.g., areas with recent disturbance)
Nonnative plant control	Annually / prior to seed set for annual species	Department's 680 permit
Habitat enhancement	As needed / during the rainy season;	Accepted methodology

TABLE G:
Biological Monitoring Element: Arroyo Toad

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Monitoring program	2016, then every 1-2 years in spring and summer/ toad breeding season	USFWS protocol
Map and maintain list of invasive plants that threaten persistence of arroyo toad habitat	Every 3-5 years / when annual nonnative species begin to germinate; typically Mar-May	Conduct annual, visual inspections in areas previously treated or areas suspected to have nonnative species (e.g., areas with recent disturbance)
Nonnative plant control	Annually / prior to seed set for annual species	Department's 680 permit
Remove dense vegetation that impedes movement	As needed / after toads have moved to wintering areas	Visual inspection in areas that support toad dispersal
Eradicate nonnative animal species	As needed	Accepted protocols for the various species

TABLE H:
Biological Monitoring Element: Northern Harrier

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Map and maintain list of invasive plants that threaten persistence of northern harrier habitat	Every 3-5 years / when annual nonnative species begin to germinate; typically Mar-May	Conduct annual, visual inspections in areas previously treated or areas suspected to have nonnative species (e.g., areas with recent disturbance).
Nonnative plant control	Annually / prior to seed set for annual species	Department's 680 permit
Restrict public use	Breeding season	Seasonal closure, signage, symbolic fencing, and/or informational kiosks
Participate in MSCP raptor monitoring efforts	As determined by Strategic Plan or CDFW	Accepted raptor survey protocol

TABLE I:
Biological Monitoring Element: Burrowing Owl

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Map and maintain list of invasive plants of management concern that threaten persistence of grassland habitat.	Every 3-5 years / when annual nonnative species begin to germinate; typically Mar-May	Conduct annual, visual inspections in areas previously treated or areas suspected to have nonnative species (e.g., areas with recent disturbance).
Nonnative plant control	Annually / prior to seed set for annual species	Department's 680 permit
Restrict public use	Breeding season	Seasonal closure, signage, symbolic fencing, and/or informational kiosks
Participate in MSCP burrowing owl monitoring efforts	As determined by Strategic Plan or CDFW	California Burrowing Owl Consortium (1993) protocol

TABLE J:
Biological Monitoring Element: Pallid Bat

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Inspect roost / breeding sites.	Annually / during breeding season	Visual inspections in areas where bats may occur: Daley mine, caves, abandoned buildings
Restrict public use	Breeding season	Seasonal closure, signage, fencing, and/or info. kiosks
Participate in MSCP bat monitoring efforts	As determined by Strategic Plan or CDFW	Anabat; accepted protocols

TABLE K:
Biological Monitoring Element: Townsend's Big-eared Bat

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Inspect roost / breeding sites	Annually / during breeding season	Visual inspections in areas where bats may occur: Daley mine, caves, abandoned buildings
Daley Mine gate maintenance	As needed / outside of breeding season	N/A
Restrict public use	Breeding season	Seasonal closure, signage, symbolic fencing, and/or informational kiosks
Participate in MSCP bat monitoring efforts	As determined by Strategic Plan or CDFW / breeding season	Anabat; accepted protocols

TABLE L:
Biological Monitoring Element: Fully Protected Species

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Map and maintain list of invasive plants that threaten persistence habitats used by golden eagle, white-tailed kite and ringtail	Every 3-5 years / when annual nonnative species begin to germinate; typically Mar-May	Conduct annual, visual inspections in areas previously treated or areas suspected to have nonnative species (e.g., areas with recent disturbance).
Nonnative plant control	Annually / prior to seed set for annual species	Department's 680 permit
Restrict public use	Breeding season	Seasonal closure, signage, symbolic fencing, and/or informational kiosks
Participate in MSCP raptor monitoring efforts	As determined by Strategic Plan or CDFW / during breeding season	Accepted protocol for surveying raptors

TABLE M:
Biological Monitoring Element: Game Species

Task	*Timing / Seasonal Restrictions*	*Protocols / Methodologies*
Game species inventory/ census	2015, then as needed	Point counts, scat identification, and tracking stations
Creation of brush piles	Outside breeding season of arroyo toad and sensitive bird species	N/A
Enhancement and repair of existing water sources	As needed / fall / winter	N/A
Evaluate fencing needs	As needed / none	N/A

4.5 PUBLIC USE ELEMENTS: Goals, Tasks, and Impact Guidelines

It is the policy of the Fish and Game Commission that:

> *Lands under the administration of the Department be made available to the public for fishing, hunting or other forms of compatible wildlife dependent recreational use, and for scientific studies whenever such use or uses will not unduly interfere with the primary purpose for which such lands were acquired.*
>
> *For the purpose of this policy, undue interference shall not mean that hunter and angler access to properties that would otherwise be available for access for passive recreational activities (i.e. bird watching, interpretive tour, etc.) is deemed to be necessarily incompatible. Further, hunting and fishing shall not be banned simply because a Department administered land was acquired primarily for the protection of various threatened and endangered species unless it can be clearly demonstrated that such activities would be likely to have a detrimental effect on listed species on the property in question.*

In keeping with this policy, the overall public use goal for the Reserve is to protect biological resources, while providing opportunities for recreational activities and scientific studies. Compatible activities are those that are wildlife-dependent and that have low potential to negatively impact wildlife and other uses of the Reserve.

As such, these Public Use Elements addresses the appropriate and compatible wildlife-dependent public uses which include:

- Hunting
- Educational/Interpretive (includes Educational Events and Trails)
- Scientific Research

Other forms of public recreation, including camping, dog training and field trials, mountain biking, and off-highway vehicle use, are prohibited because of the potential negative impacts to wildlife, wildlife habitats, conflicts with other uses, and management demands [CCR, Title 14, § 630].

California Department of Fish and Wildlife recommends that the Reserve remain a closed zone (per approval by the Fish and Game Commission) with public access by permit or appropriate educational event, with the exception of the Luelf Pond OSP trail (see Trails below). CDFW may issue permit/access letter for appropriate outdoor education programs, hunting programs, and scientific study.

4.5.1 Hunting Element

The dominant vegetation within the Reserve is chaparral with coastal sage scrub, chaparral sage scrub, oak woodland, and non-native grassland. As such, quail are found in good numbers throughout the Reserve and, to a lesser extent, dove and turkey.

In the 1950s, guzzlers were installed on what was then private land, to enhance quail and smaller wildlife populations by increasing available water. Five of these guzzlers are known to still exist on the Reserve.

Turkeys tend to inhabit the Reserve during the winter and spring months when water is available, but are mostly absent in the summer and fall. During the summer and fall months, it is believed the turkeys move from the Reserve to adjacent, private lands that have available water from irrigation.

Deer are found throughout the Reserve, but formal surveys to estimate populations have not been conducted. Rabbits are also found throughout the Reserve but tend to be nocturnal and may not be readily available for hunting opportunities.

Because the Reserve is located near large populations, has limited staffing, operates with budgetary constraints, and a large portion was acquired for mitigation, it is believed that opening the Reserve to unregulated public access would have a detrimental effect to the wildlife and habitat/vegetation on the Reserve.

The CDFW offers hunt opportunities designed especially for new hunters, youth hunters, women hunters, mobility-impaired hunters and other individuals who have limited experience or opportunity to hunt on their own (see https://nrm.dfg.ca.gov/DFGSpecialHunts/Default.aspx). Depending on the time of year, CDFW's Special Hunts may include hunts for upland game birds and, upon occasion, deer.

Hunting at the Reserve will be conducted through scheduled hunts by which hunters are chosen to participate through a random public drawing of applications (a lottery). Hunters are required to have a valid license and the appropriate equipment, stamps, and tags. These hunts are conducted by CDFW staff and will have both an educational and safety component. There will be up to but no more than seven hunting days in any given year with no more than 20 hunters allowed per hunt. In addition to the above mentioned hunts, the CDFW may conduct managed hunts within the Reserve to control non-native and noxious species.

Providing a safe and controlled environment for new hunters has been found to increase their enjoyment of hunting and desire to continue hunting. It is also hoped that by educating new hunters in the field following their classroom instruction good hunter ethics and safety will be emphasized throughout their lifetime.

Care will be taken to ensure that lands are not over-hunted and that hunting does not interfere with other stewardship goals. This includes the protection of sensitive

habitat (e.g. that which is occupied by state and federal listed species), as well as the protection of sensitive plants and animals.

A typical hunt includes hunter check-in, safety/educational training/orientation, firearm inspection, field assignment/orientation, and check out.

Regulated public access and use is being proposed for the Reserve, adhering to the following:

Goal 1

1. Provide upland game bird hunting opportunities (e.g., dove, quail, turkey) to the public through the use of the Upland Game Bird Special Hunt Program or other programs.

Tasks

1. Develop and promote youth-oriented, family, mobility-impaired, and general public hunting opportunities.
2. Promote hunter training and ethics through information, hunter education classes, and enforcement.
3. Explore and where feasible, provide additional hunts through the Upland Game Bird Heritage Program or other programs.
4. Conduct upland game bird surveys throughout the Reserve to ensure populations are sustainable and adjust hunting area and number of available hunts according to survey findings.
5. Enhance water availability for game and other wildlife species, while minimizing impacts to listed/sensitive species.
6. If feasible, provide use of the barn to support some aspects of the hunting program, such as hunter education.
7. Maintain relationships among CDFW staff, hunters, volunteer organizations, and when appropriate, implement the use of Memorandum of Understanding (MOU)s/Memorandum of Agreement (MOA)s.

MULE DEER (ODOCOILEUS HEMIONUS)

Goals 2-3

2. Conduct deer surveys on the Reserve to support big game hunting opportunities.
3. Conduct surveys for small and non-game species to assess the potential for limited small and non-game hunting opportunities and /or management activities.

Tasks

1. Conduct surveys to estimate deer abundance on the Reserve.
2. Based on findings; determine if hunting opportunities for deer are feasible. Should surveys prove hunting is feasible, establish limited public hunting opportunities with an emphasis on youth, family, and mobility-impaired hunters.
3. Based on surveys, determine if non-game hunting opportunities and/or management activities are appropriate.
4. Based on surveys, determine if small game hunting opportunities and/or management activities are appropriate.
5. Evaluate hunting activities periodically to identify and report changes that are warranted to maintain consistency with Reserve goals.

Impact Guidelines

1. Adhere to the tasks and Impact Guidelines noted in the Biological Elements section
2. Organize hunts to target specific species and limit hunters by using a random drawing for each hunt. Hunters drawn for each hunt would be allowed to hunt the Reserve on a specified date and location determined by the Department. It is not anticipated that limited regulated hunting would unduly interfere with the primary purpose for which the Reserve was acquired nor would hunting have an adverse impact on non-hunted species or their habitats due to the seasonality of hunting.
3. Provide appropriate signage and barriers to keep hunters outside of sensitive habitats and within the boundaries of designated hunting boundaries.
4. Hold pre-hunt meetings that provide hunters with safety, regulation, boundary, and other pertinent information needed to ensure protection of the public and non-targeted resources.
5. By following the above mentioned impact guidelines and other measures within the LMP, meant to eliminate or minimize impacts to resources; hunting as described above will have no significant or detrimental impacts.

4.5.2 Education/Interpretation (includes Educational Events)

Environmental research and education are integral components of resource management and allowable use on the Reserve. Educational/interpretive programing and scientific research that may benefit the understanding of the mission of CDFW and the various wildlife species and habitats at the Reserve should be encouraged. Organized educational/interpretive events must be conducted in a manner that is compatible with other current uses, management, and acquisition purposes of the Reserve.

Goals

1. Provide educational and interpretive opportunities within the Reserve. All events must follow the applicable regulations in Title 14 CCR § 550(b)(7), 550(d), and 550.5(d).
2. Provide limited educational event opportunities within the Educational/ Interpretive Management-Zone.

Tasks

1. Inform the public of Reserve access, use designations, use restrictions and who to contact in an emergency (through outreach), signage, and CDFW Web site.
2. Coordinate CDFW staff and volunteers for organized educational events, nature walks, and wildlife viewing within the Reserve.
3. Develop interpretive information about the natural history of the Reserve.
4. Continually evaluate recreation activities to identify and report changes that are warranted to maintain consistency with Reserve goals.

Impact Guidelines

1. Adhere to the Impact Guidelines and Tasks noted in the Biological Elements section.
2. Provide appropriate signage and barriers to keep users outside of sensitive habitats.

4.5.3 Environmental Research Element

Environmental research is an integral part of resource management and public use allowed on the Reserve. Environmental research on Department land shall be conducted according to California Code of Regulations [CCR § 550(f)].

Goals

1. Encourage environmental research that will enhance CDFW's adaptive management program.
2. Encourage environmental research that will add to the overall knowledge of plant and animal species found on the Reserve.
3. Encourage environmental research that will benefit/be applicable to other reserve areas within the MSCP.

Tasks

1. Support on-going scientific research in other parts of the MSCP preserve area that is relevant to CDFW's. Facilitate and coordinate scientific research required to implement the LMP.
2. Focus environmental research on topics that will help CDFW achieve the goals and objectives outlined in the LMP and thereby enhance adaptive management of the Reserve.
3. Identify research projects that are consistent with LMP goals for environmental research on the Reserve and develop guidelines for submitting proposals for such.
4. Require submission of field data and final reports of all authorized research conducted on the Reserve.
5. Where appropriate, utilize cooperative agreements/contracts with the University of California, San Diego State University, and other institutions and agencies such as the San Diego Natural History Museum Biodiversity Research Center to conduct research when needed data is not available through other means.

Impact Guideline

1. Educational events and any research that may adversely impact species, non-targeted species, and/or habitats (e.g., redundant studies, lack of responsible researchers, or excessive access from ongoing studies), shall not be allowed.

4.5.4 Trails

Prior to CDFW's ownership of the Reserve, the land was used mainly for cattle grazing, raising goats, farming, bee-keeping, and even a Bed and Breakfast, but the Reserve was never open to the public. As such, no public trails exist on the Reserve. Authorized access of the Reserve was only as an invited guest of the previous land owner and, near the end of the last private ownership, three equestrian events (called i.e., Poker Ride) was allowed. These rides were permitted as a way to help promote community and political support for development of the Reserve.

There are several former ranch roads that run through the Reserve which are currently used by CDFW staff for maintenance and research. Many of the roads terminate at the Reserve boundaries onto Barona Indian Reservation lands or private lands whose owners have expressed no interest in trail connections.

TRAIL THROUGH LUELF POND OSP

The existing conditions that follow, constrain the allowance of trails within some parts of the Reserve. The Reserve is land-locked on the west, east, and south by Native American Reservation land and/or private property. Because of this situation, trails would have no 'through-route' capability, only an 'out-and-back' trail which would cause an over-use of these specific areas. There is limited trail access into the Reserve via Chuckwagon Road, so allowing public access here would take trail users through the mitigation section and in close proximity to San Vicente Creek (which is known to have federally listed species). Public trails within the main portion of the Reserve would likely interfere with current and future research within the Reserve. In addition, there is limited CDFW staffing available to monitor and patrol the Reserve.

CDFW is exploring the potential for a public trail from San Diego County's Holly Oaks and the Luelf Pond trail through the northwestern corner of the Reserve at Southern Oak Road. Currently, a road exists between the connecting points that would provide public access to a scenic part of the Reserve while minimizing disturbance to other parts of the Reserve.

Numerous efforts were made by CDFW and CSP staff to find a through trail from the Holly Oaks and Luelf Pond trail over to the Barnett Ranch Open Space Preserve, but no sustainable trail alignment could be found due to topography and the need for extensive vegetation removal to create a new through trail. In addition, a trail in this area would have to traverse the Daney Canyon Water Transfer (not owned by CDFW). However, CDFW staff will continue to look for a sustainable through trail from Holly Oaks and Luelf Pond trail to the Barnett Ranch Open Space Preserve.

Goal

1. Work with County representatives on a connector trail from Holly Oaks Park and Luelf Pond OSP trail through to Southern Oak Road.

Tasks

1. Continue to research a through-trail alignment from Holly Oaks Park and Luelf Pond OSP trail to Barnett Ranch OSP through GIS analysis and field reconnaissance.
2. Find funding for the design, construction, and continued maintenance and patrol of a future trail from Holly Oaks Park and Luelf Pond OSP trail through to Southern Oak Road. Allow trail connector to open once all fencing and signage are adequately installed along the potential trail alignment.

Impact Guideline

1. This LMP will be a reference for future environmental documents that provide more detailed information and analysis for site-specific projects/developments related to trails.
2. To help ensure potential impacts to resources are less than significant the proposed trail alignment that extends from Holly Oaks Park and Luelf Pond OSP to Southern Oak Road will be established within the existing footprint of the dirt road using the shortest and most direct route possible. Based on the above mentioned Impact Guidelines, Goals and Task, and other measures within the LMP meant to eliminate or minimize impacts, the trail as described above will have less than significant impacts to resources.

4.6 FACILITY MAINTENANCE ELEMENTS: Goals, Tasks, and Impact Guidelines

Current facility maintenance includes the repair and preservation of structures present on the Reserve, including buildings, bridges, culverts, and fences. It also includes the maintenance of roads, future trails, and fuel modification zones. Certain maintenance activities must be done on a regular basis, such as inspecting fences and gates, clearing culverts of debris, and maintaining fuel modification zones. Other activities typically occur over a longer time period or only once every year, such as maintaining access roads, and structure maintenance. There are few buildings on the Reserve, and their maintenance is a high priority for CDFW since funding for replacement is limited. Most of the structures that require maintenance are concentrated within one specific area.

As for new structures, the Management Plan and Matrix (see Table A) will serve as guiding tools for current and future Reserve managers; as planned, any such structures will avoid or minimize environmental impacts. Proposed, new facilities shall be assessed for the appropriate level of environmental documentation on a project-by-project basis.

4.6.1 Existing Facilities

A total of 11 structures exist within the Cañada de San Vicente Reserve. Nine of these structures are located within the SDCWA Rancho Cañada HMA section, and were used as part of the former Rancho Cañada Bed and Breakfast. These structures and the grounds surrounding them will be maintained for CDFW needs and staff housing, but are not considered part of the SDCWA HMA/acreage. A grouping of seven of the nine structures is referred to as the "compound."

Two additional structures that were not part of the former bed and breakfast are also being used as CDFW housing. The first of the two is referred to as the Gate House (located at the Pool Ranch site). The second is a house located off of Southern Oak Road and was acquired through a third State acquisition.

BARN AT MONTE VISTA RANCH

The grounds around the compound and all outlying buildings will be maintained as CDFW facility's and resident housing. Although sensitive biological resources are maintained within this area, other factors such as fire abatement and landscaping will also be maintained. Irrigation of the facilities grounds has an added benefit to wildlife in the area by providing much needed water during the summer months. Water conservation and best management practices are continuously in effect.

The federally listed arroyo toad forages within the area of the compound and barn facility. The species also breeds and lives most of its developmental life stages (eggs and tadpoles) within the San Vicente Creek section that flows around the facilities grounds. Preventative measures will be implemented when preforming any work in and around the facilities that could affect the arroyo toad.

Goal 1

1. Maintain existing structures and associated grounds, including irrigation systems.

Tasks

1. Provide inspection and repair of all buildings, residences, and structures, including items such as plumbing, electrical, painting, fixtures, and any other features necessary to protect the health and safety of Reserve staff and visitors.

2. Maintain facility grounds, (including landscape) for aesthetic and wildlife purposes. Assess unneeded nonnative landscaping for fire clearance and invasive plant removal.
3. Maintain CDFW buildings used as staff housing and equipment storage.

Goal 2

1. Maintain fire breaks and remove tree hazards from around structures.

Tasks

1. Annually (or as needed) clear downed limbs, branches, and leaves around structures to reduce fire hazard. Initiate removal of ladder fuels within the facility's grounds and remove low growing, non-ornamental weeds and shrubs adjacent to buildings. Assess, and if necessary, remove fallen (and fire hazard) trees and limbs from facility grounds.
2. Use downed trees and limbs from fire and hazard removal to build brush piles for game and other wildlife species.

Impact Guidelines

1. Ensure regular maintenance actions do not affect the arroyo toad including but not limited to implementation of measures, such as: no maintenance activities at night, reduction and removal of all unneeded lighting around facility grounds, and preventing work in San Vicente Creek when it is likely toads may be present (unless conducting surveys). Where appropriate, survey job sites prior to the start of work performed to ensure no toads are present. If toads are present, work will be conducted at a later date or at another location if possible.
2. Minimize potential impacts to protected sensitive natural resources from the use of the facility operations by CDFW staff and non-staff through education.

4.6.2 Vector Control

CDFW recognizes the importance of rodents in the natural environment. However, these small mammals have been a constant issue at the Reserve. Mice and squirrels have caused extensive damage to electrical wiring on vehicles, chewed small openings in some of the structures in search of food and shelter, as well as damaged parts of the irrigation system. Many of the openings made by mice have been fixed, but it is not possible to completely secure all of the structures from rodents due to the type/age of building construction. Additionally, rodents, especially deer mice, are known carriers of diseases that can transfer to humans. Rodents accessing the buildings are a health and safety issue for residents, staff, and the public. CDFW staff have been removing rodents by hand, trapping, and other methods, as necessary from around the facilities.

CDFW prefers to use non-chemical means of rodent control. The use of any rodenticide would be used in the most extreme circumstances after all other available options have

been utilized. If staff must use pesticides, they will do so very carefully and follow all label directions and immediately dispose of any rodent carcasses that result. The use of rodenticide will be ceased at the earliest opportunity and switch to preferred control methods. No outdoor application of any pesticide will occur. No strychnine or second-generation products (brodifacoum, bromadiolone, difenacoum and difethialone) use will occur within the Reserve.

Goal

1. To prevent damage to buildings/equipment, and to protect health and safety, CDFW will continue removal of rodents from around facilities.

Tasks

1. Continued removal of mice and squirrels from facilities using safe and proven methods, according to pesticide labels, and according to BMPs.
2. Ongoing monitoring of treated areas.

4.6.3 Wells, Springs, and Guzzlers

Three wells support the facility buildings, housing, and grounds. In addition to these three wells, six other wells are known to exist in on the Reserve. Only one of the six wells is currently functioning and is located in the Central Valley area of the Reserve. This well was formerly used for agricultural purposes but is now used to supply water to a small pond for wildlife. The other five, nonfunctioning wells are located in various parts of the Reserve; they will be assessed for possible use as water supply for wildlife.

There are two springs on the Reserve, which were improved with spring boxes prior to CDFW ownership; one is located in Daney Canyon, the other is near an inholding on the eastern side of the Reserve. Spring boxes consist of a cement and/or wood box that helps raise the water level within the box which can then be gravity fed or pumped down a pipe to a cistern or holding tank for use by wildlife.

Additionally, there are five known guzzlers/drinkers on the Reserve, built in the 1950s; all of which are working but in need of repairs. These guzzlers are comprised of an above-ground concrete apron and underground storage tank. The apron covers a small area of approximately 20 square feet that collects and guides rainwater into a holding tank with about a 500-700 gallon capacity. Some guzzlers incorporate naturally existing rock outcrops for water collection/diversion aprons. In addition to rain water collection, the storage tanks can be filled by hose line if needed.

Goals

1. Maintain wells and water filtration systems for facility and wildlife needs.
2. Where feasible increase water availability for wildlife management.

Tasks

1. Annually inspect wells and filtration systems, for issues that may affect their operation and to ensure public and resident safety. On an 'as-needed' basis, maintain chlorine and salt levels for water filtration system serving the compound.
2. Annually inspect and maintain all working wildlife wells, spring boxes, and guzzlers. Where feasible, repair or replace existing, nonfunctioning water supply structures.
3. Assess existing and potential water sources within Reserve for repair, replacement, or development.
    - Assess water needs to support wildlife management within the Reserve and install additional wells or guzzlers, if needed. Review and determine potential impacts to existing resources prior to construction of any new water supply structures.
    - Maintain a small pond at the edge of the Central Valley for wildlife needs and if feasible, improve water storage at this the pond and adjacent seasonal pond. Improvement of water storage would consist of prepping and lining the bottom of the pond to prevent seepage.
4. Install guzzlers that have been designed to prevent incidental mortality of wildlife.

Impact Guidelines

1. Repairs or replacement of wells, spring boxes, and guzzlers will stay within the footprint of the existing structure and consist of repairing cracks, replacement of tank lid if needed, adding a new water tight sealant of non-toxic material to the apron of guzzlers, replacement of pipe, replacement of electrical and other repairs or replacement of structure as needed. Crack repairs to the apron of guzzlers normally consist of grinding the cracks out and filling them with mortar. All guzzler tanks hold water and have likely done so since their installation in the early 1950s so repairs to the guzzler will not be an introduction of a new water source, but will aid in their water collection/storage efficiency. All repairs or replacement of wells, spring boxes and guzzlers will be conducted in the daytime and outside of the bird nesting season unless a biologist conducts preconstruction surveys within one week of scheduled repairs and determines there will be no impacts to nesting birds. The temporary disturbance to wildlife while repairs or replacement of wells, spring boxes and guzzlers are being conducted will be less than significant.
2. Addition of new wells, spring boxes, and guzzlers will include appropriate preconstruction biological surveys conducted to ensure there will be no impacts to listed or sensitive species.

4.6.4 Roads, Bridges and Culverts

All internal roads, were former ranch roads. The majority of these internal roads will be maintained and used by CDFW staff in support of the Reserve. A few internal road extensions on the southern end of the Reserve may not be necessary to support CDFW needs and will be assessed for closure or decommissioning.

An SDG&E easement road, also on the southern end of the Reserve will be assessed for improvements needed to support CDFW management efforts.

Several bridges and culvert crossings exist within the Reserve. These bridges and culverts are needed to support the internal road systems within the Reserve. Additionally, vegetation along roadways will be controlled to improve line of sight for drivers, reduce nonnative seed transport throughout the Reserve, and to improve the use of roadways as firebreaks.

BRIDGE AT MONTE VISTA RANCH

Goals

1. Maintain existing roads and close or decommission unneeded roads, if feasible.
2. Improve line of sight for drivers to prevent accidents between vehicles and wildlife, reduce nonnative vegetation along roadways, and improve roadways as firebreaks.
3. Maintain existing bridges and culverts.

Tasks

1. Maintain existing internal roads as necessary by use of herbicide, mowing, graveling, grading, ditches, or by other means. Road maintenance activities will be scheduled to minimize impacts upon listed species.
2. Assess road extensions on southern side of the Reserve for CDFW needs and close, decommission, or improve upon where necessary.
3. Assess improvements to SDG&E easement road on southern end of Reserve and, if feasible, make improvements.
4. Annually inspect all bridges and culverts within the Reserve for integrity and repair/replace as needed.

5. Annually clear debris from culverts in fall to prepare for winter storms and re-inspect after large storm events.
6. Inspect bridges for buildup of debris during or after large storm events to ensure stability and clear debris, when necessary. Cleared debris from bridges will be moved to a nearby upland area for deposit or brush pile development.
7. Remove ladder fuels within 25' of roadways from front gate, continuing to the facility grounds and where applicable elsewhere within the Reserve. Haul cut material a minimum of 50' away from roadside to use in brush pile development for wildlife.
8. Schedule tree trimming/pruning outside the bird breeding season, to the maximum extent possible.
9. To the extent feasible, reduce nonnative vegetation along roadways through the use of herbicide, mowing, or other means.

Impact Guidelines

1. Repairs to roads, bridges and culverts will be conducted within the existing footprint of the roads/structures. All work will be conducted during normal daytime business hours. Prior to road work (surface grading) within the Arroyo Toad Management Zone, roadways will be walked by a biologist to ensure no arroyo toads are present. Herbicide treatments will be conducted in accordance with all applicable laws and Pesticide Use Recommendation Form 679 guidance measures. Removal of vegetation overgrowth of the roads, bridges, and culverts will be conducted outside of the bird nesting season unless a qualified biologist conducts preconstruction surveys to be sure no nesting birds will be impacted. All road gravel that is brought in from off-site sources will be washed off-site when possible to help prevent the spread of non-native invasive plants. Areas where off-site gravels are stored or placed on the roadways will be annually treated with herbicide to prevent the spread of non-native invasive plants. Following the above mentioned Impact Guidelines and other measures within the LMP meant to eliminate or minimize impacts, the temporary disturbance to wildlife while repairs to roads, bridges and culverts are being conducted will be less than significant. If a significant impact would become apparent, such as the likely take of a listed species all work would be stopped and not allowed to continue until it is determined that conditions are safe to do so.
2. Any moving or additions to roads that will increase the existing footprint will need additional CEQA review.

4.6.5 Signage, Fencing, and Gates

Signage, fencing, and gates are used to delineate Reserve boundaries, to restrict public access, and to assist management activities, such as potential cattle grazing. The Reserve still has internal fencing (left from prior ownership) that may hamper wildlife movement and present hazards to wildlife and public safety. Additionally, the Reserve

has several internal gates (left from prior ownership) that are being used to restrict unauthorized access and can, in the future, help guide and restrict limited authorized use of the Reserve.

Goal

1. Protect and improve the wildlife and habitat values within the Reserve.

Tasks

1. Survey existing fencing and gates and improve where necessary.
2. Identify and remove obsolete internal fencing materials.
3. Maintain existing boundary signage and fencing, and install new signs and fencing where necessary.
4. Adjust boundary signage and fencing as new parcels are added.
5. Inform the public of laws and regulations applicable to the Reserve.
6. Install and maintain kiosk(s) or bulletin board(s) to provide maps, CCR Title 14 regulations, public safety and hunting information, as well as natural and cultural resource interpretive material.
7. Educate the public about the value of the natural and cultural resources within the Reserve.
8. Install support signage necessary for Upland Game Bird Special Hunt Program, including hunt boundaries and other support signage.
9. Install temporary signage during the arroyo toad breeding season to alert the public of the sensitivity of the drainages/waterways.

Impact Guidelines

1. No removal or installation of fencing/signage will occur during the bird nesting season (March 15th-September 15th) unless a biologist conducts a preconstruction survey within one week of scheduled work and determines there will be no impacts to nesting birds. Removal of fencing will normally consist of taking down existing barbed wire, rolling it up on-site and carrying it out to the closest road for removal. Fence posts, that can easily be pulled from the ground by hand or with the aid of a post puller may also be removed. Because of the high abundance of naturally occurring perches throughout the Reserve i.e. trees and other taller vegetation, the removal of fence posts would not have a significant impact on bird species that may use them.

4.6.6 Fire and Fire Management

Fire is a natural process in the southern California, Mediterranean ecosystems with fire tolerant or fire dependent adaptations characteristic of many species in the ecosystem

(CNPS 2005). Vegetation plays an important role in the fire regime of the Reserve and plant species and vegetation have evolved to survive repeated fires. Some of these communities, such as chaparral and coastal scrub rely on occasional fires as part of their regeneration process even though the short-term impacts of fire in these communities can appear to be severe.

Fire regime refers to the patterns of fire that occur over long periods of time, and the immediate effects of fire in the ecosystem in which it occurs. Fire regime is a function of the frequency of fire occurrence, fire intensity and the amount of fuel consumed. The frequency is determined largely by ecosystem characteristics, weather, and ignition sources while the intensity is influenced by the quantity of fuel available and the fuel's combustion rates. Interactions between frequency and intensity are influenced by wind, topography, and fire history.

Wildfires at the Reserve can be fanned by 'Santa Anas,' the hot, dry winds that move through the region every fall and winter. These winds begin when masses of cold air form over the great basin (high desert plateaus in Utah and Nevada). The winds that spin off of these high pressure systems grow warmer, dryer and stronger as they spill south and west, down through the steep mountain canyons towards the ocean. Due to local topography, fires can spread rapidly and extensively when Santa Ana winds are present.

Wildfire and Fire Management

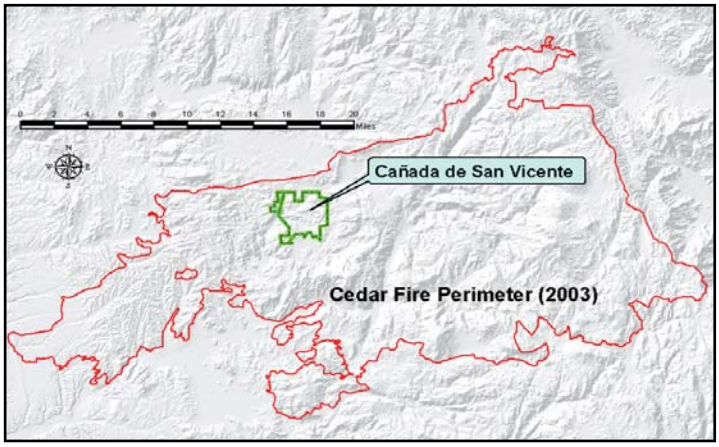
Wildfire management is essential for human safety and minimization of catastrophic fire damage to infrastructure, vegetation, wildlife, and cultural resources of the Reserve. Historic fire suppression, methods of wildfire control, and the use of prescribed fire as a management tool are important Reserve management issues.

There are opposing views of the usefulness of fuel modification to protect either homes or fire sensitive wildlife and habitat. One view holds that the majority of biological impacts occur during extreme weather events (Keeley and Zedler 2009, Moritz et. al 2004, Keeley et. al 1999) and fuel treatments do little to prevent the spread of fire under extreme weather conditions and are only useful when fire crews use them for access. On the other side, fuel treatment zones have protected numerous communities and saved lives, as well as protected habitat for wildlife. Two recent examples include Laguna skipper habitat protected due to fuels management actions between the South and East Grade on Palomar Mountain and a recent fire in Cuyamaca Rancho State Park, where a treatment served its purpose during a recent fire (Rochester and Fisher 2014).

Until Europeans settled the area, fire ignited by lightning and Native Americans was a major force that shaped and maintained the health of plant communities. Before suppression, fire cycles promoted regeneration by opening the shrub canopy and reducing plant competition, burning off duff and litter to expose soil for seed germination, triggering seed release, reducing insect pests and disease that kill woody plants, and aiding in nutrient recycling. In general, it was thought fire suppression had caused the development of dense vegetation, heavy loads of fuel, and in some

situations the unchecked invasion of exotic weeds. Recent research has indicated that age-class mosaics have only a limited ability to prevent the spread of wind-driven fires and large fires in southern California have naturally/historically occurred. Coordination with the California Department Of Forestry and Fire Protection (CAL FIRE) is an important element in the Reserve's fire management strategy. CDFW will continue cooperation with this agency during fire events and share expertise, incorporating the fire data of CDFW and other agencies into CDFW's GIS database. CDFW will also coordinate with CAL FIRE, USFS, and other local fire agencies to create the Reserve's Wildfire Management Plan following adoption of this LMP. Additionally, CDFW will work cooperatively with other agencies and strive to assist with fire management goals that provide a level of protection for both Reserve lands and neighboring development through the placement of adequate buffers located outside of the Reserve boundaries, particularly for new development projects. Prescribed burning is the planned application of fire implemented under safe weather conditions to restore a healthy ecosystem and reduce the risk of catastrophic wildfires. At present, prescribed fires are used as a management tool to eliminate exotic weeds from native habitats, promote the growth of native plant species, and enhance wildlife habitat. By reintroducing fire cycles to the ecosystem, healthy landscape-level ecological dynamics can be restored.

When there is a conflict between protecting human life and other values, human life should receive top priority. Protection of the Reserve, habitat of sensitive, threatened, and endangered species, and watershed values should receive careful consideration when choosing suppression tactics. CDFW and CAL FIRE will work together to implement the most appropriate fire suppression methods.



2003 CEDAR FIRE PERIMETER

Fire Management Within The Reserve

This element addresses all aspects of fire management within the Reserve, including vegetation management regimes, fire suppression activities, post-fire cleanup and remediation activities, and fire recovery regimes. The primary purpose of the element is to:

- Identify the public safety, wildlife, and protected resource concerns that must be factored into fire management activities within the Reserve;

- Provide guidelines for planning vegetation management, fire suppression, post-fire clean-up and remediation, and fire recovery regimes for parts within the Reserve;
- Coordinate vegetation management for fuel reduction purposes with habitat enhancement, stand management, and exotic weed control plans; and
- Continue the coordinated planning and implementation of fire management activities with CAL FIRE under existing policies, plans, and agreements.

For purposes of this LMP, the fire management program for the Reserve is divided into three components:

- Vegetation Management Regime
- Fire Suppression and Post-Fire Cleanup and Remediation
- Fire Recovery Regime

Vegetation Management Regime

This component addresses vegetation clearing for fuel reduction purposes and as part of the management of fire-dependent habitats within the Reserve. Locations in the Reserve where vegetation management may be required for fuel reduction and safety purposes include but are not limited to: all structures within the Reserve, the Reserve entrance, and vital infrastructure such as wells. Habitats targeted for vegetation management (for fuel reduction and/or habitat management purposes) include oak woodland and annual grasslands. Management regimes could include a combination of techniques to remove or thin vegetation, including hand-cutting, mechanical mowing, prescribed burns and herbicide treatments. Because of the mosaic of habitat types in the Reserve, occurrence of rare types and protected resources, and recent burn history, the Reserve does not lend itself to easily definable treatment areas or zones.

Goals:

1. Promote use of prescribed fire while protecting people and infrastructure development from catastrophic wildfire.
2. Manage for fire cycles and fire management actions that promote healthy ecological systems supportive of native biota
3. Establish pre-fire regimes that will reduce the potential for devastating wildfire impacts to facilities and resources within and adjacent to the Reserve;
4. Enhance certain habitats in the Reserve by using vegetation management to replicate natural succession processes.

Tasks:

1. Communicate prescribed fire methodology and intention to conduct burns to the public. In addition, interpret for the Reserve's visitors, the role of fire in maintaining a healthy ecosystem via prescribed burns.
2. Form cooperative partnerships with state and federal agencies, and research institutions/organizations to develop scientifically sound objectives and methodology for prescribed burning.
3. Pursue a greater understanding of the relationship between wildfire, prescribed fire, fire suppression, fire control, and the ecological systems of the region. Recognize the role of fire in maintaining ecological balance, processes, and biodiversity in all fire management policies.
4. Work in cooperation with CAL FIRE to develop and implement a fuel load reduction regime and schedule for the area around the compound and other structures, Reserve entrance and parking areas. Management techniques will be determined on a site-specific basis and may include a combination of cutting, mowing, prescribed burns, and herbicide treatments. General guidelines for the techniques to be used are provided in *Table N*.
5. Pursue fire management techniques that promote sound ecological principles or "buffer zones" between the Reserve and the neighboring communities. In cases where the adjacent land is currently developed or is planned for improvement, the footprint of these buffer zones should be implemented off of the Reserve.
6. Identify areas within the Reserve to achieve maximum benefit from hazardous fuels reduction projects. Ideal locations would be along roadways (particularly where the vegetation is primarily flashy fuels, such as annual grasses or weeds), various locations throughout the Reserve with high density of exotic species. Acceptable resources to identify potential areas include vegetation maps, fire history maps, cultural resource maps/records, and other tools.
7. Work in cooperation with CAL FIRE to develop and implement vegetation management regimes for oak woodland and grassland habitats in the Reserve. Treatment areas will be identified based on an analysis of habitat conditions, fuel loads, and occurrence of protected resources. Management techniques will be determined on a site-specific basis and will include a combination of cutting, mowing, prescribed burns, and herbicide treatments. General guidelines for the techniques to be used are provided in *Table N.*
8. Designate staging areas for fuel reduction activities in each treatment area. Staging areas are locations where hand crews and equipment may be concentrated and/or where vehicles may be parked. Staging areas will be placed at locations where minimal damage to natural habitats would occur. This could include existing roads or previously disturbed sites. Caution should be taken in locating staging areas in weedy areas. Dispersal of weed seeds into the treatment areas by foot or vehicular traffic should be avoided.

9. Identify chipping areas for each treatment area where chipping is needed. Generally, these locations need to be accessible by vehicle in order to transport and operate the chipper. Where chipping occurs, the chips shall not be placed in areas supporting native herbaceous habitats. Chips will be spread thinly where feasible and placed in the most disturbed locations. If no feasible location can be found to receive chips, they will be disposed off-site.
10. Limit foot and vehicle traffic through weedy areas being treated, in order to prevent weed seeds from being dispersed.

TABLE N:
General Technique Guidelines

Treatment Technique	Description and Guidelines
Clearing of dead or decadent shrubs	Hand-cutting based on site-specific prescriptions. Focus on species such as chamise and ceanothus.
Fuel reduction in locations dominated by annual herbaceous vegetation	Mechanical mowing using equipment dictated by site-specific conditions. No disking allowed (disturbs soil and increases weed production). Timing should take into consideration the nesting season of grassland birds and the growth patterns of that year so that mowing need only occur once. Equipment maintenance is essential to prevent sparks that could ignite fires and the spread of seeds of invasive weeds. Herbicide treatments and other methods may also be implemented.
Prescribed burns	Requires site-specific plan and must comply with air quality, ESA/CESA, and CEQA requirements. Within the Reserve, also must take into account rare habitats special status species, and mule deer fawning season. Entails igniting fires in specified location when weather, winds, and other conditions allow control of the burn. Will be planned in cooperation with and conducted by CAL FIRE.
Removal of flammable invasives	Requires site-specific prescriptions. Treatments could include hand-cutting, painting of cut individuals with herbicide, removal of seed heads to prevent dispersal, or other methods to prevent regrowth.
Roadside reduction of herbaceous biomass	Mechanical mowing along roadsides; treatment width is 10 ft. Intended to cut annual herbaceous biomass to reduce potential for roadside ignitions. Herbicide treatments may also be used in conjunction with or instead of mowing.
Thinning or clearing of live shrubs	Hand-cutting and removal based on site-specific prescriptions to reduce fuel ladder effects and facilitate mowing where annual biomass is present near roadsides; treatment width is 10 ft. Should not remove more than one-third of the individual biomass of a given shrub, unless this shrub is largely dead and decadent. As many of the rarer shrubs and subshrubs as feasible should be retained. The range of plant species in the treatment area should be maintained.

Impact Guideline:

1. All activities are subject to the impact avoidance and other requirements that apply to fire management activities in general and activities in areas with protected resources (including cultural as well as natural resources).

Fire Suppression and Post-fire Cleanup and Remediation

This component addresses responses to wildfires in the Reserve and clean-up and remediation activities immediately after fires.

Goals:

1. Ensure public safety and protect structures during wildfires.
2. Establish fire suppression, cleanup, and remediation strategies to minimize impacts to the Reserves facilities and protected resources.

Tasks:

1. Follow prepared guidelines for the protection of buildings and structures near wildland vegetation (*Guidelines for the Protection of Structures from Wildland Fire* 2009). These guidelines are intended to minimize the probability that structures near flammable vegetation will ignite and burn during a wildland fire.
2. In the event of a wildfire, implement appropriate suppression methods suitable to the different vegetative communities and terrain. Firefighting crews, equipment, and chemicals can inadvertently damage natural and cultural resources during and following firefighting activities. Procedures should be adjusted to the extent feasible to minimize damage to sensitive natural and cultural resources while implementing wildfire management; Techniques can include minimizing the construction of fire line using mechanical equipment, using helicopter long lines instead of constructing heliports, use of cold trail techniques, limiting use of fire retardant, and use of natural barriers and existing roads instead of line construction.
3. Modify fire suppression tactics such as allowing the Reserve to burn in areas with no facilities, and defending from roadways rather than aggressive, heavy equipment suppression techniques in previously undisturbed areas.
4. Ensure that CDFW Environmental Scientists provide input to the Regional Manager and work with interagency teams and Incident Command during wildfire events concerning sensitive resources to assure use of appropriate methodologies during firefighting events.
5. Establish the following guidelines for fire suppression activities within the Reserve including but not limited to:
    - Limit staging areas to designated locations on roads and already-disturbed areas.

- Prohibit bulldozer use within 100' of stream centers and in all riparian areas.
- Avoid dropping retardant within 200' of any riparian areas.
- Avoid bulldozer use within 100' of cultural resource sites and any known populations of listed plants, amphibians, reptiles, or mammals.
- Assign a qualified archaeologist to oversee protection of important archaeological, historical, and other types of cultural resources (where such protection can be accomplished in a safe manner without delaying or hindering emergency response operations). The archaeologist will follow the guidelines identified in CAL FIRE's *Procedures for an Archaeologist Assigned to a CDF Wildfire or Other Emergency Incident* (April 2005).

6. Establish the following guidelines for post-fire cleanup and remediation activities within the Reserve:
    - Restore infrastructure and landscape contours to pre-fire conditions.
    - Removal of all debris pushed into watercourses;
    - Remediate any damage from mechanical firefighting equipment, including restoring dozer lines, decompacting roads, spreading cut vegetation, and installing water diversions where needed.
    - Complete emergency watershed work as soon as possible and before the first heavy rainfall, including installation of straw waddles and other erosion protection devices.
    - Revegetate only in critical areas that are at risk for conversion to nonnative habitats, or to reduce invasion of non-native, exotic plant species.
    - Repair culverts and stream crossings and restore drainage and road surfaces in areas damaged by firefighting activities and post-fire storm runoff.
    - Ensure that fire suppression equipment, materials, and trash are removed from the Reserve.
    - Monitor invasion of weeds in areas disturbed by fire activities and the effectiveness of erosion control methods, and take corrective actions as needed. Repair damage to gates, fences, and other infrastructure caused by either fire or fire suppression activities.

All activities are subject to the impact avoidance and other requirements that apply to fire management activities in general and activities in areas with protected resources (including cultural as well as natural resources).

Fire Recovery Regime

This component focuses on the recovery of burn areas after post-fire cleanup and remediation is completed.

Goals:

1. Establish post-fire regimes that will enhance the natural recovery of vegetation communities and species populations affected by the fire.
2. Manage the regrowth areas in ways to restore habitat quality to levels that equal or exceed pre-fire conditions.

Tasks:

1. Initiate post-fire restoration of the Reserves natural and cultural resources in order to minimize further damage to watersheds and ecosystems. For example, returning landform (berms, trails, roads, etc.) to original shape, removal of debris pushed into watercourses, erosion control, seeding and planting with native species, and post-fire field reviews to inventory damage and inspect for any resources uncovered by fire.
2. Develop an assessment protocol for burn areas to identify and prioritize treatment areas for recovery regimes, including guidelines for retaining damaged or dead trees for their wildlife values.
3. In areas with burned oaks, apply the following general guidelines to mark trees for removal. The guidelines reflect the fact that oaks have the ability to regenerate after fires. The success of the regeneration depends on the intensity of the burn that took place around the oak stems. The species of oak also plays an important role in the ability of the species to respond to a wildfire. Oaks will be marked for removal if:
    - They are dead, determined by not having sprouting leaves within one year of a fire.
    - They have the potential to fall on roadways (i.e., leaning toward the roadway and having the length to reach the road if they fell, large limbs overhanging the road, obvious defects such as large scars, or swelling in the main tree stem).
4. When trees near roads in a burn area are felled:
    - Dispose of the slash (limbs and tops) either by cutting and building of brush piles or by chipping and redistributing it on the site or through another approved method.
    - Position larger felled trees so they lay horizontal to the slope to assist with erosion control and provide future wildlife habitat.

- Remove or secure loose logs on the uphill of a road to prevent them from rolling onto the roadway. Securing of logs can be done by placing large rocks or driving large wooden stakes into the ground on the downhill side of the log.

5. Working in cooperation with restoration experts and managers of adjacent public lands, develop habitat-specific recovery strategies. Each strategy will include criteria for determining appropriate methods for site restoration and monitoring, guidelines for techniques and materials to be used, monitoring protocols, and success criteria. Opportunities for pilot projects within the existing burn areas should be identified to allow methods and approaches to be tested.
6. Identify and implement interim recovery and monitoring measures in burn areas following post-fire cleanup and remediation, including but not limited to erosion and sediment control, wildlife monitoring, for occurrence of exotic invasive species monitoring in regrowth areas, and monitoring of species composition and structure in regrowth areas.

4.7 CULTURAL RESOURCES ELEMENT: Goals, Tasks, and Environmental Impact Guidelines

4.7.1 Archaeological sites (Prehistoric and Historic)

The CDFW's Cañada de San Vicente Reserve includes 53 known archaeological sites. Two sites (CA-SDI-5492 and CA-SDI-16472) have been evaluated for significance under CEQA and should be considered potentially eligible for inclusion on the California Register of Historic Resources (CRHR). Numerous other sites (e.g., CA-SDI-15034, W-1102, etc.) appear to represent significant archaeological resources and should be evaluated for eligibility prior to any activities that may have the potential to affect the sites or the cultural resources therein.

Various archaeological sites are considered sacred and/or contain culturally sensitive features such as burials, cremations, rock art, or ceremonial places. Although none of the sites within this Reserve are currently listed on the California Native American Heritage Commission's sacred sites list, it is possible that some of the sites within the Reserve would qualify for such listing.

Just over 1,000 acres (21 percent) of the 5,014-acre CDFW Cañada de San Vicente Reserve has been examined for cultural resources over the years, although most of this work was conducted more than 10 years ago. In addition, none of these investigations had 100 percent coverage or 100 percent ground visibility, and so the potential for additional cultural sites to be present within the Reserve is considered to be high. Changing conditions including effects from erosion, fire, animal disturbance, visitor disturbance, unauthorized activities, vandalism, etc., can affect cultural resource

sites and either expose additional artifacts/features, or cause damage or destruction to them.

Over 30 percent of the known archaeological sites within the Reserve are from the historic period and represent the Mexican and American presence in this area. Historic archaeological sites include mining and ranching sites, routes of travel, and others.

Goals

1. Identify, document, and evaluate archaeological and cultural resources within the Reserve as time and funding allow.
2. Protect, stabilize, and preserve the archaeological resources within the Reserve.

BONE AWL FRAGMENT

Tasks

1. Implement the recommendations as delineated on the *Treatment and Inspection Matrix (Table O)*.
2. Identify procedures for careful planning of all undertakings, including routine maintenance and new facility development, to avoid or minimize significant impacts to cultural resources within the Reserve. Planning should include archaeological and historical research and consultation with Kumeyaay and/or other cultural groups as appropriate.
3. Develop procedures for permitting of scientific research of archaeological sites. This permitting process can be based on the process in place at CSP (e.g., form DPR412A), another state agency, or it can be developed with assistance from a state agency or institution that has archaeologists on staff [e.g., CSP, California Office of Historic Preservation (OHP), California Dept. of Transportation (CalTrans), CAL FIRE, etc.].
4. Develop measures to protect cultural resources during wildfire incidents, flash flood events, earthquakes, or other natural disasters. Outline procedures for assessing damages after a natural disaster event. Archaeological sites most vulnerable to damage, such as those located along drainages and gullies, those with dense surface artifact distributions, those with combustible materials, etc., will be identified for implementation of such protection measures. Even sites containing bedrock grinding features must be recognized as vulnerable to fire, based on damages and destruction identified as a result of the 2003 Cedar Fire.
5. Provide cultural resource training to CDFW staff and make locations of previously recorded cultural sites known to the Reserve manager and game

wardens so that they can monitor site conditions and watch for deterioration and/or vandalism. Make sure they are aware of current cultural resource laws such as SB 1034, PRC 5097.5, H&HS 7050.5, Penal Code 6221/2, Government Code: PRC 6254 and 6254 and 6254.10, etc.

6. Assess the effects of visitor use, habitat management, and natural erosion on archaeological sites. Treatment measures should be implemented where appreciable damage to sites is identified. Such measures can include site-specific closures, restrictive buffers around sensitive cultural resources, moving roads/trails or other damaging activities away from archaeological sites, revegetation to hide or impede access and/or erosion control, sign placement, installation of fencing, site capping, security monitoring, public education, and other protection and/or avoidance measures. *Treatment and Inspection Matrix (Table O),* for other details.
7. Establish a program for periodic professional archaeological inspection, assessment, and evaluation of cultural resources within the Reserve as shown in *Treatment and Inspection Matrix (Table O)*. Inspections should be conducted by a qualified archaeologist and should include documentation of sites and features through photographs, measurements, and Global Positioning System (GPS) recordation. Condition monitoring/assessment records and updated site forms should be regularly prepared and submitted to California Historical Resources Information System (CHRIS)'s South Coastal Information Center to document observed changes.

Impact Guidelines

1. The compilation and identification of site data does not entail any environmental impacts.
2. Any fieldwork portions including archaeological survey, testing, or other on-site research would require pre-project environmental review and potentially, permitting if work is being done by outside consultants or non-state entities.
3. All unlisted, eligible, or potentially eligible historical resources will be mapped, recorded, and evaluated to determine their eligibility status for placement on the NRHP or CRHR.

TABLE O:
Treatment and Inspection Matrix for Cultural Resource Sites

Category	*Description*	*Treatment*	*Inspection*
1	Resources that are eligible or potentially eligible for inclusion in either the National Register of Historic Places (NRHP)[1] or the California Register of Historical Resources (CRHR), or are significant under CEQA[2]. These resources have integrity and are at risk for damage and vandalism.	1. Preserve in place 2. Actively manage for preservation through measures[3] such as: • Avoiding impacts • Installing fencing • Planting vegetation as a deterrent (e.g., thorny or poisonous plants) or for erosion control • Installing signage specifying laws protecting archaeological sites on public lands • Rerouting trails, road, paths of travel, etc. • Stabilizing and repairing historic structures and features • Capping 3. Avoid introduction of incompatible elements. Restoration and replacement of architectural features should be based on detailed and accurate representation of original features as substantiated by historical, physical, pictorial, or archaeological evidence. 4. Avoid introduction of plant species to the site area that would undermine, damage, or modify the resource (e.g., trees with spreading surface roots)	Every Year (or more frequently if site specific issues are identified)
2	Resources that may be significant under CEQA by have reduced potential for damage due to topographic isolation, inaccessibility, or limited surface manifestations (artifacts and/or features)	1. Preserve in place 2. Allow other uses nearby as long as there is no direct access to the site's resources. 3. Manage[3] the site's resources by: • Avoiding direct impacts • Planting vegetation to hide and protect the site • Stabilizing and repairing historic structures and features	Every two years (more frequently if site specific issues are identified)
3	Resources that do not meet NRHP or CRHR eligibility criteria or may not be significant under CEQA (includes resources used in interpretive programs and for research and study)	1. Preserve in place 2. Allow other uses and modern amenities nearby 3. Manage the site's resources by: • Avoiding direct impacts • Planting vegetation to hide and protect the site • Restoring or reconstructing historic resources for interpretive use	Every five years
4	Resources that do not require any additional consideration (includes some isolated artifacts, resources that have lost integrity, or those that have been damaged or destroyed). May include sites where a data recovery program has been completed.	1. Ensure proper documentation of the resource has been completed and submitted to the appropriate agencies and organizations. 2. If collections were conducted, ensure that funding is provided for curation at an appropriate facility in accordance with the State Historical Resources Commission's guidelines.	Not required

NOTES:

1. *Under the NRHP: the quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:* ***(a)*** *are associated with events that have made a significant contribution to the broad patterns of our history; or* ***(b)*** *are associated with the lives of persons significant in our past; or* ***(c)*** *embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or* ***(d)*** *have yielded or may be likely to yield, information important in prehistory or history. Generally, the resource must be at least 50 years old to be eligible for consideration.*

1. *Under CEQA, a resource is "historically significant" if the resource meets the criteria for listing on the CRHR (Pub. Res. Code SS5024.1, Title 14, Section 4852) including the following:* ***(a)*** *Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;* ***(b)*** *Is associated with the lives of persons important in our past;* ***(c)*** *Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or* ***(d)*** *Has yielded, or may be likely to yield, information important in prehistory or history.*
2. *Any installation of protective measures within or adjacent to a known cultural resource should only be undertaken with the participation of a qualified archaeologist and Native American consultation. Archaeological and/or Native American monitoring is required for any protective work that involves ground disturbance within or adjacent to a known cultural resource.*

Goal

1. Resolve potential conflicts between management goals for areas with cultural and other protected resources and facilitate the implementation of habitat and fire management, facility maintenance, and cultural resource protection.

Task

Prepare an assessment of Category 1 through 3 sites (further explained in the resource inventory and in *Appendix 8.7*) that identifies habitats, special status habitats, special status species, exotic invasive plants, roads, structures, and special use areas within a ½ mile or larger radius of known cultural resource sites and examine how prescribed treatment measures might affect other management activities in the area (and vice versa).

Impact Guidelines

1. Construction and/or maintenance of facilities, visitor-use activities, and habitat/fire management work all have the potential to disturb, degrade, or damage

surface and/or buried archaeological remains, historic structures, historic features, landscapes, or sacred sites.

2. Any new facilities including roads, trails, fence lines, structures, buildings, etc., will be designed and constructed to avoid archaeological resources to the extent possible. Projects should be designed and implemented to avoid significant impacts to recognized historic resources. As per professional standards for assessing and mitigating significant impacts to historical resources, treatment measures in compliance with the Secretary of the Interior Standards for the Treatment of Historic Properties will be implemented to reduce potential significant impacts to a level less than significant.
3. Prior to any actions that have the potential to disturb the area of known or possible archaeological sites, or in areas that have not been inspected for archaeological resources within the past five years, Environmental Review will be completed and additional research, archaeological survey, and/or testing will be carried out to determine if significant cultural resources exist.
4. If impacts to archaeological resources are unavoidable, then an archaeological data recovery plan will be developed and implemented. A qualified professional archaeologist will oversee and/or monitor those activities deemed to have the highest potential to disturb or damage buried archaeological resources to ensure that no historical or Native American resources are adversely impacted. Native American consultation will also be undertaken.
5. If unexpected cultural remains are uncovered during any project activities, work will be stopped in that area so that the resource can be recorded, the nature of the deposit can be determined, and an appropriate avoidance, protection, or recovery plan can be implemented.
6. All unlisted, eligible, or potentially eligible historical resources will be mapped, recorded, and evaluated to determine their eligibility status for placement on the NRHP or CRHR.
7. Vandalism and/or damage to cultural sites are a constant concern that is difficult to eliminate, but with proper steps, can be minimized.

Goal

1. Resolve potential conflicts between management goals for areas with cultural and other protected resources,

Impact Guideline

1. The management activities will be subject to the impact avoidance and other requirements that apply in areas with protected resources.

4.7.2 Historical Resources

As the nexus between San Diego County's coastal plain and mountainous backcountry, the Rancho de Cañada de San Vicente Reserve contains several historic landscape elements that echo almost 200 years of historic ranching and mining activities. Examples include routes of travel, a once-active copper/silver mine, a cluster of ranch houses, and the remains or the sites of such historic ranching activities as corrals, cisterns, and wind breaks.

ABANDONED CORAL AT THE FORMER MONTE VISTA RANCH

In general, the LMP's Goals and Tasks should provide the basis for CDFW's ability to effectively protect these unique historic resources from adverse impacts caused by recreational use, vandalism, or other disruptive activities.

Goal

1. Identify, document, evaluate, and protect historical resources within the Reserve.

Tasks

1. Maintain a current, updated inventory, GIS mapping, and informational database for those historic resources within the Reserve that may be eligible for listing on the CRHR/or NRHP.
2. Locate individuals or their descendants who worked, lived, or visited the Reserve and conduct oral history interviews. The information gleaned from these individuals may be used to complement and expand upon existing historical data for planning and interpretive purposes.
3. Collect, store, preserve, and make available any original photographs, plans, documents, objects, transcribed oral histories, etc., associated with the Reserve's historic resources to qualified researchers and interpreters.

4. Actively designate eligible historic resources to the CRHR/or NRHP. Listing on the latter may qualify a historic resource for federal emergency post-disaster restoration and/or reconstruction funding sources.
5. Initiate and complete Historic Structure Reports (HSR) and/or Cultural Landscape Reports (CLR) for extant historic buildings, structures, objects, sites, and other significant landscape features.
6. These reports will provide the following:
    - Physical, graphic, and photographic information about a resource's history and existing conditions.
    - Recommend appropriate preservation treatments, managerial actions, and appropriate uses.
    - Outline recommendations for future work without compromising character-defining historic features.

Goal

1. Protect the valuable historic resources of the Reserve; while still creating opportunities for visitor-related outdoor recreational experiences.

Tasks

1. Base historic resource managerial decisions in accordance with recommendations and guidelines set forth by the following state and federal historic preservation regulations and guidelines:
    - California Public Resources Code (PRC)
    - Executive Order W-26-92
    - CEQA
    - National Environmental Protection Act (NEPA)
    - The United States Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Preservation Projects
    - The United States Secretary of the Interior's Standards for the Treatment of Historic Properties, with Guidelines for Cultural Landscapes.
    - The United States Department of the Interior Preservation Brief No. 36: Protecting Cultural Landscapes—Planning, Treatment and Management of Historic Landscapes.
2. Employ applicable professional standards to determine appropriate use (stabilize, restore, reconstruct, or modify for adaptive reuse) for all historic resources to provide for their regular maintenance and long-term preservation.
3. Follow the Archaeological Goals and Tasks (as appropriate) for the treatment of historic archaeological resources. For example:

- Provide cultural resource training to CDFW staff and make locations of previously recorded cultural sites known to Reserve manager and game wardens so that they can monitor site conditions and watch for deterioration and/or vandalism.
- Develop measures to protect cultural resources during wildfire incidents, flash flood events, earthquakes, or other natural disasters and procedures for assessing damages after a natural disaster event.
- Assess the effects of visitor use and natural erosion on (historic) archaeological sites.
- Conduct additional studies (i.e., archival research, detailed site and structure recordation and GIS mapping, subsurface testing, etc.) for any proposed project or undertaking that has the potential to disturb any known or potentially eligible historical resource.
- Consider the acquisition of additional land from willing sources that contain historical resources linked to those already identified within the Reserve; or areas that do not contain such resources, but may serve as protective buffers.
- Coordinate the management of historic resources with public agencies managing the same types of resources on adjacent lands.

DALEY MINE OVERLOOKING THE CVS CENTRAL VALLEY

Goal

1. Interpret the Reserve's unique historical resources.

Tasks

1. Address the interrelationship between the natural environment and those people and cultures that created these resources.
2. Consider constructing or adapting one of the Reserve's existing Vernacular-style buildings into an interpretive center/meeting building.

Goal

1. Develop Area-specific goals and tasks for specific planning areas within the Reserve that contain historic cultural landscapes: Daley Mine and Monte Vista Ranch Complex.

Tasks

1. Daley Mine:
    - Determine if the resource is historically significant as a Cultural Landscape composed of historic sites connected via their historic function and use.
    - Prepare and submit a formal CRHR/NRHP nomination to the State Historic Preservation Officer (SHPO).
    - Prepare a CLR.
    - Utilize the report to employ applicable treatment standards to provide for the long-term preservation, use, and interpretation of the mine.
    - Monte Vista Ranch Complex
    - Determine if the resource is historically significant as a Historic Vernacular Landscape.
    - Prepare an HSR.
    - Utilize the reports to employ applicable treatment standards to provide long-term preservation, use, and interpretation for the complex.

Impact Guidelines

1. If prospective land use management activities are subjected to the above-listed historic resource treatment recommendations, any impacts to their historic integrity would be reduced to acceptable levels.

5 OPERATIONS AND MAINTENANCE SUMMARY

5 Operations and Maintenance Summary

Operations and maintenance is broken down into two sections: funding and staffing, and equipment needs.

5.1 Funding and Staffing

Cañada de San Vicente was funded through dedicated endowments provided by SDCWA and TNC. The SDCWA endowment was provided by an agreement (September 24, 2007) between CDFW and SDCWA [in relation to the acquisition of Rancho Cañada Habitat Management Area (HMA)], which limits the endowment funds to management projects/actions within the 392-acre SDCWA HMA. Further, the endowment cannot be used for facility-related issues or to fund projects outside of Rancho Cañada HMA. Additionally, a Property Analysis Record (PAR) was completed that provides guidance regarding acceptable expenditure of the SDCWA endowment.

In contrast, the endowment provided by TNC can be used to support projects throughout the Reserve, including the acquisition of new lands.

Both of the endowments provide funding for staff working on the Reserve. Currently, one Environmental Scientist/Reserve Manager is assigned to the Reserve and two Scientific Aids (seasonal staff) are assigned to the Reserve Manager. The Reserve Manager oversees other Reserves in addition to Cañada de San Vicente Reserve, so work time is allocated between the Reserves and is not fully dedicated to the Cañada de San Vicente Reserve. Even though it was anticipated that the Reserve would not require intensive management or a full-time permanent or resident staff, current staffing is not adequate to fulfill all management needs of the Reserve.

Goal

To adequately support the Cañada de San Vicente Reserve and perform the tasks identified in this LMP, a combination of additional site management and maintenance staffing will be required. The staffing needs proposed in this LMP incorporate permanent staffing, supplemented by seasonal labor and, where appropriate, use of volunteer help.

Tasks

1. Addition of one Permanent Yearly (PY) Environmental Scientist, with 50 percent of time assisting the Reserve Manager at the Cañada de San Vicente Reserve.

2. Addition of one PY Fish and Wildlife Technician, with 50 percent of time to maintain facilities/grounds and assist with other management needs at the Reserve.
3. Addition of one PY Environmental Scientist, as needed, to assist with hunting program.
4. Addition of one equipment operator, as needed.
5. Secure additional funding to support and maintain the Reserve.
6. Secure additional funding through constituent groups, user fees, and grants from persons/groups that do not provide monies through traditional hunting/fishing license fees.

5.2 Equipment

Initially, no equipment existed, but as management progressed, tools and equipment were purchased to work on various projects associated with the Reserve. Additional equipment and tool supplies are needed to conduct Reserve-related activities. Storage areas for tools and equipment are available at the Reserve. To enhance tool storage and the shop area, a large cargo container located above the shop will be moved from its current location and placed in line and adjacent to the shop. Additionally, A small tractor is on site, but is inadequate for the size of the Reserve.

Goal 1

1. Manage the grounds at the Reserve to protect, maintain, and improve the biodiversity, habitat integrity, and environmental health of the Reserve. As well, ensure the safety of people working on and using the Reserve.

Tasks

1. Move existing cargo container adjacent to the shop for additional storage.
2. Purchase equipment needed to maintain grounds and facilities at the Reserve. Equipment needed to implement LMP goals includes but is not limited to: 80+horsepower wheeled tractor with a bucket, box scraper, flail mower, auger, forks, and a trailer for towing the tractor. Additionally, a new herbicide spray rig for use on a utility vehicle (e.g., a 'Gator') and one small sprayer for use on an ATV need to be purchased.

Goal 2

1. Maintain all equipment, vehicles, and facilities in optimum working condition to maximize their useful life-span and also allow efficient use of the Reserve's operating budget.

Tasks

1. Regularly inspect and service all equipment and vehicles.
2. Regularly inspect and maintain fuel storage cabinet to ensure that it is in good condition and that no stored containers are leaking.
3. Maintain herbicide storage facility, in accordance with all applicable storage regulations.
4. When feasible, establish cooperative agreements with other state agencies such as Caltrans and CAL FIRE to provide and operate equipment needed to maintain the roads and facilities at the Reserve.

Constraints on Facility Maintenance Elements

The goals of the facilities maintenance elements are constrained by a range of natural and human induced factors. Effective management of the Reserve requires that these factors be identified and considered.

Environmental factors

Maintenance requirements will depend largely on the severity of winter weather conditions. In years of exceptional rainfall, flooding or erosion may damage roads, fences, and signage. The degree of damage will dictate maintenance priorities.

Financial factors

As with other elements, limited funding for staff and operations is a major constraint on facilities maintenance. Full realization of the facilities maintenance goals will require an increase in funding for the Reserve.

EQUIPMENT STORAGE AT THE 'COMPOUND'

6 CLIMATE CHANGE STRATEGIES

6 Climate Change Strategies

In July 2014 the Natural Resource Agency released *Safeguarding California: Reducing Climate Risk, an update to the 2009 California Climate Adaptation Strategy*. This document lists nine broad areas (agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water) impacted by climate change.

Climate impacts occur at different scales (global, national, regional and local) and impacts may vary from place to place. Because of this, many strategies to reduce climate risk must be crafted at a regional or local scale. For both Wildlife Areas and Ecological Reserves, the Reserve Managers are currently integrating the understanding of climate change strategies and impacts into their planning efforts. Strategies, goals, operations, and maintenance tasks are being composed to take these risks into account and design management actions that will help minimize impacts to key species and habitats.

The following actions needed to safeguard biodiversity and habitats build on those made in the 2009 Adaptation Strategy based on emerging science and practice of climate adaptation. The below actions can be found throughout the Plan in the various Elements as "Goals" and "Tasks."

Improve understanding of climate risks to biodiversity and habitats. Completing habitat and vegetation mapping, refining regional connectivity analyses, doing climate vulnerability analyses, understanding extreme events and disturbance regimes, and identifying opportunities to address the emissions that contribute to climate change.

Develop management practices to help safeguard species and ecosystems from climate risks. This includes improving habitat connectivity, reducing existing stressors, and protecting climate refugia to name a few.

Enhance biodiversity monitoring in California to detect climate impacts and inform responses. Identify and develop baseline ecological information that can detect changes in terrestrial and aquatic species and habitat patterns on the landscape as well as implementing adaptive management to refine approaches for conserving biodiversity.

Support environmental stewardship across sectors. This can be done by promoting nature-based solutions for adapting to climate risks and maintaining and supporting tools that help resource managers determine when and where to focus conservation activities.

Information Sharing and Education. It will be important to create and maintain partnerships that support biodiversity, promote public education and outreach, and provide support for the continuation of the CDFW Climate College and broader state climate literacy programs.

7 FUTURE REVISIONS TO LAND MANAGEMENT PLANS

7 Future Revisions to Land Management Plans

The following text is adapted from CDFW's *A Guide and Annotated Outline for Writing Land Management Plans, May 2013*:

All planning documents eventually become dated and require revision so they can continue to provide practical direction for operational and maintenance activities associated with the Reserve. A common and unfortunate situation is that the revision of planning documents is often neglected for budgetary or staff constraints, or other priorities. To address this challenge, this brief guide incorporates a suggested hierarchy of revision procedures in which the level of process and required involvement is proportionate to the level of change that is proposed. The LMP reflects the best information available during the planning process, but it is understood that new information or circumstances will arise over time and adjustments will be required to keep the LMP current. Such new information or circumstances may include:

- Feedback generated by adaptive management of the site
- Scientific research that directs improved techniques of habitat management
- Documented threats to fish and wildlife species and their habitats
- New legislative or policy direction
- New acquisitions

When new information dictates a change to the LMP, it is important that there is an appropriate process established to facilitate this change. Public outreach and public input will be necessary in proportion to the proposed policy change established by the LMP. Unless a reasonable and clear revision process exists, the LMP could become outdated and irrelevant. If the appropriate procedure for a particular proposed revision is not apparent, the determination of which of the following procedures to use shall be made by the Regional Manager in consultation with the Lands Program/Wildlife Branch.

7.1 Minor Revisions

Minor revisions may include the addition of new property to an existing Reserve or the adoption of limited changes to the goals and tasks through adaptive management, based on other scientific information or policy direction. This procedure will be applicable to revisions that meet the following criteria:

- No change is proposed to the overall purposes of this LMP.
- CEQA documentation (if required) is completed and approved.

- Appropriate consultation occurs within the region and with other appropriate branches in the CDFW.
- Appropriate consultation with other agencies occurs (i.e. SDCWA, CAL FIRE, etc.)

Minor revisions may be prepared by the staff members or with other CDFW resources, and require approval by the Regional Manager. If additional acquisitions require no changes in existing management, the parcels may be integrated within the current plan via a memo from the Regional Manager to the Director. The documentation is attached to the management plan and provided to the Lands Program/Wildlife Branch for their files.

7.2 Major Revisions

Major revisions or a new LMP, require a procedure comparable to the initial LMP planning process, but also proportionate to the level of policy change that is proposed. The following revisions are categorized as major:

- Substantial revision and/or a new policy direction is proposed to the LMP, or the adoption of a completely new plan is proposed
- Revisions that propose a completely new LMP.
- Revisions that physically alter the environment of the Ecological Reserve beyond what was analyzed in the current LMP.
- Management actions that require additional CEQA documentation or environmental permits and approvals.

Major revisions may be prepared by CDFW staff or other resources including consultation from SDCWA, CAL FIRE, etc. and require prior approval by the Regional Manager. If additional acquisitions require no changes in existing management, the parcels may be integrated within the current plan via a memo from the Regional Manager to the Director. The documentation is attached to the management plan and provided to the Lands Program/Wildlife Branch for their files. The revised plan may need additional CEQA analysis if the revisions present substantive changes.

7.3 Plan Status Reports

Periodic evaluation is important to help ensure that the purposes and goals of the LMP are being met. The chapter or section that includes "Management Goals," may contain many specific tasks that involve monitoring of the site and evaluation of the adequacy of management activities. Cumulatively, these efforts will provide feedback regarding the success of the overall management effort. Periodic and detailed analysis of this feedback data will be necessary to assess the status of this LMP.

A review of the achievement of the goals of the LMP should be prepared every 5-10 years following the date of adoption of the LMP or subsequent revisions.

A status report documenting this review should, at minimum, include:

- An evaluation of the achievement of the purposes and goals of the LMP.
- An evaluation of the completion or annual completion, as appropriate, of each task contained in this LMP.
- Monitoring required as a result of a Mitigated Negative Declaration
- A fiscal evaluation of the program.
- An evaluation of the effectiveness of CDFW's coordination efforts with local governments, and other property management and regulatory agencies involved with the Reserve.
- A notation of important new scientific information that has bearing on management.
- A recommendation and schedule for revisions to the LMP to incorporate new information and improve its effectiveness.

The status report should be prepared or coordinated by the Reserve Manager or other regional representative. It should be reviewed by appropriate Regional functions, then submitted to the Regional Manager and forwarded to the Lands Program/Wildlife Branch to be submitted to the Deputy Director. This report should serve as a basis for revision of the LMP and appropriate adjustment to ongoing management practices.

8 APPENDICES

APPENDIX 8.1
Vegetation Alliances/Groups Occurring Within Cañada de San Vicente, San Diego County, CA.

ALLIANCE	*ACRES*
• *Adenostoma fasciculatum*	901.7
• *Adenostoma fasciculatum-Xylococcus bicolor*	*1044.6*
• *Artemisia californica-Eriogonum fasciculatum*	*425.1*
• *Baccharis salicifolia*	*1.9*
• *Bromus (diandrus, hordeaceus) - Brachypodium distachyon*	*96.9*
• *Californian Warm Temperate Marsh/Seep*	*4.4*
• *Ceanothus crassifolius*	*28.5*
• *Ceanothus leucodermis*	*512.1*
• *Ceanothus tomentosus*	*100.0*
• *Corethrogyne filaginifolia*	*28.9*
• *Eriogonum fasciculatum*	*106.9*
• *Eriogonum fasciculatum-Salvia apiana*	*11.0*
• *Lotus scoparius*	*8.0*
• *Malosma laurina*	*472.3*
• *Mediterranean California Naturalized Annual and Perennial Grassland*	*236.3*
• *Platanus racemosa*	*55.6*
• *Quercus agrifolia*	*329.8*
• *Quercus berberidifolia*	*224.7*
• *Quercus berberidifolia-Adenostoma fasciculatum*	*145.8*
• *Quercus engelmannii*	*9.0*
• *Salix lasiolepis*	*14.1*
• *Salvia apiana*	*.7*

APPENDIX 8.2

Plant species known to occur within Cañada de San Vicente, San Diego County, CA.

Scientific Name	*Common Name*		*Covered Species*
Acalypha californica	California Copperleaf	Native	
Acanthomintha ilicifolia	Thornmint	Native	SDCWA NCCP/ HCP & MSCP
Achnatherum coronatum	Giant Stipa	Native	
Acmispon glaber	Coastal Deerweed	Native	
Acmispon micranthus	Grab Lotus	Native	
Acourtia microcephala	Sacapellote	Native	
Adenostoma fasciculatum	Chamise	Native	
Adiantum jordanii	California Maidenhair	Native	
Agrostis viridis	Water Beardgrass	Non-Native	
Allium peninsulare var. *peninsulare*	Mexicali Onion	Native	
Ambrosia psilostachya	Western Ragweed	Native	
Amsinckia menziesii	Rigid Fiddleneck	Native	
Anagallis arvensis	Scarlet Pimpernel	Non-Native	
Anemopsis californica	Yerba Mansa	Native	
Antirrhinum nuttallianum	Violet Snapdragon	Native	
Aphanes occidentalis	Mountain Mahogany	Native	
Apiastrum angustifolium	Mock Parsley	Native	
Aristida adscensionis	Six-weeks Three-awn	Native	
Artemisia californica	Coastal Sagebrush	Native	
Artemisia douglasiana	Douglas' Sagewort	Native	
Aspidotis californica	California Lace Fern	Native	
Astragalus gambelianus	Gambel's Locoweed	Native	
Avena barbata	Slender Wild Oat	Non-Native	
Avena fatua	Wild Oat	Non-Native	
Baccharis salicifolia	Mule Fat	Native	
Baccharis sarothroides	Desertbroom	Native	
Bloomeria crocea var. *crocea*	Common Goldenstar	Native	
Bothriochloa barbinodis	Cane Bluestem	Native	
Bowlesia incana	Hoary Bowlesia	Native	
Brassica nigra	Black Mustard	Non-Native	
Briza minor	Little Quaking Grass	Non-Native	
Brodiaea terrestris	Dwarf Brodiaea	Native	
Bromus carinatus	California Brome	Non-Native	
Bromus diandrus	Rip Gut Grass	Non-Native	
Bromus hordeaceus	Soft Chess	Non-Native	
Bromus madritensis	Compact Brome	Non-Native	
Bromus rubens	Red Brome	Non-Native	
Calandrinia breweri	Brewer's Calandrinia	Native	
Calandrinia ciliata	Red Maids	Native	
Calochortus splendens	Splendid Mariposa Lily	Native	
Calystegia macrostegia	Island False Bindweed	Native	
Camissonia bistorta	California Suncup	Native	
Camissonia californica	Sun cup	Native	
Camissonia confusa	San Bernardino Sun Cup	Native	
Camissonia hirtella	Hairy Suncups	Native	
Camissonia intermedia	Canyon Clarkia	Native	
Camissonia robusta	Robust Sun Cup	Native	
Camissonia strigulosa	Sandysoil Sun Cup	Native	
Carduus pycnocephalus	Italian Plumeless Thistle	Non-Native	
Carex spissa	San Diego Sedge	Native	
Castilleja exserta	Purple Owl's Clover	Native	
Castilleja exserta ssp. *exserta*	Exserted Indian Paintbrush	Native	
Caulanthus heterophyllus	San Diego Jewelflower	Native	

APPENDIX 8.2 (cont.'d)

Ceanothus crassifolius	Hoaryleaf Ceanothus	Native	
Ceanothus cyaneus	Lakeside Ceanothus	Native	SDCWA NCCP/ HCP & MSCP
Ceanothus leucodermis	Chaparral Whitethorn	Native	
Ceanothus tomentosus	Woolyleaf Ceanothus	Native	
Centaurea melitensis	Tocalote	Non-Native	
Cerastium glomeratum	Sticky Chickweed	Non-Native	
Cercocarpus minutiflorus	Mountain Mahogany	Native	
Chaenactis artemisiifolia	White Pincushion	Native	
Chaenactis glabriuscula	Yellow Pincushion	Native	
Chamaesyce melanadenia	Red-gland Spurge	Native	
Chamaesyce polycarpa	Small-seed Sandmat	Native	
Cheilanthes newberryi	Newberry's Lipfern	Native	
Chenopodium californicum	Soaproot	Native	
Chenopodium murale	Sowbane	Non-Native	
Chlorogalum parviflorum	Smallflower Soap Plant	Native	
Chorizanthe fimbriata	Fringed Spineflower	Native	
Cirsium vulgare	Bull Thistle	Non-Native	
Clarkia delicata	Campo Clarkia	Native	
Clarkia epilobioides	Canyon Godeita	Native	
Clarkia purpurea	Purple Clarkia	Native	
Clarkia similis	Canyon Clarkia	Native	
Claytonia parviflora	Narrow-leaf Miner's Lettuce	Native	
Claytonia perfoliata	Miner's Lettuce	Native	
Clematis ligusticifolia	Western White Clematis	Native	
Cnicus benedictus	Blessed Thistle	Non-Native	
Collinsia heterophylla	Chinese-house	Native	
Conyza bonariensis	Flax-leaf Fleabane	Non-Native	
Corethrogyne filaginifolia	California-aster	Native	
Cotula australis	Australian Brass-buttons	Non-Native	
Cotula coronopifolia	African Brass-buttons	Non-Native	
Crassula connata	Sand Pygmyweed	Native	
Crypsis vaginiflora	Swamp Grass	Non-Native	
Cryptantha intermedia	Clearwater Cryptantha	Native	
Cryptantha micromeres	Pygmyflower Cryptantha	Native	
Cryptantha microstachys	Tejon Cryptantha	Native	
Cryptantha muricata	Pointed Cryptantha	Native	
Cuscuta californica	Chaparral Dodder	Native	
Cynodon dactylon	Bermuda Grass	Non-Native	
Cyperus eragrostis	Tall Flatsedge	Native	
Datura wrightii	Jimsonweed	Native	
Daucus pusillus	American Wild Carrot	Native	
Delphinium parryi	San Bernardino Larkspur	Native	
Dicentra chrysantha	Golden Ear-drops	Native	
Dichelostemma capitatum	Bluedicks	Native	
Dryopteris arguta	Coastal Wood Fern	Native	
Ehrendorferia chrysantha	Golden Eardrops	Native	
Ehrharta calycina	Perennial Veldtgrass	Non-Native	
Ehrharta erecta	Panic Veldtgrass	Non-Native	
Eleocharis bella	Delicate Spikerush	Native	
Eleocharis montevidensis	Sand Spikerush	Native	
Elymus glaucus	Blue Wildrye	Native	
Emmenanthe penduliflora	Whispering Bells	Native	
Epipactis gigantea	Stream Orchid	Native	
Eriastrum filifolium	Lavender Woollystar	Native	
Erigeron foliosus var. *foliosus*	Leafy Fleabane	Native	

APPENDIX 8.2 (cont.'d)

Eriodictyon crassifolium var. *crassifolium*	Thickleaf Yerba Santa	Native	
Eriogonum fasciculatum	California Buckwheat	Native	
Eriophyllum confertiflorum var. *confertiflorum*	Golden Yarrow	Native	
Erodium botrys	Longbeak Stork's Bill	Non-Native	
Erodium brachycarpum	Foothill Filaree	Non-Native	
Erodium cicutarium	Redstem Stork's Bill	Non-Native	
Erodium moschatum	White-stem Filaree/Storksbill	Non-Native	
Eschscholzia californica	California Poppy	Native	
Eucrypta chrysanthemifolia	Common Eucrypta	Native	
Eucrypta chrysanthemifolia var. *chrysanthemifolia*	Spotted Hideseed	Native	
Filago californica	California Filago	Native	
Filago gallica	Narrow-leaf Filago	Non-Native	
Frangula californica	California Buckthorn	Native	
Galium angustifolium	Narrow-leaf Bedstraw	Native	
Galium aparine	Stickywilly	Native	
Galium parisiense	Wall Bedstraw	Non-Native	
Galium porrigens	Climbing/Oval-leaf Bedstraw	Native	
Gastridium ventricosum	Nit Grass	Non-Native	
Geranium carolinianum	Carolina Geranium	Native	
Geranium dissectum	Cut-Leaf Geranium	Non-Native	
Gilia angelensis	Grassland Gilia	Native	
Gilia capitata	Ball Gilla	Native	
Glinus radiatus	Spreading Sweetjuice	Non-Native	
Guillenia lasiophylla	California Mustard	Native	
Gutierrezia californica	California Matchweed	Native	
Harpagonella palmeri	Palmer's Grappling-hook	Native	
Hazardia squarrosa	Sawtooth Goldenbush	Native	
Hedypnois cretica	Crete Hedypnois	Non-Native	
Helianthemum scoparium	Bisbee Peak Rushrose	Native	
Heliotropium curassavicum	Salt Heliotrope	Native	
Herniaria hirsuta	Gray Herniaria	Non-Native	
Hesperocnide tenella	Western Nettle	Native	
Hesperoyucca whipplei	Chaparral Yucca	Native	
Heteromeles arbutifolia	Toyon	Native	
Heterotheca sessiliflora	Golden Aster	Native	
Hirschfeldia incana	Short-pod Mustard	Non-Native	
Hordeum murinum	Hare Barley	Non-Native	
Hypochaeris glabra	Cat's Ear; False Dandelion	Non-Native	
Jepsonia parryi	Coast Jepsonia	Native	
Juncus bufonius	Toad Rush	Native	
Juncus oxymeris	Pointed Rush	Native	
Juncus textilis	Basket Rush	Native	
Juncus xiphioides	Irisleaf Rush	Native	
Keckiella antirrhinoides	Snapdragon Penstemon	Native	
Keckiella cordifolia	Heartleaf Penstemon	Native	
Lactuca serriola	Prickly Lettuce	Non-Native	
Lamarckia aurea	Golden-top	Non-Native	
Lastarriaea coriacea	Leather Spineflower	Native	
Lasthenia californica	California Goldfields	Native	
Lasthenia coronaria	Royal Goldfields	Native	
Lathyrus vestitus	San Diego Sweet Pea	Native	
Layia platyglossa	Tidy Tips	Native	
Lepidium nitidum var. *nitidum*	Shining Pepperweed	Native	
Lepidium ramosissimum	Manybranched Pepperweed	Native	
Lepidium virginicum	Virginia Pepperweed	Native	

APPENDIX 8.2 (cont.'d)

Logfia filaginoides	California Cottonrose	Native	
Logfia gallica	Narrow-leaf Cottonrose	Non-Native	
Lolium multiflorum	Bulbous Canary Grass	Non-Native	
Lolium perenne	Perennial Ryegrass	Non-Native	
Lonicera subspicata	Southern Honeysuckle	Native	
Lonicera subspicata var. *denudata*	Santa Barbara Honeysuckle	Native	
Lotus strigosus	Hairy Lotus	Native	
Lotus unifoliolatus	American Bird's Foot Trefoil	Native	
Lotus wrangelianus	Chile Lotus	Native	
Lupinus bicolor	Miniature Lupine	Native	
Lupinus concinnus	Bajada Lupine	Native	
Lupinus hirsutissimus	Stinging Lupine	Native	
Lupinus succulentus	Arroyo Lupine	Native	
Lupinus truncatus	Collar Lupine	Native	
Lythrum hyssopifolia	Grass Poly	Non-Native	
Machaeranthera juncea	Rush Bristleweed	Native	
Madia gracilis	Gumweed	Native	
Malacothamnus fasciculatus	Mendocino Bushmallow	Native	
Malosma laurina	Laurel Sumac	Native	
Malva parviflora	Cheeseweed Mallow	Non-Native	
Marah macrocarpus	Wild Cucumber	Native	
Marah macrocarpus var. *macrocarpus*	Cucamonga Manroot	Native	
Marrubium vulgare	Horehound	Non-Native	
Matricaria discoidea	Pineapple Weed	Non-Native	
Medicago polymorpha	California Burclover	Non-Native	
Melica frutescens	Tall Melic	Native	
Melica imperfecta	Coast Range Melic	Native	
Melilotus albus	White Sweetclover	Non-Native	
Melilotus indicus	Yellow Sweetclover	Non-Native	
Melinis repens	Natal Grass	Non-Native	
Micropus californicus	Q-tips	Native	
Microseris douglasii	Small-Flower Microseris	Native	
Mimulus aurantiacus	Orange Bush Monkeyflower	Native	
Mimulus brevipes	Scarlet Monkeyflower	Native	
Mimulus cardinalis	Seep Monkeyflower	Native	
Mimulus guttatus	Seep Monkey Flower	Native	
Mirabilis laevis	Desert Wishbone-bush	Native	
Monardella hypoleuca ssp. *lanata*	Feltleaf Monardella	Native	SDCWA NCCP/ HCP & MSCP
Muhlenbergia microsperma	Annual Muhly	Native	
Muhlenbergia rigens	Italian Ryegrass	Native	
Nasturtium officinale	Water Cress	Native	
Navarretia atractyloides	Hollyleaf Pincushionplant	Native	
Navarretia hamata	Hooked Pincushionplant	Native	
Nemophila menziesii	Baby Blue Eyes	Native	
Nemophila spatulata	Sierra Baby Blue Eyes	Native	
Nicotiana glauca	Tree Tobacco	Non-Native	
Olea europaea	Olive	Non-Native	
Osmadenia tenella	False Rosinweed	Native	
Oxalis californica	Californica Wood Sorrel	Native	
Paeonia californica	California Peonia	Native	
Panicum acuminatum	Western Panicgrass	Native	
Parietaria hespera var. *hespera*	Western Pellitory	Native	
Pectocarya linearis ssp. *ferocula*	Sagebrush Combseed	Native	
Pellaea andromedifolia	Coffee Fern	Native	
Pellaea mucronata ssp. *mucronata*	Birdfoot Cliffbrake	Native	
Pennisetum setaceum	African Fountain Grass	Non-Native	
Penstemon spectabilis	Showy Penstemon	Native	

APPENDIX 8.2 (cont.'d)

Pentagramma triangularis	Goldback Fern	Native	
Petunia parviflora	Wild Petunia	Native	
Phacelia cicutaria	Caterpillar Phacelia	Native	
Phacelia cicutaria var. *hispida*	Caterpillar Phacelia	Native	
Phacelia distans	Wild-Heliotrope	Native	
Phacelia parryi	Parry's Phacelia	Native	
Phacelia ramosissima	Branching Phacelia	Native	
Phalaris aquatica	Bulbous Canary Grass	Non-Native	
Pholistoma racemosum	Constance Racemed Fiestaflower	Native	
Piperia cooperi	Cooper's Rein Orchid	Native	
Plagiobothrys arizonicus	Arizona Popcornflower	Native	
Plagiobothrys canescens	Valley Popcornflower	Native	
Plagiobothrys collinus	Rough Popcornflower	Native	
Plagiobothrys nothofulvus	Rusty Popcornflower	Native	
Plagiobothrys tenellus	Slender Popcornflower	Native	
Plantago erecta	Dotseed Plantain	Native	
Platanus racemosa	California Sycamore	Native	
Poa annua	Annual Bluegrass	Non-Native	
Polycarpon tetraphyllum	Four Leaved Polycarp	Non-Native	
Polygonum arenastrum	Common Knotweed, Doorweed	Non-Native	
Polypodium californicum	California Polypody	Native	
Polypogon interruptus	Ditch Beard Grass	Non-Native	
Polypogon monspeliensis	Annual Beard Grass	Non-Native	
Polypogon viridis	Bentgrass	Non-Native	
Porophyllum gracile	Slender Poreleaf	Native	
Prunus ilicifolia	Holly-leaf Cherry	Native	
Pseudognaphalium biolettii	Bicolor Cudweed	Native	
Pseudognaphalium californicum	Ladie's Tobacco	Native	
Pseudognaphalium luteoalbum	Jersey Cudweed	Non-Native	
Pseudognaphalium microcephalum	Wright's Cudweed	Native	
Pseudognaphalium stramineum	Cotton-batting Plant	Native	
Pterostegia drymarioides	Woodland Pterostegia	Native	
Quercus agrifolia	California Live Oak	Native	
Quercus agrifolia var. *oxyadenia*	Coastal Live Oak	Native	
Quercus berberidifolia	Scrub Oak	Native	
Quercus engelmannii	Engelmann Oak	Native	
Rafinesquia californica	California Chicory	Native	
Ranunculus hebecarpus	Delicate Buttercup	Native	
Rhamnus ilicifolia	Holly-leaf Redberry	Native	
Rhamnus pilosa	Hairy-leaf Redberry	Native	
Rhus aromatica	Skunk Bush	Native	
Rhus ovata	Sugar Sumac	Native	
Ribes indecorum	Whiteflower Currant	Native	
Rosa californica	California Wildrose	Native	
Rubus ursinus	California Blackberry	Native	
Rumex conglomeratus	Green Dock	Non-Native	
Rumex crispus	Curly Dock	Non-Native	
Rumex pulcher	Fiddle Dock	Non-Native	
Sairocarpus nuttallianus	Violet Snapdragon	Native	
Salix gooddingii	Goodding's Willow	Native	
Salix lasiolepis	Arroyo Willow	Native	
Salvia apiana	White Sage	Native	
Salvia columbariae	Chia	Native	
Sambucus nigra ssp. *caeulea*	Blue Elderberry	Native	
Samolus parviflorus	Water-pimpernel	Native	
Sanicula arguta	Sharp-tooth Sanicle	Native	
Sanicula bipinnatifida	Purple Sanicle	Native	
Sanicula crassicaulis	Pacific Black Snakeroot	Native	

APPENDIX 8.2 (cont.'d)

Schismus barbatus	Mediterranean Schismus	Non-Native	
Schoenoplectus acutus	Hardstem Bulrush	Native	
Scrophularia californica	California Figwort	Native	
Scutellaria tuberosa	Danny's Skullcap	Native	
Selaginella bigelovii	Bigelow's Spike-moss	Native	
Selaginella cinerascens	Mesa Spike-moss	Native	
Senecio vulgaris	Common Groundsel	Non-Native	
Sidalcea malviflora	Dwarf Checkerbloom	Native	
Silene antirrhina	Snapdragon Catchfly	Native	
Silene gallica	Common Catchfly	Non-Native	
Silene laciniata	Cardinal Catchfly	Native	
Sisymbrium altissimum	Tumble/Jim Hill Mustard	Non-Native	
Sisymbrium orientale	Hare's-ear Cabbage	Non-Native	
Solanum douglasii	Greenspot Nightshade	Native	
Solanum parishii	Parish's Nightshade	Native	
Solidago spectabilis var. *confinis*	Nevada Goldenrod	Native	
Solidago velutina ssp. *californica*	California Goldenrod	Native	
Sonchus asper	Prickly Sow-thistle	Non-Native	
Sonchus oleraceus	Common Sowthistle	Non-Native	
Spergularia bocconi	Boccone's Sand-spurry	Non-Native	
Stachys ajugoides var. *rigida*	Rough Hedge Nettle	Native	
Stebbinsoseris heterocarpa	Grassland Stebbinsoseris	Native	
Stellaria media	Chickweed	Non-Native	
Stellaria pallida	Pale Starwort	Non-Native	
Stephanomeria diegensis	San Diego Wreath-plant	Native	
Stipa cernua	Nodding Needlegrass	Native	
Stipa lepida	Foothill Needlegrass	Native	
Stipa miliacea var. miliacea	Smilo Grass	Non-Native	
Stipa pulchra	Purple Needlegrass	Native	
Stylocline gnaphalioides	Mountain Neststraw	Native	
Thalictrum fenderl	Fendler's Meadowrue	Native	
Thysanocarpus laciniatus	Notch Fringepod	Native	
Toxicodendron diversilobum	Pacific Poison Oak	Native	
Trifolium ciliolatum	Tree Clover	Native	
Trifolium gracilentum	Pin Point Clover	Native	
Trifolium hirtum	Rose Clover	Non-Native	
Trifolium microcephalum	Maiden Clover	Native	
Trifolium obtusiflorum	Creek Clover	Native	
Trifolium willdenovii	Tomcat Clover	Native	
Typha domingensis	Southern Cat-tail	Native	
Uropappus lindleyi	Lindley's Silverpuffs	Native	
Urtica dioica	Stinging Nettle	Native	
Urtica urens	Dwarf Nettle	Non-Native	
Veronica anagallis-aquatica	Water Speedwell	Non-Native	
Vicia americana	American Vetch	Native	
Vicia benghalensis	Reddish Tufted Vetch	Non-Native	
Vicia ludoviciana	Slender Vetch	Native	
Vicia villosa	Winter Vetch	Non-Native	
Viola pedunculata	Johnny Jump-up	Native	
Vulpia bromoides	Brome Fescue	Non-Native	
Vulpia microstachys	Pacific Fescue	Native	
Vulpia myuros	Rat-tail Fescue	Non-Native	
Vulpia octoflora	Slender Fescue	Native	
Xanthium strumarium	Rough Cocklebur	Native	
Xylococcus bicolor	Mission Manzanita	Native	
Yucca schidigera	Mojave Yucca	Native	

APPENDIX 8.3

Special status plant species and vegetation communities and their status identified in the San Vicente Reservoir and El Cajon Mt. USGS 7.5-minute quadrangles from the CDFW CNDDB RareFind database and CNPS.

Scientific Name	*Common Name*	*Status*				*General Habitat*	*Micro Habitat*
		Fed.	*State*	*CNPS*	*Other*		
Acanthomintha ilicifolia	San Diego thorn-mint	FT	SE	1B	MSCP	Chaparral, coastal scrub, valley & foothill grassland, vernal pools.	Endemic to active vertisol clay soils of mesas & valleys. Usually on clay lenses w/in grassland or chap communities. 10-960 m.
Astragalus deanei	Dean's milk-vetch			1B	BLM, USFS	Chaparral, cismontane woodland, coastal scrub, riparian forest.	Open, brushy south-facing slopes in Diegan coastal sage, sometimes on recently burned-over hillsides. 75-695 m.
Astragalus oocarpus	San Diego milk-vetch			1B	BLM, USFS	Chaparral, cismontane woodland.	Openings in chaparral or on gravelly flats & slopes in thin oak woodland. 305-1525 m.
Baccharis vanessae	Encinitas baccharis	FT	SE	1B	MSCP	Chaparral (maritime), cismontane woodland.	On sandstone soils in steep, open, rocky areas with chaparral associates. 60-720m.
Bloomeria clevelandii	San Diego goldenstar			1B	BLM, MSCP	Chaparral, coastal scrub, valley & foothill grassland, vernal pools.	Mesa grasslands, scrub edges; clay soils. Often on mounds between vernal pools in fine, sandy loam. 50-1090 m.
Brodiaea filifolia	thread-leaved brodiaea	FT	SE	1B	MSCP	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley & foothill grassland, vernal pools. Often clay.	Usually associated with annual grassland & vernal pools; often surrounded by shrubland habitats.
Brodiaea orcuttii	Orcutt's brodiaea			1B	BLM, MSCP, USFS	Vernal pools, valley & foothill grassland, closed-cone coniferous forest, cismontane woodland, chaparral, meadows & seeps.	Mesic, clay habitats; sometimes serpentine; usually in vernal pools & small drainages. 30-1695 m.
Calochortus dunnii	Dunn's mariposa lily			1B	MSCP	Closed-cone coniferous forest, chaparral, valley & foothill grassland.	On gabbro or metavolcanic soils; also known from sandstone; often associated with chaparral. 185-1830 m.
California macrophylla	round-leaved filaree			1B	BLM	Cismontane woodland, valley & foothill grassland.	Clay soils. 15-1200 m.
Ceanothus cyaneus	Lakeside ceanothus			1B	BLM, MSCP, USFS	Closed-cone coniferous forest, chaparral.	235-755 m.
Ceanothus verrucosus	wart-stemmed ceanothus			2B	MSCP	Chaparral.	1-380 m.
Chorizanthe polygonoides var. *longispina*	long-spined spineflower			1B	BLM	Chaparral, coastal scrub, meadows & seeps, valley & foothill grassland, vernal pools.	Gabbroic clay. 30-1530 m.
Clarkia delicata	delicate clarkia			1B	BLM	Cismontane woodland, chaparral.	Often on gabbro soils. 235-1000 m.
Clinopodium chandleri	San Miguel savory			1B	BLM, MSCP, USFS	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley & foothill grassland.	Rocky, gabbroic or metavolcanic substrate. 120-1005 m.
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly			1B	BLM	Chaparral, cismontane woodland.	Often in mixed chaparral in California, sometimes post-burn. 30-790 m.
Dudleya variegata	variegated dudleya			1B	BLM, MSCP	Chaparral, coastal scrub, cismontane woodland, valley & foothill grassland.	In rocky or clay soils; sometimes associated with vernal pool margins. 3-580 m.
Ericameria palmeri var. *palmeri*	Palmer's goldenbush			1B	MSCP	Coastal scrub, chaparral.	On granitic soils, on steep hillsides. Mesic sites. 30-600 m.
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE	SE	1B	MSCP	Vernal pools, coastal scrub, valley & foothill grassland.	San Diego mesa hardpan & claypan vernal pools & southern interior basalt flow vernal pools; unusually surrounded by scrub. 20-620 m.
Ferocactus viridescens	San Diego barrel cactus			2B	MSCP	Chaparral, Diegan coastal scrub, valley & foothill grassland.	Often on exposed, level or south-sloping areas; often in coastal scrub near crest of slopes. 3-450 m.
Horkelia truncata	Ramona horkelia			1B	USFS	Chaparral, cismontane woodland.	Habitats in California include: mixed chaparral, vernal streams, & disturbed areas near roads. Clay soil. 400-1300 m.
Isocoma menziesii var. *decumbens*	decumbent goldenbush			1B		Coastal scrub.	Sandy soils; often in disturbed sites. 10-910 m.

Lepechinia cardiophylla	heart-leaved pitcher sage			1B	MSCP, USFS	Closed-cone coniferous forest, chaparral, cismontane woodland.	550-1370 m.
Monardella hypoleuca ssp. *lanata*	felt-leaved monardella			1B	BLM, MSCP, USFS	Chaparral, cismontane woodland.	Occurs in understory in mixed chaparral, chamise chaparral, & southern oak woodland; sandy soil. 300-1575 m.
Monardella viminea	willowy monardella	FE	SE	1B	MSCP	Coastal scrub/alluvial ephemeral washes with adjacent coastal scrub, chaparral, riparian forest, riparian scrub, & riparian woodland.	In canyons, in rocky & sandy places, sometimes in washes or floodplains; w/Baccharis, Iva, etc. 50-225 m.
Packera ganderi	Gander's ragwort			1B	BLM, MSCP, USFS	Chaparral.	Recently burned sites & gabbro outcrops. 400-1200 m.
Pogogyne abramsii	San Diego mesa mint	FE	SE	1B	MSCP	Vernal pools.	Vernal pools within grasslands, chamise chaparral or coastal sage scrub communities; w/other rare plants. 90-200 m.
Pogogyne nudiuscula	Otay Mesa mint	FE	SE	1B	MSCP	Vernal pools.	Dry beds of vernal pools & moist swales w/Eryngium aristulatum var. parishii & Orcuttia californica. 90-250 m.
Quercus cedrosensis	Cedros Island oak			2B		Closed-cone coniferous forest, chaparral, coastal scrub.	255-960 m.
Quercus engelmannii	Engelmann oak		SE	4.2		Chaparral, cismontane woodland, riparian woodland, & valley & foohill grasslands.	50-1300 m.
Ribes canthariforme	Moreno currant			1B	BLM, USFS	Chaparral, riparian scrub.	Among boulders in oak-manzanita thickets; shaded or partially shaded sites. 340-1200 m.
Tetracoccus dioicus	Parry's tetracoccus			1B	BLM, MSCP, USFS	Chaparral, coastal scrub.	Stony, decomposed gabbro soil. 150-1000 m.
Triquetrella californica	coastal triquetrella			1B	USFS	Coastal bluff scrub, coastal scrub valley & foothill grasslands.	Grows within 30m from the coast in coastal scrub, grasslands & in open gravels on roadsides, hillsides, rocky slopes, & fields. On gravel or thin soil over outcrops. 10-100 m.
VEGETATION COMMUNITIES							
Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest					Open to locally dense evergreen sclerophyllous riparian woodlands dominated by Quercus agrifolia. This type appears to be richer in herbs & poorer in understory shrubs than other riparian communities.	
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland					A tall, open, broadleafed, winter-deciduous streamside woodland dominated by Platanus racemosa (& often also Alnus rhombifolia). These stands seldom form closed canopy forests, & even may appear as trees scattered in a shrubby thicket of sclerophyllous & deciduous species. Lianas include Rubus ursinus & Toxicodendron diversilobum.	

1B = CNPS List: Rare, Threatened, or Endangered in California
2B = CNPS List: Rare, Threatened, or Endangered in California, but more common elsewhere
BLM = Bureau of Land Management Sensitive
FE = Listed as endangered under the Federal Endangered Species Act
FT = Listed as threatened under the Federal Endangered Species Act
SE = Listed as endangered under the California Endangered Species Act
ST = Listed as threatened under the California Endangered Species Act
USFS = United States Forest Service Sensitive

APPENDIX 8.4
Bird, mammal, reptile, and amphibian species known to occur within Cañada de San Vicente, San Diego County, CA.

Scientific Name	*Common Name*	*Covered Species*
	BIRDS	
Accipiter cooperii	Cooper's hawk	MSCP
Accipiter striatus	sharp-shinned hawk	
Aeronautes saxatalis	white-throated swift	
Agelaius phoeniceus	red-winged blackbird	
Aimophila ruficeps	Rufous-crowned sparrow	SDCWA NCCP/HCP & MSCP
Ammodramus savannarum	grasshopper sparrow	SDCWA NCCP/HCP
Amphispiza belli belli	sage (Bell's) sparrow	SDCWA NCCP/HCP
Anas platyrhynchos	mallard	
Aphelocoma californica	western scrub jay	
Aquila chrysaetos	golden eagle	MSCP
Archilochus alexandri	black-chinned hummingbird	
Ardea alba	great egret	
Ardea herodias	great blue heron	
Athene cunicularia	burrowing owl	SDCWA NCCP/HCP & MSCP
Aythya affinis	Lesser scaup	
Aythya collaris	ring-necked duck	
Baeolophus inornatus	oak titmouse	
Bombycilla cedrorum	cedar waxwing	
Bubo virginianus	Great horned owl	
Bucephala albeola	bufflehead	
Buteo jamaicensis	red-tailed hawk	
Buteo lineatus	red-shouldered hawk	
Buteo regalis	ferruginous hawk	MSCP
Callipepla californica	California quail	
Calypte anna	Anna's hummingbird	
Calypte costae	Costa's hummingbird	
Carduelis lawrencei	Lawrence's goldfinch	
Carduelis psaltria	Lesser goldfinch	
Carduelis tristis	American goldfinch	
Carpodacus mexicanus	house finch	
Cathartes aura	turkey vulture	
Catharus guttatus	hermit thrush	
Catherpes mexicanus	canyon wren	
Chamaea fasciata	wrentit	
Charadrius vociferus	killdeer	
Chondestes grammacus	lark sparrow	
Circus cyaneus	northern harrier	MSCP
Colaptes auratus	northern flicker	
Columba livia	domestic pigeon	
Contopus cooperi	olive-sided flycatcher	
Contopus sordidulus	western wood pewee	
Corvus brachyrhynchos	American crow	
Corvus corax	common raven	
Dendroica coronata	yellow-rumped warbler	
Dendroica petechia	yellow warbler	SDCWA NCCP/HCP
Elanus leucurus	white-tailed kite	
Empidonax difficilis	western flycatcher	

APPENDIX 8.4 (cont'd.)

Scientific Name	*Common Name*	*Covered Species*
	BIRDS	
Eremophila alpestris	horned lark	SDCWA NCCP/HCP
Euphagus cyanocephalus	Brewer's blackbird	
Falco sparverius	American kestrel	
Geococcyx californianus	greater roadrunner	
Geothlypis trichas	common yellowthroat	
Himantopus mexicanus	black-necked stilt	
Hirundo rustica	barn swallow	
Icterus bullockii	Bullock's oriole	
Icterus cucullatus	hooded oriole	
Junco hyemalis	dark-eyed junco	
Lanius ludovicianus	loggerhead shrike	SDCWA NCCP/HCP
Melanerpes formicivorus	acorn woodpecker	
Meleagris gallopavo	wild turkey	
Melospiza melodia	song sparrow	
Mimus polyglottos	northern mockingbird	
Molothrus ater	brown-headed cowbird	
Myiarchus cinerascens	ash-throated flycatcher	
Nycticorax nycticorax	black-crowned night heron	
Oxyura jamaicensis	ruddy duck	
Passer domesticus	house sparrow	
Passerculus sandwichensis	Savannah sparrow	MSCP
Passerella iliaca	fox sparrow	
Passerina amoena	Lazuli bunting	
Passerina caerulea	blue grosbeak	
Petrochelidon pyrrhonota	cliff swallow	
Phainopepla nitens	Phainopepla	
Phalaenoptilus nuttallii	common poorwill	
Pheucticus melanocephalus	black-headed grosbeak	
Picoides nuttallii	Nuttall's woodpecker	
Pipilo crissalis	California towhee	
Pipilo maculatus	spotted towhee	
Piranga ludoviciana	western tanager	
Podiceps nigricollis	eared grebe	
Podilymbus podiceps	pied-billed grebe	
Polioptila caerulea	blue-gray gnatcatcher	
Psaltriparus minimus	bushtit	
Quiscalus mexicanus	great-tailed grackle	
Regulus calendula	ruby-crowned kinglet	
Salpinctes obsoletus	rock wren	
Sayornis nigricans	black phoebe	
Sayornis saya	Say's phoebe	
Sialia currucoides	mountain bluebird	
Sialia mexicana	western bluebird	MSCP
Sitta carolinensis	white-breasted nuthatch	
Sphyrapicus ruber	red-breasted sapsucker	
Spizella atrogularis	black-chinned sparrow	
Spizella passerina	chipping sparrow	

APPENDIX 8.4 (cont'd.)

Scientific Name	*Common Name*	*Covered Species*
	BIRDS	
Stelgidopteryx serripennis	northern rough-winged swallow	
Sturnella neglecta	western meadowlark	
Sturnus vulgaris	European starling	
Tachycineta bicolor	tree swallow	
Tachycineta thalassina	violet-green swallow	
Thryomanes bewickii	Bewick's wren	
Toxostoma redivivum	California thrasher	
Tringa melanoleuca	greater yellowlegs	
Troglodytes aedon	house wren	
Turdus migratorius	American robin	
Tyrannus verticalis	western kingbird	
Tyrannus vociferans	Cassin's kingbird	
Tyto alba	barn owl	
Vermivora celata	orange-crowned warbler	
Vireo huttoni	Hutton's vireo	
Zenaida macroura	mourning dove	
Zonotrichia atricapilla	golden-crowned sparrow	
Zonotrichia leucophrys	white-crowned sparrow	
	MAMMALS	
Antrozous pallidus	pallid bat	
Canis latrans	coyote	
Chaetodipus californicus	California pocket mouse	SDCWA NCCP/HCP
Chaetodipus fallax	San Diego pocket mouse	SDCWA NCCP/HCP
Didelphis virginiana	Virginia opossum	
Dipodomys simulans	Dulzura kangaroo rat	
Eptesicus fuscus	big brown bat	
Eumops perotis	western mastiff bat	
Lasiurus cinereus	hoary bat	
Lepus californicus	black-tailed jackrabbit	SDCWA NCCP/HCP
Lynx rufus	bobcat	
Mephitis mephitis	striped skunk	
Mus musculus	house mouse	
Mustela frenata	long-tailed weasel	
Myotis californicus	California myotis	
Myotis ciliolabrum	small-footed myotis	
Myotis evotis	long-eared myotis	
Myotis yumanensis	Yuma myotis	
Neotoma fuscipes	dusky-footed woodrat	
Neotoma lepdia intermedia	desert woodrat	SDCWA NCCP/HCP
Nyctinomops femorosaccus	pocketed free-tailed bat	
Odocoileus hemionus	mule deer	MSCP
Peromyscus boylii	brush mouse	
Peromyscus californicus	California mouse	
Peromyscus fraterculus	cactus mouse	
Peromyscus maniculatus	deer mouse	
Pipistrellus hesperus	western pipistrelle	
Plecotus townsendii	Townsend's big-eared bat	

APPENDIX 8.4 (cont'd.)

Scientific Name	*Common Name*	*Covered Species*
	MAMMALS	
Procyon lotor	racoon	
Puma concolor	mountain lion	SDCWA NCCP/HCP & MSCP
Reithrodontomys megalotis	western harvest mouse	
Spermophilus beecheyi	California ground squirrel	
Sylvilagus audubonii	desert cottontail	
Sylvilagus bachmani	brush rabbit	
Tadarida brasiliensis	Mexican free-tailed bat	
Thomomys bottae	Botta's pocket gopher	
Urocyon cinereoargenteus	gray fox	
	REPTILES & AMPHIBIANS	
Aspidoscelis tigris stejnegeri	coastal whiptail	
Cnemidophorus hyperythrus beldingi	Belding's orange-throated whiptail	
Crotalus exsul (=Crotalus ruber)	red diamond rattlesnake	SDCWA NCCP/HCP
Crotalus mitchellii pyrrhus	southwestern speckled rattlesnake	
Crotalus oreganus helleri	southern pacific rattlesnake	
Diadophis punctatus similis	San Diego ring-neck snake	
Elgaria multicarinata webbii	San Diego alligator lizard	
Hypsiglena ochrorhyncha klauberi	San Diego nightsnake	
Lampropeltis getula	common kingsnake	
Leptotyphlops humilis humilis (=Rena humilis humilis)	southwestern threadsnake (blindsnake)	
Lichanura trivirgata roseofusca	coastal rosy boa	
Masticophis flagellum	coachwhip	
Masticophis lateralis	striped racer	
Phrynosoma (coronatum) blainvillii	coast (San Diego) horned lizard	SDCWA NCCP/HCP & MSCP
Pituophis catenifer annectens	San Diego gopher snake	
Plestiodon gilberti	Gilbert's skink	SDCWA NCCP/HCP
Plestiodon skiltonianus interparietalis (=Eumeces skiltonianus interparietalis)	western skink (Coronado skink)	
Sceloporus occidentalis	western fence lizard	MSCP
Sceloporus orcutti	granite spiny lizard	SDCWA NCCP/HCP
Tantilla planiceps	western black-headed snake	
Thamnophis hammondii	two-striped garter snake	
Uta stansburiana	common side-blotched lizard	SDCWA NCCP/HCP

APPENDIX 8.5

Special status wildlife species and their status identified in the San Vicente Reservoir and El Cajon Mt. USGS 7.5-minute quadrangles from the CDFW CNDDB RareFind database and CDFW staff

Scientific Name	*Common Name*	*Status*				*General Habitat*	*Micro Habitat*
		Fed.	*State*	*CDFW*	*Other*		
BIRDS							
Ammodramus savannarum	grasshopper sparrow			SSC	MSCP	Dense grasslands on rolling hills, lowland plains, in valleys & on hillsides on lower mountain slopes.	Favors native grasslands with a mix of grasses, forbs & scattered shrubs. Loosely colonial when nesting.
Aquila chrysaetos	golden eagle			FP	BLMS, MSCP, USFS	Rolling foothills, mountain areas, sage-juniper flats, & desert.	Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.
Athene cunicularia	burrowing owl			SSC		Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren			SSC	MSCP, USFS	Southern CA coastal sage scrub.	Wrens require tall opuntia cactus for nesting & roosting.
Circus cyaneus	northern harrier			SSC	MSCP	Coastal salt & fresh-water marsh. Nest & forage in grasslands, from salt grass in desert sink to mountain cienagas.	Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.
Contopus cooperi	olive-sided flycatcher			SSC		Nesting habitats are mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir & lodgepole pine.	Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain.
Dendroica petechia brewsteri	yellow warbler			SSC		Riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, & alders for nesting & foraging.	Also nests in montane shrubbery in open conifer forests.
Elanus leucurus	white-tailed kite			FP	BLM	Rolling foothills & valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland.	Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting & perching.
Empidonax traillii extimus	southwestern willow flycatcher	FE	SE		MSCP	Riparian woodlands in Southern CA.	
Icteria virens	yellow-breasted chat			SSC		Summer resident; inhabits riparian thickets of willow & other brushy tangles near watercourses.	Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages & nests within 10' of ground.
Lanius ludovicianus	loggerhead shrike			SSC		Broken woodlands, savannah, pinyon-juniper, Joshua tree, & riparian woodlands, desert oasis, scrub & washes.	Prefers open country for hunting, with perches for scanning, & fairly dense shrubs & brush for nesting.
Polioptila californica californica	coastal California gnatcatcher	FT		SSC	MSCP	Obligate, permanent resident of coastal sage scrub below 2500' in Southern CA.	Low, coastal sage scrub in arid washes, on mesas & slopes. Not all areas classified as coastal sage scrub are occupied.
Vireo bellii pusillus	least Bell's vireo	FE	SE		MSCP	Summer resident of Southern CA in low riparian in vicinity of water or in dry river bottoms; below 2000'.	Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.
MAMMALS							
Chaetodipus californicus femoralis	Dulzura pocket mouse			SSC		Variety of habitats including coastal scrub, chaparral & grassland in San Diego Co.	Attracted to grass-chaparral edges.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse			SSC		Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego Co.	Sandy, herbaceous areas, usually in association with rocks or coarse gravel.
Corynorhinus townsendii	Townsend's big-eared bat		CT	SSC	MSCP	Throughout California in a wide variety of habitats. Most common in mesic sites.	Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
Eumops perotis californicus	western mastiff bat			SSC	BLM, MSCP	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc.	Roosts in crevices in cliff faces, high buildings, trees & tunnels.
Lasiurus blossevillii	western red bat			SSC	USFS	Roosts primarily in trees, 2-40' above ground, from sea level up through mixed conifer forests.	Prefers habitat edges & mosaics with trees that are protected from above & open below with open areas for foraging.

Lepus californicus bennettii	San Diego black-tailed jackrabbit			SSC		Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges.	Coastal sage scrub habitats in Southern CA.
Myotis ciliolabrum	western small-footed myotis				BLM	Wide range of habitats mostly arid wooded & brushy uplands near water. Seeks cover in caves, buildings, mines & crevices	Prefers open stands in forests & woodlands. Requires drinking water. Feeds on a wide variety of small flying insects.
Myotis yumanensis	Yuma myotis				BLM	Optimal habitats are open forests & woodlands with sources of water over which to feed.	Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.
Neotoma lepida intermedia	San Diego desert woodrat			SSC		Coastal scrub of Southern CA from San Diego County to San Luis Obispo County.	Moderate to dense canopies preferred. They are particularly abundant in rock outcrops & rocky cliffs & slopes.
Nyctinomops femorosaccus	pocketed free-tailed bat			SSC		Variety of arid areas in Southern CA; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc.	Rocky areas with high cliffs.
Tasidea taxus	American badger			SSC	MSCP	Most abundant in drier, open stages of most shrub, forest, and herbaceous habitats with friable soils.	Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.
				REPTILES & AMPHIBIANS			
Anaxyrus californicus	arroyo toad	FE		SSC	MSCP	Semi-arid regions near washes or intermittent streams, including valley-foothill & desert riparian, desert wash, etc.	Rivers with sandy banks, willows, cottonwoods, & sycamores; loose, gravelly areas of streams in drier parts of range.
Aspidoscelis hyperythra	orangethroat whiptail			SSC	MSCP	Inhabits low-elevation coastal scrub, chaparral, & valley-foothill hardwood habitats.	Prefers washes & other sandy areas with patches of brush & rocks. Perennial plants necessary for its major food-termites
Crotalus ruber	red-diamond rattlesnake			SSC		Chaparral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains.	Occurs in rocky areas & dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.
Diadophis punctatus similis	San Diego ringneck snake				USFS	Open, fairly rocky areas. Use boards, flat rocks, woodpiles, stable talus, rotting logs & small ground holes for cover.	Prefer areas with surface litter or herbaceous vegetation. Often in somewhat moist areas near intermittent streams.
Phrynosoma blainvillii	coast horned lizard			SSC	USFS, BLM	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	Open areas for sunning, bushes for cover, patches of loose soil for burial & abundant supply of ants & other insects.
Plestiodon skiltonianus interparietalis	Coronado Island skink			SSC	BLM	Grassland, chaparral, pinon-juniper & juniper sage woodland, pine-oak & pine forests in Coast Ranges of Southern CA.	Prefers early successional stages or open areas. Found in rocky areas close to streams & on dry hillsides.
Salvadora hexalepis virgultea	coast patch-nosed snake			SSC		Brushy or shrubby vegetation in coastal Southern CA.	Require small mammal burrows for refuge & overwintering sites.
Spea hammondii	western spadefoot			SSC	BLM	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands.	Vernal pools are essential for breeding & egg-laying.
Thamnophis hammondii	two-striped garter snake			SSC	BLM	Coastal CA from vicinity of Salinas to northwest Baja CA. From sea to about 7,000' elevation.	Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds & riparian growth.
				INVERTEBRATES			
Euphydryas editha quino	Quino checkerspot butterfly	FE			MSCP	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside & San Diego counties.	Hills and mesas near the coast. Need high densities of food plants Plantago erecta, P. insularis, Orthocarpus purpurescens.

BLM = Bureau of Land Management Sensitive
CT = Listed as Candidate Threatened under the California Endangered Species Act
FE = Listed as endangered under the Federal Endangered Species Act
FP = CDFW Fully Protected Species
FT = Listed as threatened under the Federal Endangered Species Act
MSCP = Multiple Species Conservation Program
SE = Listed as endangered under the California Endangered Species Act
SSC = CDFW Species of Special Concern
USFS = United States Forest Service Sensitive

APPENDIX 8.6

Roosting requirements of potentially occurring bat species within San Diego County, CA (Johnston et al. 2004).*

Species Name	*Common Name*	*Status*	*Bridge*	*Cave/ Mine*	*Building*	*Cliff/ Rock Face*	*Tree Bark /Hollow*	*Tree Foliage*	*Rip-Rap*
Family Phyllostomidae (leaf-nosed bats)									
Choeronycteris mexicana	Mexican long-tongued bat	SSC, SC		1	2				
Macrotus calfiornicus	California leaf-nosed bat	SSC,SC	3	1					
Leptoncycteris curasoae	Lesser long-nosed bat	FE		1					
Family Molossidae (free-tailed bats)									
Eumops perotis	Western mastiff bat	SSC, SC			3	1			
Nyctinomops femorosaccus	Pocket free-tailed bat	SSC				1			
Tadarida brasiliensis	Mexican free-tailed bat		1	2	1	1	3		
Nyctinomops macrotis	Big free-tailed bat	SSC				1			
Family Vespertilionidae (mouse-eared bat)									
Anttozous pallidus	Pallid bat	FSS, SSC	1	2	1	2	1		
Corynorhinus townsendii	Townsend's big-eared bat	FSS, SSC, SC	2	1	2		3		
Eptesicus fuscus	Big brown bat		1	2	1	2	1		
Euderma maculatum	Spotted bat	SSC, SC				1			
Lasionycteris noctivagans	Silver haired bat		3				1		
Lasiurus blossevillii	Western red bat	FSS, PSSC						1	
Lasiurus cinereus	Hoary bat							1	
Lasiurus xanthinus	Western yellow bat	PSSC, SC						1	
Myotis californicus	California myotis		2	2	1	1	2		
Myotis ciliolabrum	Small-footed myotis	SC	2	2		1			
Myotis evotis	Long-eared myotis	SC	2	2	2	2	1		2
Myotis lucifugus	Little brown myotis		2	2	1	2	2		
Myotis thysanodes	Fringed myotis	PSSC, SC	2	1	2	2	1		
Myotis volans	Long-legged myotis	PSSC, SC	2	2	2		1		
Myotis yumanensis	Yuma myotis	SC	1	2	1	3	2		
Pipistrellus hesperus	Western pipistrelle		3	2	3	1			

* 1 = use frequently; 2 = use sometimes; 3 = use rarely; Blank = not known to use

PSSC = Proposed, CDFG Mammal Species of Concern

SSC = CDFG Mammal Species of Concern

SC = Former Candidate (Category 2) for listing under the U.S. Endangered Species Act; Species of Concern

FSS = USDA Forest Service Sensitive

APPENDIX 8.7

PROPOSED CATEGORIES FOR THE ARCHAEOLOGICAL SITES AT CAÑADA DE SAN VICENTE*

CATEGORY 1

SDM-W-1102 (CA-SDI-21158) CA-SDI-5492/CA-SDI-16954 CA-SDI-15304
CA-SDI-21134

CATEGORY 2

CA-SDI-131	CA-SDI-132	CA-SDI-5762	CA-SDI-8281	CA-SDI-16472
CA-SDI-21132	CA-SDI-21139	CA-SDI-21140	CA-SDI-21143	CA-SDI-21145
CA-SDI-21148	CA-SDI-21150	CA-SDI-21151	CA-SDI-21152	CA-SDI-21153
CA-SDI-21155	CA-SDI-21156	CA-SDI-21218		

P-37-033657 through P-37-033665

CATEGORY 3

CA-SDI-13088	CA-SDI-16471	CA-SDI-16793	CA-SDI-21131	CA-SDI-21133
CA-SDI-21135	CA-SDI-21136	CA-SDI-21137	CA-SDI-21138	CA-SDI-21141
CA-SDI-21142	CA-SDI-21144	CA-SDI-21146	CA-SDI-21147	CA-SDI-21149
CA-SDI-21154	CA-SDI-21157	CA-SDI-21159	CA-SDI-21161	CA-SDI-21162
CA-SDI-21163	CA-SDI-21164	P-37-025537	P-37-033681	

CATEGORY 4

P-37-033638	P-37-033641	P-37-033650	P-37-033654	P-37-033669

*****These proposed categories are based only on site inspections conducted during the resource inventory work for the Reserve and should not be assumed to infer any determination of significance or non-significance of the sites. In order to determine site significance, National Register of Historic Places/California Register of Historic Resources eligibility, and actual site categories a program of archaeological site testing should be undertaken. However, until such a time as the testing program occurs, these proposed categories should be used for treatments and inspections outlined in the Treatment and Inspection Matrix.

9 DEFINITIONS

ACCESS (ingress/egress) – The ability to enter a site from a roadway or trail and exit a site onto a roadway or trail by vehicle, walking, bike, horse, etc.

ACCESSIBILITY – Under the Americans with Disabilities Act of 1990, state and local governments that construct new- or make specific alterations to, buildings and facilities must make them accessible. Title II requires a public entity to ensure that persons with disabilities are not excluded from services, programs, and activities because existing building and facilities are inaccessible. Beyond federal law, the state has established standards for accessibility in the California Building Code. Title I and Title II would also be applicable. [*see* ***Americans with Disabilities Act of 1990***]

ADAPTIVE (RESOURCE) MANAGEMENT (per. FGC: Div. 0.05, ch. 1, sec. 13.5) – Management that improves the management of biological resources over time by using new information gathered through monitoring, evaluation, and other credible sources as they become available, and adjusts management strategies and practices to assist in meeting conservation and management goals. Under adaptive management, program actions are viewed as tools for learning to inform future actions.

ADAPTIVE USE – Use of a historic structure for a purpose other than that for which it was originally intended. This may require alterations to a structure's interior while maintaining the original exterior appearance.

ALLUVIUM – Sand, gravel, Silt, and clay deposited by rivers and streams in valley bottoms.

AMERICANS WITH DISABILITIES ACT OF 1990 (ADA) – Ensures equal access to all users of public (and private) facilities and programs. This federal civil rights legislation for persons with disabilities passed in 1990. The ADA covers a wide range of disabilities, from physical conditions affecting mobility, stamina, sight, hearing, and speech, to conditions such as emotional illness and learning disorders. The ADA also addresses access to the workplace. *[see* ***Accessibility****]*

AQUIFER – A layer of water-bearing permeable rock, sand, or gravel capable of providing significant amounts of water to wells or springs. The upper boundary of the topmost aquifer is known as the water table. Some areas have several aquifers, each capped on top by an impervious layer (aquitard). If the recharge area is elevated higher that the capping layer, the water may be under considerable pressure, and flowing or Artesian wells may be likely.

ARCHAEOLOGICAL MONITORING – During construction or other ground-disturbing activities an archaeological monitor is present to inspect the disturbed soil and excavated areas and determine the presence/absence of archaeological deposits, features, and/or artifacts and/or to ensure avoidance of significant impacts to known or expected archaeological resources. [*see* Artifact, Cultural Resource, Feature]

ARCHAEOLOGICAL SITE – specific places where there are artifacts or features indicating some human activity occurred at that location. In southern California a typical definition of a

site is one or more "features" and/or a scatter of at least three distinct "artifacts" within 50 meters of each other. [*see* Artifact, Cultural Resource, Feature]

ARTIFACT – An artifact is an item made or used by humans in the past. In California, archaeological artifacts include both historic and Native American items that are more than 50 years old. [*see* Archaeological Site; Feature]

BEST MANAGEMENT PRACTICE (BMP) – The most current methods, treatments, or actions in regard to environmental mitigation responses.

BUFFER – An area or strip of land separating two distinct and/or incompatible land uses or zones, which acts to soften or mitigate the effects of one land use on another. It should function as a barrier for both vision and sound.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) – CEQA is a statute that requires state and local agencies to identify the significant environmental and historical impacts of their proposed actions and to avoid or mitigate any adverse impacts, if feasible. The evaluation is conducted as specified in CEQA guidelines, using the CEQA checklist/Initial Study and subsequent documentation as necessary (i.e., Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report).

CALIFORNIA REGISTER OF HISTORICAL RESOURCES (CRHR) – This register is the official inventory of districts, sites, buildings, structures, and objects significant in California history, architecture, archeology, engineering, and culture. California State and local agencies, private groups, and citizens use the CRHR to identify the State's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change. The California State Historical Resources Commission oversees the CRHR's administration.

CONCESSIONS – A contract with persons, corporations, partnerships, or associations for the provision of products, facilities, programs and management and visitor services that will provide for the enhancement of park visitor use, enjoyment, safety, and convenience. Concessions may be for food service, overnight accommodation, equipment rentals (canoes, rafts, skis), gift stores, etc.

CONDITIONS OF COVERAGE – Specific avoidance and minimization measures that are implemented by a Permittee to ensure that a species is adequately conserved under a regional multi-species conservation plan.

CULTURAL LANDSCAPE – Cultural landscapes often encompass an area containing groupings of historic as well as natural resources organized in spatial patterns associated with a historic event, activity, or person. Cultural landscape resources can also be associated with other cultural or aesthetic values.

CULTURAL LANDSCAPE REPORT (CLR) – Often prepared when a change (e.g., new visitor center or parking area) is proposed, a CLR documents the history, significance and recommended treatments for a cultural landscape. A CLR can also be a useful tool to protect a cultural landscape's character-defining features from undue wear, alteration or loss.

CULTURAL RESOURCE – Cultural Resources include archaeological, ethnographical, traditional, and historical sites, as well as artifacts, features, landscapes, properties, and built-

environment resources including but not necessarily limited to buildings, structures, objects, and districts.

DIRECT IMPACTS – Primary environmental effects that are caused by a project and occur at the same time and place.

ENVIRONMENT – The California Legislature defined 'environment' to refer to "the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water noise, objects of historic or aesthetic significance."

ENVIRONMENTAL ANALYSIS – The task of addressing the potential impact of any given plan or development project on the state's environment, an analysis that can range across any number of topics including air pollution, toxins, and impacts on plants, animals and historical resources.

ENVIRONMENTAL IMPACT REPORT (EIR) – An informational document prepared by the lead agency responsible for carrying out a project as part of the CEQA public review process that describes and analyses a projects potential significant environmental effects and discusses ways to mitigate or avoid those effects. [*see* ***California Environmental Quality Act; Tiered Approach/Tiering***]

EXOTIC SPECIES (OR ALIEN, NON-NATIVE, NON-INDIGENOUS SPECIES) – A species occurring in an area outside of its historically known natural range that has been intentionally introduced or has inadvertently penetrated the system. Also known as introduced, non-native, non-indigenous or ornamental species. [*see* ***Non-native Species***]

FEATURE (ARCHAEOLOGICAL) – An archaeological feature is immovable evidence of a human activity occurring in a specific location. Features can be made up of groupings of artifacts such as a "pot drop" or a "flaking station"; bedrock uses such as bedrock grinding (e.g., mortars, slicks, basins), rock art (pictographs, petroglyphs), or rock shelters; or use areas such as fire pits/hearths, rock enclosures, quarries, or trails. [*see* Artifact; Archaeological Site; Grinding Feature; Rock Art]

GRAVEL – All sedimentary particles (rock or mineral) between 2 and 64 millimeters in diameter.

GRINDING FEATURE – Grinding Features include bedrock slicks (flat, horizontal areas of a rock or outcrop that have been worn smooth by grinding or processing materials with a handstone or mano), basins (shallow bowl-shaped depressions in a bedrock outcrop that have been made and/or used for grinding foodstuff s or other materials), and mortars (shallow to deep, circular holes or depressions in a bedrock outcrop that are used as containers for pounding, pulverizing, and/or grinding acorns, seeds, plants, pigments, or other materials and foods with the use of a pestle). [*see* Feature]

HABITAT – The physical location or type of environment in which an organism or biological population lives or occurs, often characterized by a dominant plant form or physical characteristic (e.g., oak-savanna, wetland, coastal habitat)

HABITAT ENHANCEMENT – The improvement of an existing degraded vegetation community. Enhancement involves improving one or more ecological factors, such as species richness, species diversity, overall vegetative cover, or wildlife value. Enhancement activities typically occur on substrates that are largely intact.

HABITAT RESTORATION – The establishment of a vegetation community in an area that historically supported it, but no longer does because of the loss of one or more required ecological factors. Restoration may involve altering the substrate to improve a site's ability to support the historic vegetation community.

HISTORIC DISTRICT – A geographic area that contains a concentration of historic buildings, structures, or sites united historically, culturally, or architecturally. Historic districts are defined by precise geographic boundaries.

HISTORIC RESOURCE – Any object, building, structure, site, area, place, record, or manuscript which is historically significant or which is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, archaeological or cultural history of California.

HISTORIC LANDSCAPE – A historic landscape is composed of a number of character-defining features which, either individually or collectively, contribute to the landscape's physical appearance as it has evolved over time. Historic landscapes often include natural and introduced vegetation, circulation features, topography, and hardscape features.

HISTORIC SITE – A historic site is the location of a significant event, occupation, or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself is historically significant for its association with an important event, activity, or person.

HISTORIC VERNACULAR LANDSCAPE – This type of landscape evolved through use by the people whose cultural, social, and/or recreational activities and/or occupancy shaped that landscape.

HISTORIC STRUCTURE REPORT (HSR) – An HSR provides documentary, graphic, and physical information about a building's history and existing condition. Broadly recognized as an effective part of preservation planning, an HSR also addresses management goals for the building's use or re-use. It provides thoughtfully considered arguments for selecting and then outlining the most appropriate treatments. The report serves as an important guide for all changes made to a historic Reserve during a project repair, rehabilitation, or restoration and can also provide information for maintenance procedures. Finally, it records the findings of research and investigation, as well as the processes of physical work, for future researchers.

INDIRECT IMPACTS – Also referred to as secondary effect, indirect impacts are caused by a project and occur later in time or at some distance from the project.

INTERPRETATION – A communication process that forges emotional and intellectual connections between the interests of the audience and the inherent meanings in the resource. The term is used to describe communication activities designed to improve understanding at parks, zoos, museums, nature centers, historic sites and other travel destinations. [*www.interpnet.com*]

INTERPRETIVE ACTIVITIES – Hikes, talks, tours or demonstrations that provide the participants with information and inspiration on a given natural or cultural resource. Participants learn and discover new ideas or concepts about a given subject.

KUMEYAAY – The Kumeyaay are a group of Native Americans who live in San Diego and Imperial counties and northern Baja California. They are also known as "Diegueño" due to their proximity to the Mission San Diego de Alcalá.

LAND MANAGEMENT PLAN – Defines the objectives, methodologies, and/or designs regarding how management goals will be accomplished. Occurring on an as-needed basis, they are typically focused on specific management topics, goals, or issues. Depending on their focus, the plans can apply to all or part of a unit. Management plans are consistent with system-wide plans and policies.

LEAD AGENCY – The government agency responsible for compliance with CEQA for a proposed project. Generally, it is the agency with the broadest permit discretion for the project or the agency actually carrying out the project. For example, CSP is the Lead Agency for Departmental projects, and has the authority to approve its own projects, even though permits may also be required from other agencies [*see* ***California Environmental Quality Act (CEQA)***]

LITHIC – This term is an adjective meaning "stone" - therefore a "lithic tool" is the same as a stone tool. [see Artifact]

MASTER PLAN – Master plans are tangible statements of where the unit is now, what it should be in the future and what is required to get there. While circumstances vary from place to place, the decision to develop a master plan is often determined by the need to understand the current conditions of the park, to generate and build community interest and participation, to create a new and common vision for the park's future, and/or to develop a clear and solid set of recommendations and implementation strategies.

MISSION STATEMENT – A broad statement of purpose derived from an organization's values and goals. [*see* ***Vision Statement***.]

MITIGATE, MITIGATION – To ameliorate, alleviate, or avoid to the extent reasonably feasible – usually impacts to the environment associated with a project or undertaking. According to CEQA, mitigation for environmental impacts include: (a) avoiding an impact by not taking a certain action or parts of an action; (b) minimizing an impact by limiting the degree or magnitude of the action and its implementation; (c) rectifying an impact by repairing, rehabilitating or restoring the environment affected; (d) reducing or eliminating an impact by preserving and maintaining operations during the life of the action; (e) compensating for an impact by replacing or providing substitute resources or environments. [*Refer also to Section 106 of the National Historic Protection Act.*]

MITIGATION MEASURE – Under CEQA, when an environmental impact or potential impact is identified, measures must be proposed that will eliminate, avoid, rectify, reduce or compensate for those environmental effects.

MONITORING – The systematic and usually repetitive collection of information typically used to track the status of a variable or system. Monitoring is often used to track and evaluate many different variables, ranging from the number of species present in an area to the stability of a sensitive species' population in a particular area.

MULTI-USE OR MULTI-PURPOSE TRAIL – An appropriately surfaced trail intended as a circulation connection for a variety of uses (bicycle, hiking, pedestrian).

NATIVE AMERICAN MONITORING – During construction or other ground-disturbing activities a Native American monitor is present to inspect the disturbed soil and excavated areas and determine the presence/absence of culturally sensitive or significant items and/or remains and/or to ensure avoidance of significant impacts to known or expected cultural resources. [*see* Cultural Resource]

NATIVE SPECIES – A plant or animal that is historically indigenous to a specific area.

NATURAL COMMUNITY CONSERVATION PLANNING (NCCP) – A program undertaken by the State of California [under the Natural Community Conservation Planning Act of 1991 (NCCPA)], and numerous private and public partners that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

PROTECTED RESOURCES – Native vegetation communities, special-status species and their habitat, and cultural resource sites.

NON-NATIVE SPECIES – Introduced species or exotic species; refers to plants and animals that originate in other regions of the world and are brought into a new region, where they may dominate the local species or in some way negatively impact the environment for native species. Also known as non-indigenous species. [*see* ***Exotic Species***.]

PROVINCE – A broadly defined geographical area. It is a term that helps predict where plant species can be expected to grow.

PUBLIC RESOURCES CODE (PRC) – California law that addresses natural, cultural, aesthetic, and recreational resources of the State, in addition to the State Constitution and Statutes.

RECOVERY – The process by which the decline of an endangered, threatened, or special-status species is stopped and reversed, or threats to its survival are neutralized so that the species' long-term survival in nature can be ensured.

RESOURCE PROCUREMENT AREA – This term is used to refer to an area where certain types of materials or resources were gathered, mined, or collected for food, medicine, manufacturing, or other purposes. It is most often used for areas where Native Americans traditionally gathered resources or materials.

RIPARIAN – (land or area) – The strip of land adjacent to a natural watercourse such as a river or stream. Often supports vegetation that provides fish habitat when growing large enough to overhang the bank.

RIPARIAN BUFFER – A setback or zone extending from the creek bed into adjacent terrestrial habitat where access and activity restrictions may be imposed.

RUNOFF – That portion of rainfall or surplus water that does not percolate into the ground and flows overland and is discharged into surface drainages or bodies of water.

SACRED SITE/SACRED LANDS – Places of special religious or social significance to Native Americans including, but not limited to, known graves and cemeteries of Native Americans. In California, the Native American Heritage Commission (NAHC) maintains the official list of Sacred Sites [PRC 5097.94(a) and 5097.96].

SAND – Loose particles of rock or mineral that range from 0.0625-2.0 millimeters in diameter.

SEASONAL RESTRICTION – Access control or impact avoidance measure tied to a time of year (e.g., the months of highest rainfall or the months when certain species breed).

SEDIMENTATION – Deposition of material suspended in water or air, usually when the velocity of the transporting medium drops below the level at which the material can be supported.

SHALE – A fine-grained detrital sedimentary rock, formed by the deposition and compaction of clay, silt, or mud. It has finely laminated (layered) structure, which gives it a fissility along which the rock splits readily, especially on weathered surfaces. Shale is well indurated, but not as hard as argillite or slate. It may be red, brown, black, or gray. A diatomaceous shale is usually a light colored, soft rock composed mostly of the opaline frustules (the hard, siliceous bivalve shell of a diatom).

SIGNIFICANT EFFECT – A substantial, or potentially substantial, adverse change in the environment.

SILT – Loose particles of rock or mineral that range from 0.002-0.0625 millimeters in diameter.

SPECIAL-STATUS SPECIES – Plants and animals that are legally protected or are otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations. This includes species listed as state and/or federally threatened or endangered; species identified by CDFW as Species of Special Concern; and plants considered by CNPS to be rare, threatened, or endangered (i.e., plants on CNPS List 1B and 2).

STAKEHOLDER – Group or individual who can affect, or is affected by, the achievement of the jurisdiction or organization's mission; examples include managers, employees, policy makers, suppliers, vendors, citizens, users, community activists, businesses, and community groups; and who should have a right to participate in the decision-making process.

SUSTAINABLE DESIGN – To locate, design, reconstruct, construct, rehabilitate, renovate, operate, and maintain built environments that are models of energy, water, and materials efficiency, while providing healthy, productive, and comfortable habitable environments and long term benefits. This design approach is sometimes called "green design" or "green technology."

TASKS - General statements of policy direction around which specific details may later be established

VIEWSHED – The total area within a view from a defined observation point.

VISION STATEMENT – A vision statement is a compelling image (description) of a desirable state of reality made possible by accomplishing the mission in a way that is consistent with the core values of key stakeholders. The vision statement is an inspiring view of the preferred future. [*see* ***Mission Statement***.]

10 ABBREVIATIONS

ASMD	Area Specific Management Directives
ACOE	Army Corps of Engineers
Barona	Barona Band of Mission Indians
BMI	Benthic Macro-Invertebrate
BMP	Best Management Practices
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CalVEG	Classification & Assessment with Landsat of Visible Ecological Groupings
Cal Water	California Water Service Company
CCR	California Code of Regulations
CDFW/CDFG	California Department of Fish & Wildlife (formerly: CDFG - CA Dept. of Fish & Game)
CESA	California Emergency Services Association
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CLR	Cultural Landscape Report
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRHR	California Register of Historic Resources
CSP	California State Parks
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
DBH	Diameter at Breast Height
ER	Ecological Reserve
ESA	Environmental Site Assessment
GIS	Geographic Information System
GPS	Global Positioning System
FGC	Fish and Game Code
HCF	Habitat Conservation Fund
HCP	Habitat Conservation Program
HMA	Habitat Management Area
HSR	Historic Structure Report
KCRC	Kumeyaay Cultural Repatriation Committee

LMP	Land Management Plan
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSCP	Multiple Species Conservation Program
MHCP	Multiple Habitat Conservation Program
MU	Management Unit
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Planning
NCCPA	Natural Community Conservation Planning Act (1991)
NEPA	National Environmental Policy Act
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
OHP	(California) Office of Historic Preservation
OSP	Open Space Preserve
PAMA	Pre-Approved Mitigation Area
PRC	(California) Public Resources Code
PY	Permanent Yearly (employee)
QAL/QAC	Qualified Applicator Licensee/Qualified Applicator Certificate
PAR	Property Analysis Record
RCA	Resource Conservation Area
RWQCB	Regional Water Quality Control Board
SanDAG	San Diego Association of Governments
SCR	South Coast Region
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas & Electric
SDMMP	San Diego Management and Monitoring Program (a.k.a *Management Strategic Plan for Conserved Lands in Western San Diego County*)
SHPO	State Historic Preservation Officer
SSC	Southern Service Center
TNC	The Nature Conservancy
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFS	United States Forestry Service
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Survey

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