FINAL

Baseline Biodiversity Survey for Potrero Mason Property

Prepared for:

County of San Diego
Department of Parks and Recreation
5500 Overland Avenue Drive, Suite 410
San Diego, California 92123
Contact: Jennifer Price

Prepared by:

DUDEK
605 Third Street
Encinitas, California 92024
Contact: Brock Ortega

DECEMBER 2012

Printed on 30% post-consumer recycled material.

TABLE OF CONTENTS

Section **Page No.**

TABLE OF CONTENTS (CONTINUED)

Section **Page No.**

APPENDICES

TABLE OF CONTENTS (CONTINUED)

Section **Page No.**

FIGURES

TABLES

INTENTIONALLY LEFT BLANK

LIST OF ACRONYMS

AMSL	above mean sea level
AOU	American Ornithologists' Union
APN	Assessor's Parcel Numbers
ASMD	Area-Specific Management Directive
BLM	U.S. Bureau of Land Management
BMP	Best Management Practices
CAL FIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
CDFG	California Department of Fish and Game
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CSC	California Species of Special Concern
DPR	County of San Diego Department of Parks and Recreation
FMP	Framework Management Plan
FRAP	Fire and Resource Assessment Program
GIS	geographic information system
GPS	Global Positioning System
IA	index of abundance
IEMM	Institute for Ecological Monitoring and Management
MSCP	Multiple Species Conservation Program
NABA	North American Butterfly Association
NCCP	Natural Community Conservation Plan
NPS	U.S. National Park Service
NRCS	Natural Resources Conservation Service
PDS	San Diego Department of Planning and Development
RMP	Resource Management Plan
SANDAG	San Diego Association of Governments
SDG&E	San Diego Gas & Electric
SDMMP	San Diego Management and Monitoring Program
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VCM	Vegetation Classification Manual for Western San Diego County
WRCC	Western Regional Climate Center

INTENTIONALLY LEFT BLANK

EXECUTIVE SUMMARY

The County of San Diego Department of Parks and Recreation (DPR) began acquiring parcels to comprise the 480-acre Potrero Mason Property (referred to as Property hereafter) beginning in 1963; all parcels were acquired by DPR by 2009. The Property is included in the Draft East County Multiple Species Conservation Program (MSCP) preserve system. The DPR proposes to manage the Property in accordance with a Resource Management Plan (RMP) including Area-Specific Management Directives (ASMDs). Dudek conducted a baseline biodiversity study of the Property to provide the DPR with current biological data needed to prepare an RMP. The RMP will be prepared based upon the survey information contained within this report.

Dudek biologists performed the following biological inventory surveys within the Property from spring through summer 2012: vegetation communities mapping, rare plant surveys, invasive non-native plant species mapping, butterfly surveys and habitat assessment for Quino checkerspot (*Euphydryas editha quino*) and Hermes Copper (*Lycaena hermes*) butterflies, herpetological pitfall trap surveys, diurnal and nocturnal avian point count surveys, passive bat surveys, small mammal trapping, and large and medium mammal surveys using remote camera stations.

Based on the Vegetation Classification Manual (VCM) for Western San Diego County, 15 vegetation communities or land covers were identified within the Property: eucalyptus woodland semi-natural stands, coast live oak woodland alliance, chamise chaparral alliance, chamise chaparral–coastal sage scrub association, chamise chaparral–deerweed association, bigberry manzanita–chamise chaparral association, California sagebrush–California buckwheat scrub alliance, chaparral whitethorn association, mountain-mahogany provisional association, California buckwheat association, snapdragon penstemon scrub alliance, deerweed association, scrub oak chaparral–chamise chaparral alliance, annual brome grasslands semi-natural stands, and California deer grass association. A total of 249 plant species were recorded within the Property during surveys. Five special-status plant species were observed. A total of 109 wildlife species were observed or detected in the Property during surveys, including 1 amphibian, 6 reptiles, 38 birds, 28 mammals, and 36 invertebrates. Twenty-two special-status wildlife species were observed or detected in the Property, including seven species proposed for coverage under the Draft East County MSCP.

INTENTIONALLY LEFT BLANK

1.0 INTRODUCTION

1.1 Purpose of the Report

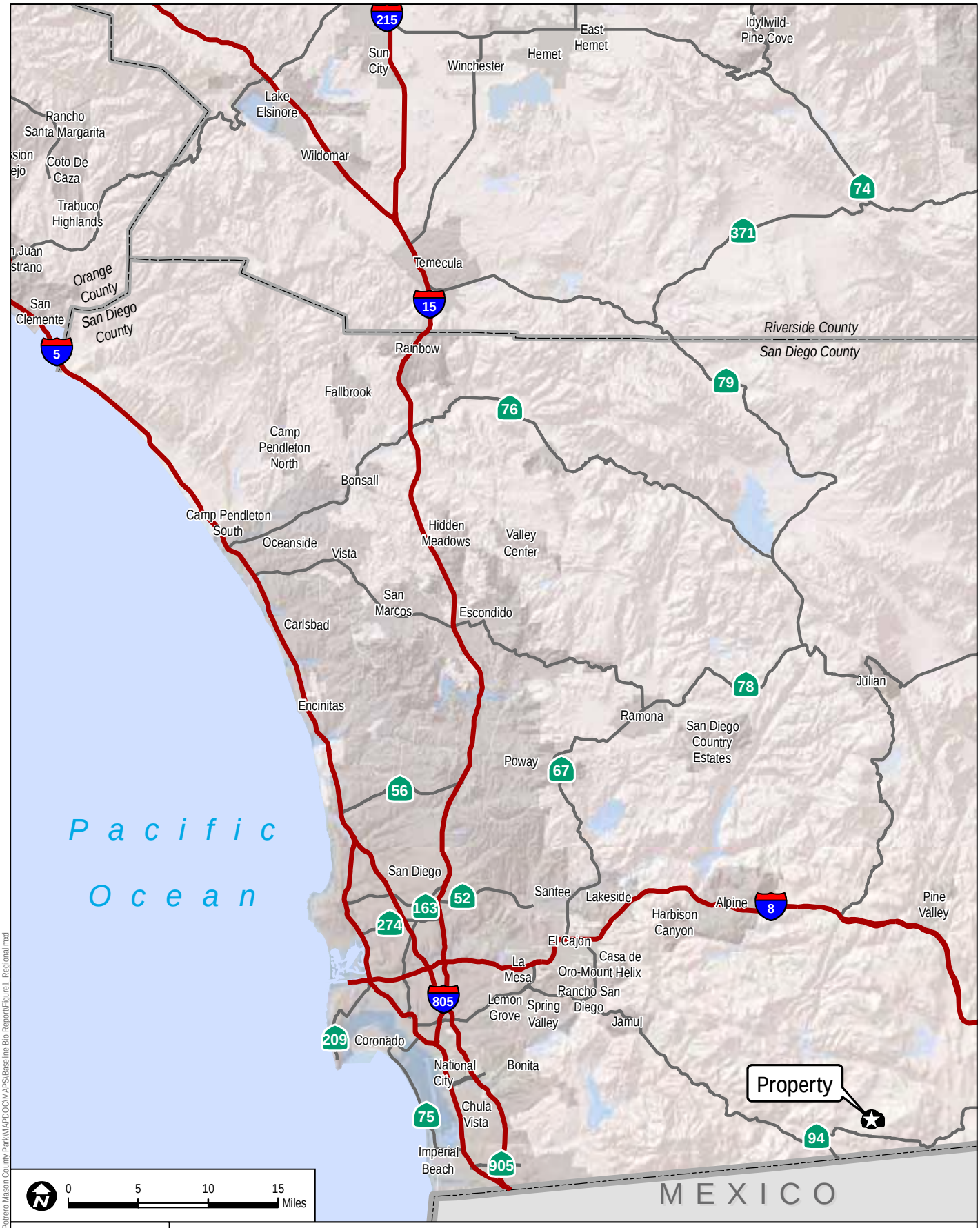
Baseline biological resources surveys were conducted within the County of San Diego (Figures 1 and 2). The purpose of these surveys was to identify and map existing biological resources. This information will be utilized to develop a Resource Management Plan (RMP), including area-specific management directives (ASMDs). These ASMDs will provide the management framework for monitoring and managing the resources of the Potrero Mason Property (referred to as Property hereafter).

1.2 MSCP Context

The Property is located within the boundaries of the Draft East County Multiple Species Conservation Program (MSCP). The County of San Diego began development of the East County MSCP in collaboration with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act; the Natural Community Conservation Plan (NCCP) pursuant to the California NCCP Act of 1991; and the state Endangered Species Act (County of San Diego 2012). However, due to budget and staffing constraints, efforts to complete the East County MSCP were halted in 2008. Since it is the intention of the County to have all areas in its jurisdiction located within an MSCP, this report assumes that the Draft East County MSCP will be finalized at a later date.

Land surrounding the Property is dominated by undeveloped open space areas, rural housing, and conserved lands (Figure 3). Specifically, Conserved Lands owned by the Bureau of Land Management (BLM) are located east of the property; to the north is San Diego Mountain Ranch Open Space, and to the northwest is McAlmond Canyon Open Space. Cleveland National Forest is also located north of the open space areas.

INTENTIONALLY LEFT BLANK



DUDEK

6680-10

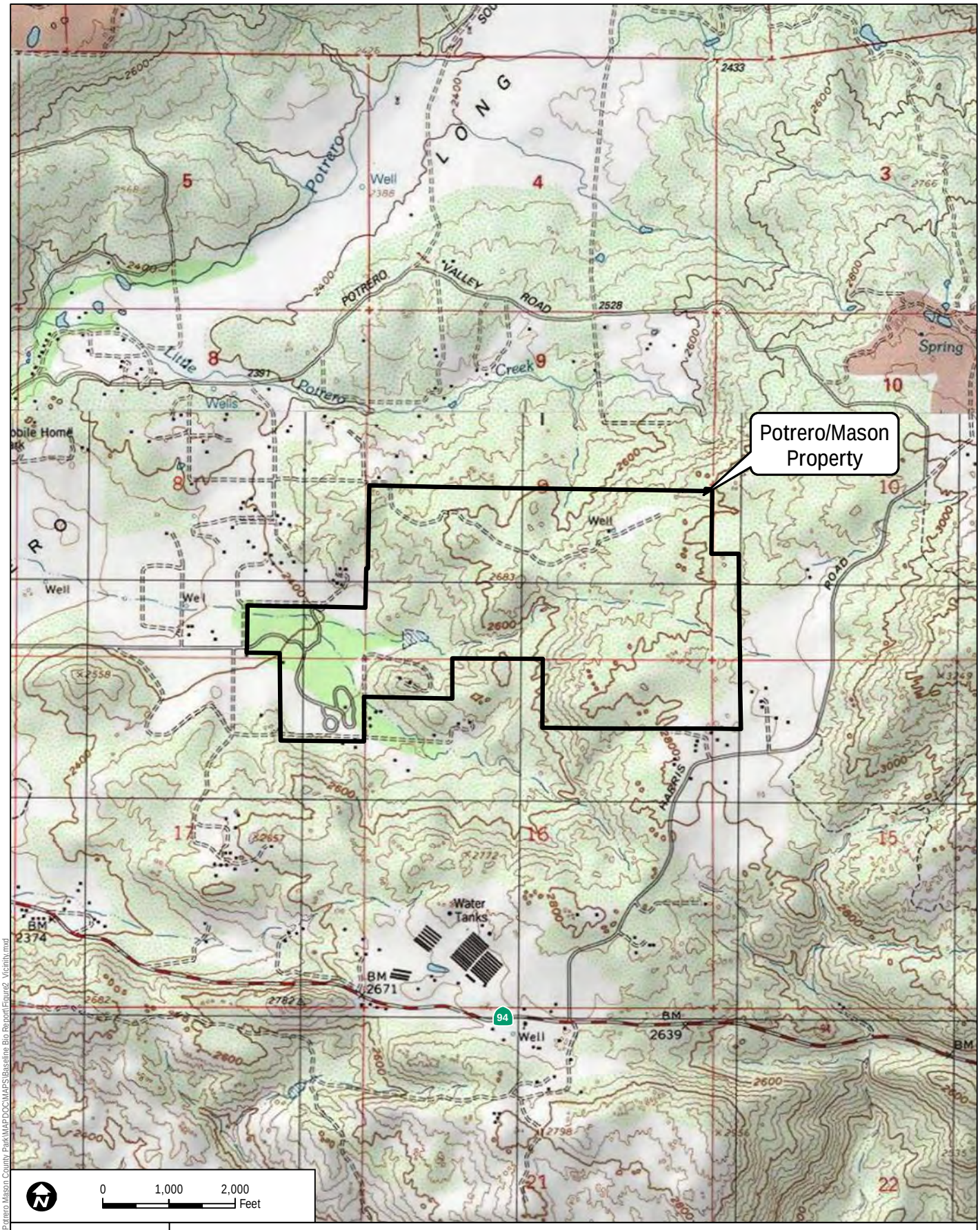
FIGURE 1

Regional Map

Potrero Mason Property - Baseline Biodiversity Survey

Z:\Projects\6680\0\6680010 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure1_Regional.mxd

INTENTIONALLY LEFT BLANK



DUDEK

6680-10

SOURCE: USGS topo 7.5-Minute Series Quadrangle

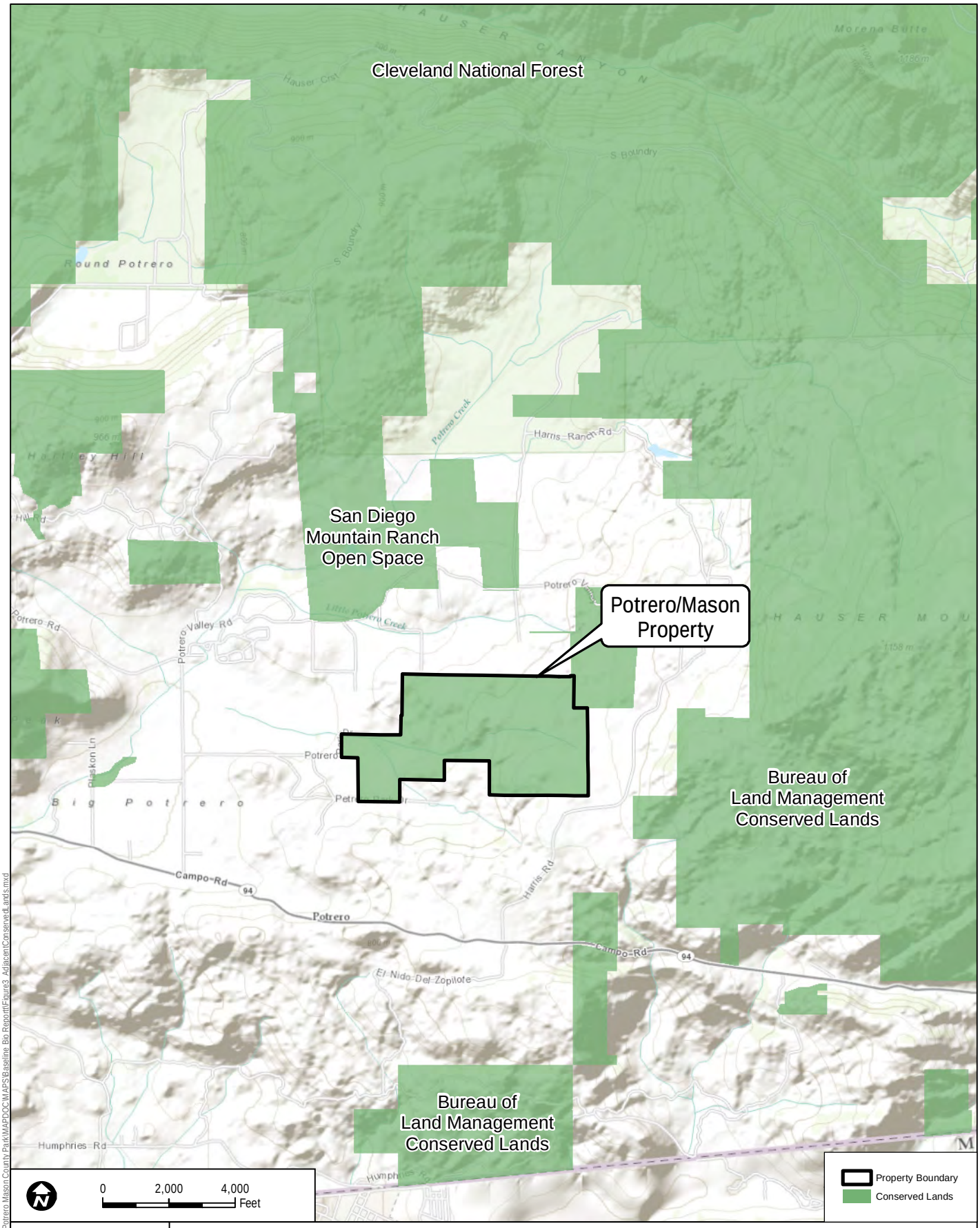
FIGURE 2

Vicinity Map

Potrero Mason Property - Baseline Biodiversity Survey

Z:\Projects\668000\668010 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure2_Vicinity.mxd

INTENTIONALLY LEFT BLANK



Z:\Projects\668000\668010 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure3_AdjacentConservedLands.mxd

DUDEK

6680-10

SOURCE: USGS, SanGIS 2012

FIGURE 3

Adjacent Conserved Lands

Potrero Mason Property - Baseline Biodiversity Survey

INTENTIONALLY LEFT BLANK

2.0 PROPERTY DESCRIPTION

2.1 Project Location

The Property is located within the unincorporated community of Potrero in South-Central San Diego County (Figure 1). Specifically, it is located north of Potrero Park Drive, west of Harris Road, south of Potrero Valley Road, and east of Potrero Park Drive. The Property is mapped on the U.S. Geological Survey (USGS) 7.5-minute Potrero quadrangle: Township 18 South, Range 4 East, Sections 8, 9, 10, 15, 16, and 17 (Figure 2).

The Property is composed of the following Assessor's Parcel Numbers (APNs): 653-111-03, 653-111-06, 653-120-06, 653-120-19, 653-120-20, 653-120-27, 653-120-28, and 654-030-02.

2.2 Geographical Setting

The Property is located in the foothills of the Laguna Mountains of Southern California and is composed of sloping or hilly terrain (the majority of the Property has a slope gradient less than 20º) ranging in elevation from approximately 725 to 870 meters (2,380 to 2,853 feet) above mean sea level (AMSL).

The topography of the Property is determined primarily by proximity to the Peninsular Range, which creates relatively hilly terrain. The Property is situated between Hauser Mountain to the east and Potrero Peak to the west and is characterized by two drainages that run east to west and converge near the western border.

2.3 Geology and Soils

The Property contains six soil types belonging to five soil series: Cieneba rocky coarse sandy loam, Fallbrook sandy loam and rocky sandy loam, Greenfield sandy loam, Mottsville loamy coarse sand, and Tollhouse rocky coarse sandy loam (Figure 4) (USDA 2010). A brief description of each soil series and the associated soil type that occurs in the Property is provided as follows.

Cieneba Series

Cieneba rocky coarse sandy loam is the representative of the Cieneba series mapped within the south-central and northeastern regions of the Property (Figure 4). Cieneba soils are very shallow, excessively drained, and characterized by low to medium runoff and moderately rapid permeability. Cieneba soils are found in uplands with slopes varying from 9% to 85%. Typical vegetation found on this soil series is primarily chaparral. The Cieneba series occurs in the Coast Range of the Central and South-Central California foothills of the Sierra Nevada (NRCS 2012).

Fallbrook Series

The Fallbrook series is represented by two soil types: Fallbrook sandy loam and Fallbrook rocky sandy loam. Fallbrook soils are deep, well-drained soils formed from granitic rocks. Fallbrook soils are found on rolling hills, and native vegetation typically consists of chaparral (NRCS 2012). However, agriculture, including the growth of irrigated avocados or citrus plants, and grazing are also common on Fallbrook soils (NRCS 2012). Within the Property, Fallbrook rocky sandy loam is found throughout much of the central and southeastern regions of the Property and in the west-central region (Figure 4). Fallbrook sandy loam is found in the northwest region of the Property (Figure 4).

Greenfield Series

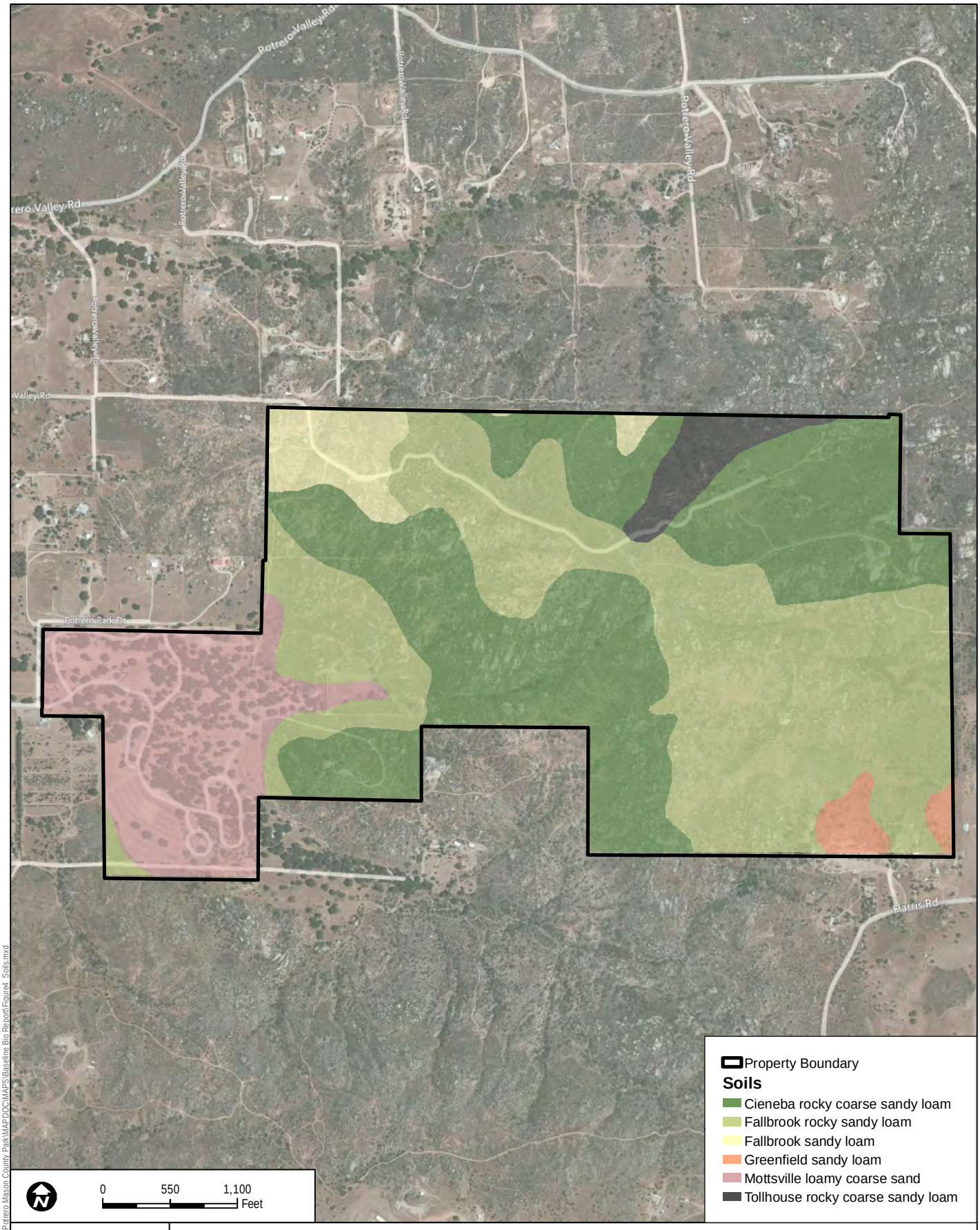
Greenfield sandy loam is found within the extreme southeastern corner of the Property (Figure 4). These soils are found on alluvial fans and terraces and are characterized as deep, well-drained soils formed from coarse alluvium derived primarily from granitic sources (NRCS 2012). Annual grasses, forbs, and scattered oaks are common vegetation types found on Greenfield soils. This series occurs throughout the interior and coastal valleys of Central and Southern California (NRCS 2012).

Mottsville Series

Mottsville loamy coarse sand is the representative soil type of the Mottsville series found within the Property. Similar to the Greenfield series, Mottsville soils are formed in alluvium derived from granitic rocks. Mottsville soils are very deep and excessively drained; they occur on alluvial fans, fan remnants, and fan aprons. Mottsville loamy coarse sand is mapped within the western region of the Property (Figure 4). Typical vegetation communities associated within this soil type are big sagebrush (*Artemisia tridentata*), antelope bitterbrush (*Purshia tridentata*), Anderson's peachbrush (*Prunus andersonii*), and needlegrass (*Stipa* spp.) (NRCS 2012).

Tollhouse Series

Tollhouse rocky coarse sandy loam is a shallow, excessively drained soil formed in material weathered from granitic rocks and is found on very steep mountain slopes (NRCS 2012). Rock outcrops are common within this soil series. Tollhouse soils are found in the northeastern area of the Property (Figure 4). Native vegetation communities that are typically found within Tollhouse soils include manzanita (*Arctostaphylos* spp.), interior live oak (*Quercus wislizenii*), ceanothus (*Ceanothus* spp.), and buckeye (*Aesculus californica*) chaparrals.



Z:\Projects\6680000\6680010 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure4_Soils.mxd

DUDEK

6680-10

SOURCE: Bing, USDA Soils 2010

FIGURE 4

Soils Map

Potrero Mason Property - Baseline Biodiversity Survey

INTENTIONALLY LEFT BLANK

2.4 Climate

As with most of Southern California, the regional climate in the vicinity of the Property is influenced by the Pacific Ocean and is frequently under the influence of a seasonal, migratory, subtropical high-pressure cell known as the Pacific High (WRCC 2012a). Wet winters and dry summers with mild seasonal changes generally characterize the Southern California climate. This climate pattern is occasionally interrupted by extreme periods of hot weather, winter storms, or dry, easterly Santa Ana winds (WRCC 2012a). However, a continental desert regime prevails in the vicinity of the Property. Warmer summers, colder winters, greater daily and seasonal temperature ranges, and lower relative humidity are characteristic of continental, as opposed to maritime, locales. The location of the Property within the foothills of the Peninsular Range and just west of the Colorado Desert contributes to these climatic factors.

The average high temperature calculated from July 1948 to June 2012 for the surrounding Campo area is approximately 76.3º Fahrenheit (F), with higher temperatures in summer and early fall (June through September) reaching up to an average of 93.8°F (WRCC 2012b). The average low temperature is 40.79°F, and winter low temperatures are routinely around 30°F. The mean annual precipitation for the area is 14.83 inches, with the most rainfall concentrated in the months of January (3.04 inches), February (2.77 inches), and March (2.30 inches) (WRCC 2012b). Rainfall is much less during the summer months of May (0.32 inches), June (0.06 inches), and July (0.33 inches) (WRCC 2012b). Snow is periodically reported in Campo, with an annual average snowfall of 0.6 inches. In Campo, the 2011–2012 season (July through June) cataloged 15.84 inches of rain, while the 2010–2011 season cataloged 20.85 inches of rain (WRCC 2012b).

2.5 Hydrology

The Property is located within the Tijuana Watershed (Figure 5). Water within the Property generally drains and eventually flows into the Potrero Creek. This creek discharges into the Tijuana River and flows southwest from the Property to the Tijuana Estuary in Imperial Beach, California, (Project Clean Water 2012). The majority of the watershed is located within Mexico, with approximately 25% occurring in California (Project Clean Water 2012).

The Tijuana River Watershed is the most severely impacted watershed in San Diego County. Impairment of the watershed is primarily due to non-point agricultural sources on the California side of the border and various point and non-point sources within Mexico (Project Clean Water 2012).

The watershed is an important area for wildlife. The Tijuana Estuary, in particular, provides habitat for many endangered or otherwise special-status species and has been designated a National Estuarine Sanctuary. Ongoing efforts are underway to restore the estuary and limit impacts from pollution (Project Clean Water 2012).

2.6 Fire History

Based on historical fire perimeter data from the California Department of Forestry and Fire Protection (CAL FIRE) (FRAP 2012)[1], three fires have affected the Property (Figure 6). Table 1 presents the fire interval data for the Property. An unnamed fire occurred in 1942 and burned approximately 12% of the Property. The Bell Fire occurred in 2001 and burned only a small percentage of the Property in the southeast. The Harris Fire, which occurred in 2007, burned the entirety of the Property (CAL FIRE 2012).

Table 1
Potrero Mason Property Fire Intervals

Fire Year*	Fire Name	Interval (years)	Acreage Burned	Percent of Property Burned**
1942	No Name	—	61.1	12%
2001	Bell	59	5.7	1%
2007	Harris	6	480	100%

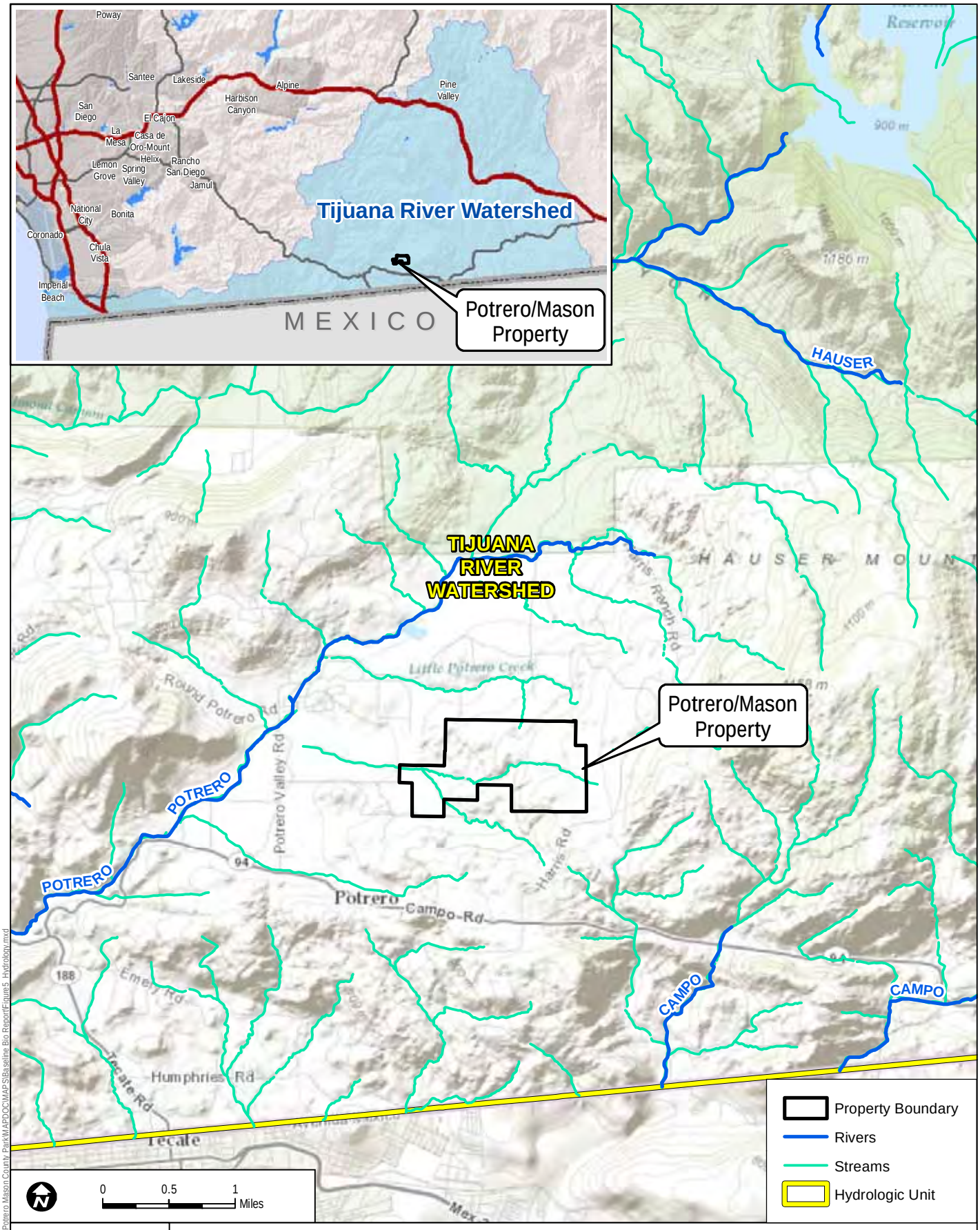
*FRAP 2012
**Based on the 480-acre total acreage of the Property

2.7 Trails

The western region of the Property is currently open for public access. There are campgrounds, picnic areas, and facilities. Currently, one hiking trail (Nature Trail) exists east of the coast live oak woodland in the south-central area of the Property (Figure 7). Trails have not been established within the rest of the Property, although a few dirt roads are found throughout. The principal dirt road (North Trail) within the northern region of the Property provides east–west access.

Dudek will prepare a Public Access Plan for the Property, including a more detailed discussion of trails located within the Property and proposed new trails.

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



Z:\Projects\6680010\6680010 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure5_Hydrology.mxd

DUDEK

6680-10

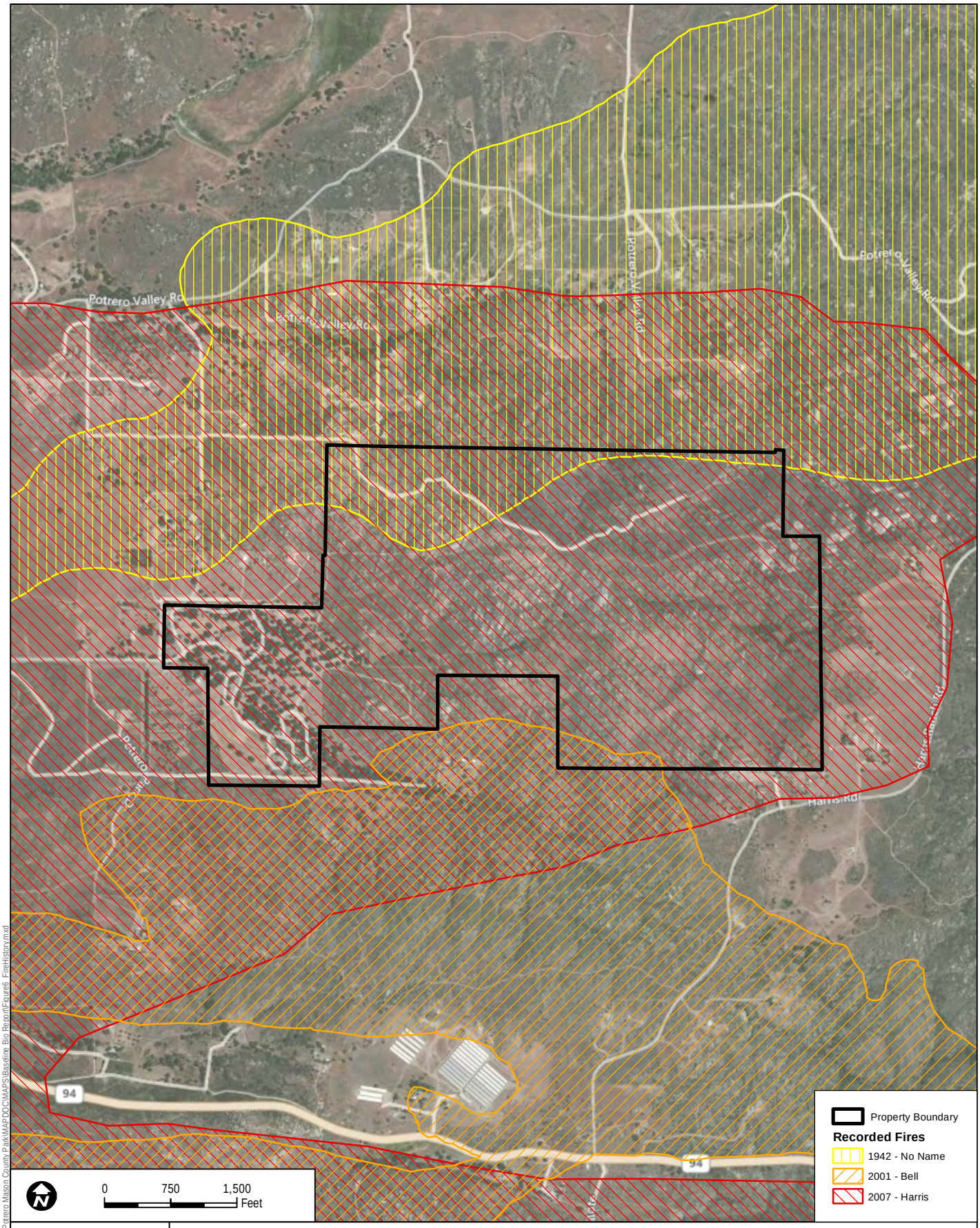
SOURCE: USGS 2012, SanGIS 2012

FIGURE 5

Hydrology Map

Potrero Mason Property - Baseline Biodiversity Survey

INTENTIONALLY LEFT BLANK



Z:\Projects\668000\668010 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure6_FireHistory.mxd

DUDEK

6680-10

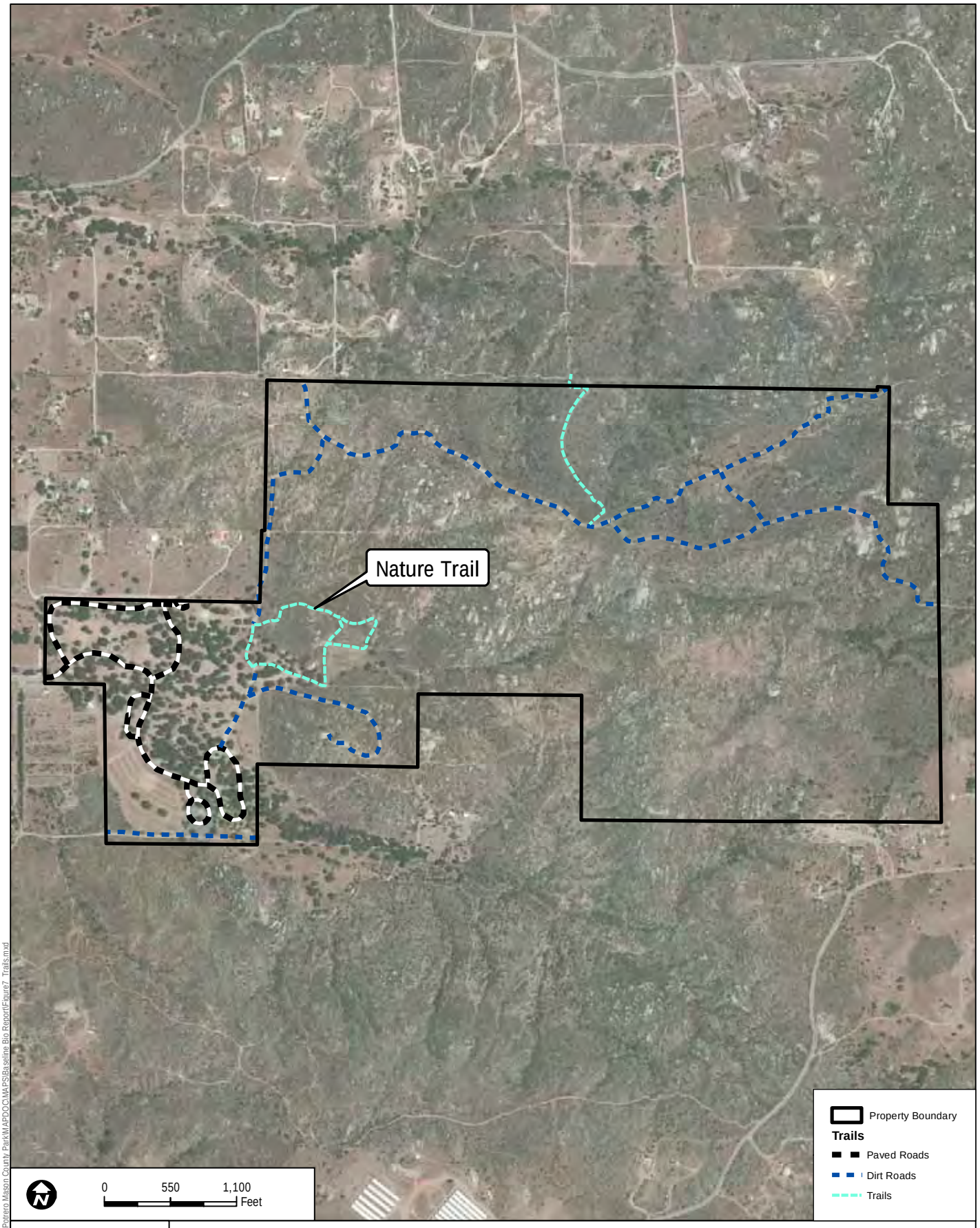
SOURCE: Bing, SanGIS 2012

FIGURE 6

Fire History

Potrero Mason Property - Baseline Biodiversity Survey

INTENTIONALLY LEFT BLANK



DUDEK

SOURCE: Bing 2012

FIGURE 7
Trails Map

6680-10

Potrero Mason Property - Baseline Biodiversity Survey

Z:\Projects\6680\0\6680\0-6680\0 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure7_Trails.mxd

INTENTIONALLY LEFT BLANK

3.0 METHODS

Dudek biologists conducted biological surveys from March 2012 through September 2012. Table 2, Schedule of Surveys, shows the surveys conducted and the survey conditions. Surveys included vegetation communities mapping; rare plant surveys; invasive non-native plant species mapping; surveys and habitat assessment for Quino checkerspot (*Euphydryas editha quino*) and Hermes Copper (*Lycaena hermes*) butterflies; herpetological pitfall array surveys; herpetological coverboard surveys; diurnal and nocturnal avian point count surveys; small mammal trapping; passive acoustical bat surveys; and medium and large mammal camera surveys.

Table 2
Schedule of Surveys

Date	Time	Personnel	Survey Type	Conditions
03/23/12	07:30–19:00	ACT	Vegetation mapping, rare plant survey, and invasive species mapping	0% cc; wind 2–10mph; 58°F to 65°F
04/24/12	10:30–14:30	PCS	Butterfly survey	10–30% cc; wind 2–5mph; 64°F to 70°F
04/26/12	11:11–12:25	EAW, DAM	Avian point count survey (morning survey)	90% cc; drizzle; wind 1–7 mph; 64°F to 65°F
04/26/12	20:00–21:05	EAW, DAM	Avian point count survey (evening survey)	50–10% cc; drizzle; wind 0–3 mph; 58°F to 60°F
5/14/12	08:10–18:00	ACT, KCD	Rare plant survey and invasive species mapping	0% cc; wind 0–5 mph; 57°F
5/22/12–6/4/12	NR	PCS	Medium and large mammal camera surveys	NR
05/24/12	10:25–11:46	EAW, DAM	Avian point count survey (morning survey)	0–10% cc; wind 4 mph; 64°F to 68°F
05/24/12	NR	EAW, DAM	Herpetological coverboard survey	NR
05/24/12	20:13–21:15	EAW, DAM	Avian point count survey (evening survey)	10–50% cc; wind 2–4mph; 51°F to 55°F
06/5/12	12:40–14:10	EAW	Herpetological pitfall array survey	0% cc; wind 2–5 mph; 72°F to 73°F
6/6/12	13:30–14:25	EAW	Herpetological pitfall array survey	0% cc; wind 0–4 mph; 86°F
6/7/12	15:00–16:20	EAW	Herpetological pitfall array survey	0% cc; wind 3–6 mph; 87°F
6/8/12	15:15–16:50	EAW	Herpetological pitfall array survey	0% cc; wind 0–5 mph; 88°F
6/13/12	07:30–17:00	ACT	Rare plant survey and invasive species mapping	100–0% cc; wind 0–6 mph; 62°F to 75°F
06/25/12	10:29–11:36	EAW, DAM	Avian point count survey (morning survey)	0% cc; wind 0–4 mph; 74°F to 75°F
06/25/12	NR	EAW, DAM	Herpetological coverboard survey	NR
06/25/12	20:27–21:29	EAW, DAM	Avian point count survey (evening survey)	0% cc; wind 0 mph; 62°F to 63°F

Table 2
Schedule of Surveys

Date	Time	Personnel	Survey Type	Conditions
6/26/12–7/10/12	NR	PCS	Medium and large mammal camera surveys	NR
7/10/12	10:16–11:20	EAW	Herpetological pitfall array survey	20%–10% cc; wind 0–2 mph; 88°F to 97°F
7/11/12	13:25–14:15	EAW	Herpetological pitfall array survey	40%–85% cc; wind 2–6 mph; 96°F
7/12/12	07:26–08:13	DAM	Herpetological pitfall array survey	100% cc; wind 2–10 mph; 73°F to 77°F
7/13/12	07:26–08:51	DAM	Herpetological pitfall array survey	80%–90% cc; wind 0–5 mph; 66°F to 68°F
7/25/12	NR	DAM	Herpetological coverboard survey	NR
7/30/12–8/6/12	NR	PML	Acoustical bat survey-Anabat location 1 (west)	NR
8/6/12–8/8/12	NR	TSL	Small mammal trapping (Pass 1)	Clear skies; 63°F to 64°F
8/7/12–8/15/12	NR	PML	Acoustical bat survey-Anabat location 2 (east)	NR
7/31/12–8/14/12	NR	PCS, EAW	Medium and large mammal camera surveys	NR
8/14/12	12:15–13:20	EAW	Herpetological pitfall array survey	<5%–40% cc; wind 3–8 mph; 98°F
8/15/12	12:20–12:55	DAM	Herpetological pitfall array survey	70% cc; wind 1–5 mph; 82°F to 87°F
8/16/12	11:35–12:20	DAM	Herpetological pitfall array survey	70%–90% cc; wind 4–9 mph; 88°F to 91°F
8/17/12	15:10–16:30	DAM	Herpetological pitfall array survey	80%–60% cc; wind 0–4 mph; 84°F
8/27/12	08:30–NR	ACT, KCD	Rare plant survey; invasive species mapping	100% cc; wind 0–2 mph; 83°F
9/4/12–9/6/12	NR	TSL	Small mammal trapping (Pass 2)	Clear skies; 54°F to 60°F
9/10/12–9/17/12	NR	PML	Acoustical bat survey-Anabat location 1 and 2 (west/east)	NR

Personnel Key:
ACT: Andy Thomson
DAM: Danielle Mullen
EAW: Emily Wier
PCS: Patricia Schuyler
PML: Paul Lemons
TSL: Thomas Liddicoat
cc = Cloud cover
NA = Not Applicable
NR = Not Recorded

A review of state and federal databases for existing biological resource information for the Property was conducted to provide baseline information regarding special-status biological resources potentially occurring on the Property and in the surrounding area. The following sources were reviewed for pertinent information prior to conducting the baseline biological

diversity surveys: the California Natural Diversity Database (CNDDB), information provided by the CDFG (2011a-b, 2012a-c), and the California Native Plant Society's (CNPS's) *Inventory of Rare and Endangered Vascular Plants* (CNPS 2012).

Survey Limitations

Biological surveys within the Property were conducted from March to September 2012. As such, many wildlife species that occur in the area during fall and winter seasons, including migratory birds, were not captured during this survey. Additional surveys may be desired at a later date to establish a more thorough inventory of wildlife species. Focused plant surveys were conducted in March, May, June, and August to correspond with the blooming periods of the special-status species with the highest potential to occur within the Property. Not all plant species would have bloomed during these survey passes, and it is possible that detection of some special-status plant species may not have been possible due to the timing of the focused plant surveys and variable seasonal conditions that influence growth and flowering (e.g., rainfall and temperatures).

Coverboard sampling is widely recognized as an effective survey technique for reptiles and amphibians, especially during winter months when cold-blooded animals actively seek out shelter (Nussbaum et al. 1983). Since the surveys for the Property occurred during summer months, the species diversity obtained during coverboard surveys was much lower than would be anticipated during winter months.

3.1 Vegetation Communities/Habitat

3.1.1 Vegetation Communities Mapping

Vegetation communities and land cover types were mapped in the field directly onto 200-scale (1 inch = 200 feet) base maps of the Property using 1-foot resolution color aerial imagery from 2012 (Bing 2012). Mapping of the Property included a 100-foot buffer pursuant to County of San Diego guidelines (County of San Diego 2010a). Vegetation surveys were conducted throughout the Property both on foot and using vehicles where access was available. Vegetation community classification was based on two separate systems, including the Holland (1986) (as modified by Oberbauer et al. 2008) classification system and the Vegetation Classification Manual for Western San Diego County (VCM) (SANDAG 2011). The field mapping was conducted according to the VCM and then cross-walked to the Holland-Oberbauer classification system. Following the completion of fieldwork, vegetation polygons were scanned and digitized using ArcGIS, and a GIS (Geographic Information System) coverage was created. Acreage calculations of vegetation communities and land cover types were determined using ArcGIS. Vegetation community classifications used in this report follow the VCM.

3.2 Plants

All plant species encountered during the field surveys were identified and recorded. Latin names follow the "Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California" (Jepson Flora Project 2012), and common names follow the USDA Natural Resources Conservation Service Plants Database (USDA 2012). A list of plant species observed in the Property is provided in Appendix A.

3.2.1 Floristic Surveys

Special-Status/Rare Plant Surveys

Special-status biological resources present or potentially present in the Property were identified through a literature search using the CNDDB (CDFG 2012b-c) and the *Inventory of Rare and Endangered Vascular Plants* (CNPS 2012). Special-status plant species considered in this report are those (a) listed by federal and/or state agencies, proposed for listing as threatened or endangered, or are candidate species; (b) assigned a California Rare Plant Rank (CRPR) (formerly known as the CNPS List); (c) listed on the County of San Diego rare species list (County of San Diego 2009a); or (d) proposed for coverage under the Draft East County MSCP (County of San Diego 2009b).

Dudek conducted four surveys to maximize detection of special-status plants within the Property. Based on usual blooming patterns, the first pass was conducted in March 2012 to detect early blooming spring annual species. The second pass was conducted in May and June 2012 to corresponded with the blooming periods of the majority of the potentially occurring special-status plant species. A third survey pass was conducted in August 2012 to detect summer blooming species. Surveyors were prepared with a target list of species that have potential to occur within the Property.

Field survey methods conformed to County of San Diego Department of Planning and Development Services (PDS) *Guidelines for Determining Significance and Report Format and Content Requirements*: *Biological Resources* (County of San Diego 2010a); CNPS Botanical Survey Guidelines (CNPS 2001); *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFG 2000); and *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 1996). All plant species encountered during the field surveys were identified to subspecies or variety, if applicable, to determine sensitivity status.

The potential for special-status plant species to occur on site was evaluated based on the elevation, soils, vegetation communities, and level of disturbance of the site, as well as species status and distribution in the vicinity of the Property and the results of rare plant surveys.

Non-Native Invasive Plant Species Mapping

Locations of non-native invasive plant species were mapped within the Property. The entire Property was surveyed; however, to maximize productivity, locations that were identified as disturbed in the vegetation mapping and areas that are expected to have experienced disturbance in the past due to their proximity to development or other sources of disturbance were prioritized. The focus was on mapping species with the greatest potential to invade native habitats, such as those listed on the California Invasive Plant Council's (Cal-IPC) California Invasive Plant Inventory (2012) with a rating of moderate or high (e.g., Tasmanian bluegum [*Eucalyptus globulus*] and shortpod mustard [*Hirschfeldia incana*]) or species that may not be rated as moderate or high, but are considered to have a localized potential for habitat invasion (e.g., curly dock [*Rumex crispus*]). Ubiquitous species scattered across the site that pose limited potential for invasion into established habitats and that would be impractical to control on an individual basis (e.g., soft brome [*Bromus hordeaceus*]) were not mapped as individual occurrences; however, their presence was noted as components of non-native grasslands mapped on site.

Species locations were mapped with a combination of field Global Positioning System (GPS) mapping and hand mapping on field maps. All collected data were combined into a GIS data layer with points and polygons representing species locations.

3.3 Wildlife

All wildlife species detected during the field surveys by sight, vocalizations, burrows, tracks, scat, and other signs were recorded. Binoculars (10mm×40mm) were used to aid in the identification of observed wildlife. A cumulative list of wildlife species observed by Dudek during the 2012 surveys is presented in Appendix B. Latin and common names of animals follow Crother (2008) for reptiles and amphibians, American Ornithologists' Union (AOU) (2012) for birds, Wilson and Reeder (2005) for mammals, and North American Butterfly Association (NABA) (2001) for butterflies.

The potential for special-status wildlife species to occur on the Property was evaluated based on the elevation, vegetation communities, level of disturbance of each site, status, distribution in the vicinity, and the results of wildlife surveys conducted on site.

3.3.1 Invertebrates

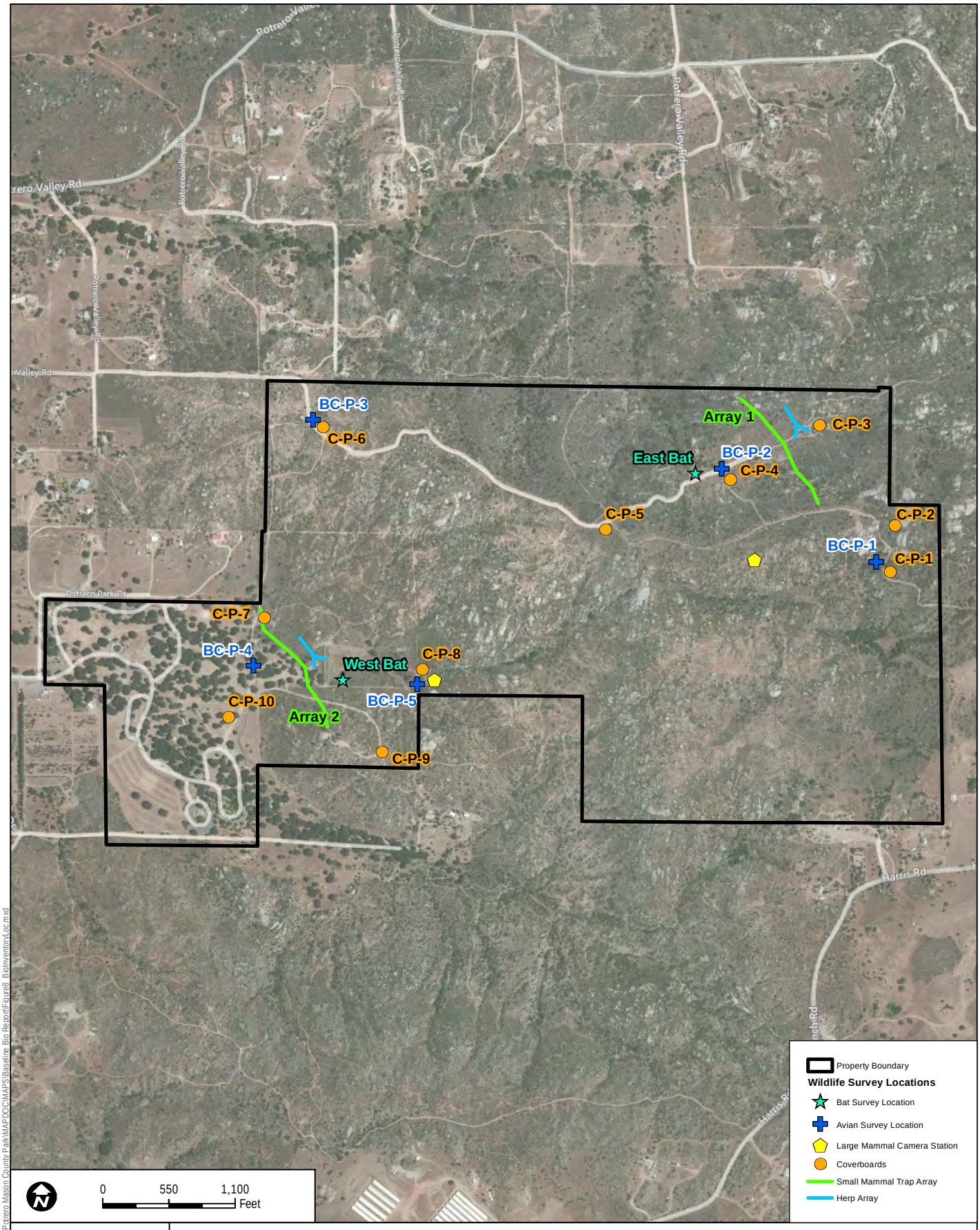
One general butterfly survey, or pass, was performed in the Property in 2012 at the approximate peak of the early spring butterfly activity period to record anecdotal butterfly species observations during the early months of the year. While it was not possible to survey during the absolute peak, the survey was conducted in April 2012 (Table 2). The vegetation map, soils, and previous experience with various special-status butterfly species were used to determine areas that may be suitable for common and special-status butterfly species. Host or nectar plants for certain special-status butterflies (e.g., Quino checkerspot [*Euphydryas editha quino*] or Hermes copper [*Lycaena hermes*]), if observed, were mapped as either a point or polygon location, depending on the size of the population. Areas containing nectar or host plant resources, drainages, ridges, and hilltops, were emphasized during butterfly surveys. It should be noted that the survey for butterflies was conducted from morning through the afternoon period, when it was assumed that more butterflies would be visible; conditions were suitable for butterfly activity. Incidental butterfly observations were also recorded during wildlife surveys and representative photographs were taken of the butterflies observed, if possible.

3.3.2 Herpetofauna

Two methods of surveying for herpetofauna were utilized during surveys of the Property. Both approaches were utilized in order to sample species diversity and abundance, since different trapping methods are utilized for different target species. Coverboard surveys were utilized to survey for slow-moving or burrowing herpetofauna, whereas pitfall trap arrays were targeted towards fast-moving and more active herpetofauna.

A total of 10 coverboard surveys, consisting of 3-foot by 3-foot plywood planks painted brown, were placed in suitable herpetofauna habitats throughout the Property (Figure 8). Coverboards were placed in such a way that a representative array of habitat types were surveyed. Leaf litter or dirt was carefully placed over the coverboard in between survey periods. Coverboards were checked for herpetofauna by carefully lifting up the coverboard and looking for animals and/or signs of their presence and utilizing a stick or rake to carefully comb through soil and leaf litter for other animals. Coverboards were checked for herpetofauna three times during the survey season in the months of May, June, and July 2012 (Table 2).

The second methodology utilized was pitfall trap arrays. Two pitfall trap arrays were constructed on the Property (Figure 8). An attempt was made to install the arrays in locations that provided the greatest amount of potential species diversity.



Z:\Projects\6680010\668010 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure8_BioInventoryLoc.mxd

DUDEK

6680-10

SOURCE: Bing 2012

FIGURE 8

Biological Inventory Locations

Potrero Mason Property - Baseline Biodiversity Survey

INTENTIONALLY LEFT BLANK

The arrays were constructed in accordance with the USGS document "Herpetological Monitoring Using a Pitfall Trapping Design in Southern California" (USGS 2008) and were modified to include snake traps at the end of each arm of the array. Specifically, the arrays consisted of three 15-meter (49-foot) arms of drift fence. Each arm radiated from a central pitfall bucket at approximately 120° increments. Additional pitfall buckets were placed at the center and terminal ends of the array arms. In addition, snake traps (i.e., wire mesh rectangular traps with one-way doors or cylindrical traps with funnels at each end) were installed between the middle and terminal pitfall buckets on the right side of the arm. Drift fencing was keyed into the ground to prevent reptiles and snakes from crawling under it. In addition, an effort was made to minimize the number of creases that would provide reptile refuge between buckets. Typical 5-gallon buckets were used as pitfall traps. The edges of the buckets were flush with or slightly below the ground surface. Bucket lids were fitted with angled wood blocks on their top surfaces, providing an approximately 2-inch gap between the ground surface and the lid to encourage reptiles to crawl under while seeking cover. The lids fit the buckets securely and were protected from deterioration so that the buckets could be sealed off from captures when not in use.

Traps were opened on the first day of the survey and checked over the next four days; traps were closed after the fourth trap check. The arrays were checked, all animals were processed, and all animals were released before daytime temperatures reached levels that could result in animal mortality. All captures were identified and sexed. Data was collected regarding the weight, snout-vent length, total length, sex, and age class of each individual. Finally, each individual was marked with permanent marker near the back of the neck to determine if it was a recapture during that session. No scale clipping, toe clipping, or any other means of permanent marking was performed during this study. After each animal was processed, it was released at a nearby location near shrubs, burrows, or debris; care was taken to ensure that competitors or potential predator/prey species were not released at the same location. Animals that ran from the release site directly into another pitfall trap or snake trap were released without being counted again. Captured small mammals were weighed, identified, photographed, and sexed. Each animal's body length, total length, and ear length were also measured. They were immediately released after processing. Large invertebrates (e.g., tarantulas, scorpions, and Jerusalem crickets [*Stenopelmatus fuscus*]) that fell into the pitfall traps were counted and identified as feasible. Trap arrays were sampled during three periods in summer months of June, July, and August 2012 (Table 2).

Representative photographs were taken of the arrays and animals that were captured.

3.3.3 Birds

Using point counts to track species' presence over time is a standard practice and has been implemented for extended survey periods by a variety of entities, including the Audubon Christmas Bird Count, Point Reyes National Seashore, Partners in Flight, Arizona State University, Florida Monitoring Project, U.S. NPS, California Department of Parks and Recreation Department, USGS, USFWS, and other institutions.

Based on a review of previous point count surveys, it was determined that much variation exists among the numerous point count studies relating to detection radius, distance between stations, season, and amount of time spent at each station. Because the habitats and topographies present within the Property are diverse, a radius of 50 meters (164 feet) was used around each point. This falls well within ranges found within the literature (20 to 400 meters; 66 to 1,312 feet) and allowed greater accuracy of detection and identification than larger radius designs.

Point Count Locations

Point count locations were established in such a way that they covered as many different portions of the Property as possible given the road network constraints, general accessibility, and distribution. In addition, these point locations were distributed to cover all of the Property. No point count location was situated closer than 700 feet to another point. A total of five point count locations were established within the Property (Figure 8). The point count locations were located in chamise chaparral alliance, eucalyptus woodland semi-natural stands, deerweed association, and coast live oak woodland alliance. The center point for each point count location was permanently established in the field by mapping the GPS coordinates and installing a 2-foot section of steel rebar in the soil so that the top 2 inches were visible, flagged, and painted. All rebar and flagging were removed at the end of the final survey. Each avian point count was photographed in the four cardinal compass directions (Appendix C).

Conducting the Point Count Surveys

Each vehicle driven to the point count location traveled no faster than 5 miles per hour within 500 feet of any avian point count location. Upon entering the point count location, the observer stopped the vehicle and turned off the engine. The observer waited for 3 minutes before beginning the sampling period. During the waiting period, the observer filled out the weather conditions portion of the data sheet. After the 3-minute waiting period, the observer noted the time on the data sheet and started the counting session. After 10 minutes, the observer stopped the counting session, packed up any equipment, and continued to the next point count location. Point count locations were counted in the same order each time, starting at approximately the same time relative to sunrise so that future data sets could be compared.

When starting the survey, the observer identified and tallied all birds that were observed (audibly or visually) within the 50-meter (164-foot) point count area. An attempt was made to count birds only once (i.e., minimize counting the same individual more than once) during the time period. Groups of birds (e.g., quail families) were identified, and the number of individuals was noted. Birds detected outside the 50-meter area were noted in a separate column. Birds noted only in flight were recorded as either using the landscape (e.g., swallows and raptors actively foraging and raptors using thermal updrafts) or not (e.g., birds commuting between distant habitat patches off site, such as cormorants over an upland site or birds migrating high overhead). When multiple sightings of a species occurred within a point count area, multiple entries for a species were only included if the observer was reasonably certain that they were different individuals. Only different individuals of a given species were counted. All recorded species in the data sheets are assumed to be separate individuals (e.g., 10 California towhee [*Melozone crissalis*] means that 10 different California towhee were detected). Estimates for large flocks of birds (e.g., blackbirds [*Icteridae* spp.] and European starlings [*Sturnus vulgaris*]) were provided and noted as being estimates in the Notes section of the data sheet. No differentiation between adult and juvenile birds was made during this study. Unidentified birds were identified to the closest taxonomic group, and a description of the species was included within the Notes section of the data sheet.

The observer was as unobtrusive as possible during the point count session. The observer wore drab clothing, did not talk, turned cell phone to "vibrate," and did not try to elicit bird responses by "pishing," using recorded calls, or using any other type of lure.

Nocturnal surveys proceeded in the same manner as the diurnal surveys, with the exception of the use of a moderately powered flashlight to aid identifications.

Once the point count session was finished, all data sheets were gathered, and the data was entered into Excel or Access files for future analysis.

All point count locations were surveyed during the same 24-hour period. Diurnal surveys occurred between 10:25 and 12:00 hours, and nocturnal surveys took place between 20:00 and 21:29 hours. Surveys took place in April, May, and June 2012 (Table 2). Only one day was required per month to cover these areas. Survey timing allowed the detection of both breeding and migratory bird species.

To augment the point count studies, birds identified during the course of other survey work were also included in the species compendium (Appendix B), although their relative abundance was not noted.

3.3.4 Mammals

Small Mammals

Two small mammal trapping arrays were set within the Property (Figure 8). Trapping took place over two rounds, with the first round occurring in August 2012 and the second occurring in September 2012 (Table 2). Each trapping round involved setting two trap arrays (i.e., Array-1 and Array-2) for three consecutive nights; no daytime trapping occurred. The trapping effort was conducted when the weather had been relatively dry for at least 5 days prior to trapping.

Each trap array included two meandering parallel lines (i.e., trap lines A and B) of Sherman live-traps set at approximately 10-meter (32-foot) intervals. Traps were sign-set (i.e., set at burrow entrances, runs, woodrat [*Neotoma* spp.] nests, or rock outcrops) to the extent feasible in order to capture the greatest species diversity possible. In each trap array, the trap lines were set parallel approximately 7 meters (23 feet) apart. Each trap line consisted of 20 traps for a total of 40 traps set per night, covering approximately 200 meters (656 feet) of distance. Meandering trap lines were set to sample the widest area possible and to obtain greater species diversity. (e.g., interface between community types and areas of microhabitat changes). The location of each trap was indicated using GPS and marked in the field using whisker nails and flagging tape.

Trap arrays were set and baited (with Quaker Oats) each evening before dusk and were checked the following morning near dawn before daytime temperatures reached levels that could result in animal mortality. All captured animals were processed (i.e., data collected regarding the weight, ear length, hind foot length, sex, age class, and sexual maturity of the individual), identified to species, and marked with a semi-permanent marker on their abdominal fur to determine if they were recaptured. No ear notching, toe clipping, fur cutting, micro-chipping, or any other means of permanent marking was performed during this trapping study. After the captured animal was processed, it was carefully released at the capture location. All traps that did not capture an animal and remained set (i.e., not sprung/ closed) during the morning checks were sprung/closed so that no additional animals could be captured during the day. Representative photographs were taken of the trap arrays. Photos were taken of all captured mammals and reviewed by Dudek Senior Biologist Phil Behrends.

In addition to the species captured during the trapping, small mammal species identified through other surveys (e.g., pitfall arrays and nocturnal surveys) were included in the species compendium (Appendix B).

Bats

Anabat technologies were used to identify foraging and roosting bats present within the Property. Prior to conducting bat habitat assessment and acoustical surveys, a review of the literature of bats in California was conducted to identify species with potential to occur within the Property. All areas identified as having high potential for bat roosting and foraging that allowed vehicular access were surveyed using the Anabat bioacoustics survey system.

Passive acoustic recording of bat calls was conducted at two monitoring locations within the Property (Figure 8). Dudek Biologist Paul Lemons conducted a site reconnaissance survey to further refine the monitoring locations where it was presumed that bat activity would be highest based on localized topography and presence of drainages. Following the reconnaissance survey, the Anabat microphone was attached to a pole, which was then hung from a tree at each location. Locations were chosen at different habitats identified as feasible and were set at least 305 meters (1,000 feet) apart. The Anabat units were deployed and run continuously for approximately one week at each location. Two survey passes were conducted during July, August, and September 2012 (Table 3).

Table 3
Schedule of Passive Acoustic Monitoring

Location	Dates of Deployment	Total Number of Survey Nights
West	7/30/12–8/6/12; 9/10/12–9/17/12	8 8
East	8/7/12–8/15/12; 9/10/12–9/17/12	8 8

After completion of these surveys, the methods of O'Farrell et al. (1999) were used to identify species; methods are based on frequency characteristics, call shape, and comparison with a comprehensive library of vocal signatures developed by O'Farrell and colleagues. Thus, species richness (i.e., number of species verified as present) was obtained for each survey location. An index of abundance (IA), or the magnitude of each species' contribution to spatial use, was obtained using the sum of 1-minute time increments for which a species was detected as present divided by the number of nights of sampling (Miller 2001). Species were identified by O'Farrell Biological Consulting LLC for Dudek.

Representative photographs were taken of the bat survey locations (Appendix F).

Medium to Large Mammals

Dirt trails and roads cross through the Property and function as wildlife corridors. Therefore, two baited motion-sensing cameras were installed within the Property (Figure 8). Each camera was set where it was accessible and protected from the public but placed near potential higher-use movement areas (e.g., dirt roads leading to important resources, such as canyons or creeks). The ground in front of the camera was baited with a scent lure, such as Gusto, and each camera was set so that the bait station and travel path were covered. Cameras were set in place for 2 weeks per month, and photographs were downloaded, the bait refreshed, and batteries checked at approximately 1-week intervals. Camera stations were installed and run in May/June, June/July, and July/August 2012 (Table 2).

Following the camera study, all photographs were reviewed by at least two Dudek biologists to determine species and number present. All data, including time and date of photograph, species captured, and moon phase, were cataloged on an excel spreadsheet. Example photographs of species captured are included in Appendix F.

4.0 RESULTS AND DISCUSSION

4.1 Vegetation Communities/Habitat

Vegetation and land cover communities present within the Property were mapped based on the VCM and crosswalked with the Holland/Oberbauer classification system. There are 15 plant alliances, associations, or semi-natural stands present within the Property (Table 4). Figure 9a shows the VCM code distribution of vegetation communities and land covers within the Property; Figure 9b shows the Holland/Oberbauer code distribution. Descriptions of the vegetation community follow the VCM code. The VCM does not include unvegetated habitat (e.g., disturbed land or urban/developed areas); therefore, unvegetated habitat was described using the Holland/Oberbauer code distribution.

The following vegetation community and land cover descriptions for the Property follow the VCM codes.

Eucalyptus Woodland Semi-Natural Stands (3.2)

Although not recognized as a native plant community, Eucalyptus Woodland Semi-Natural Stands is a distinct "naturalized" vegetation type that is fairly widespread in Southern California and is considered a woodland habitat. It typically consists of monotypic stands of introduced Australian eucalyptus trees (*Eucalyptus* spp.) (SANDAG 2011). The understory is either depauperate or absent owing to shade and the possible allelopathic (toxic) properties of the eucalyptus leaf litter (SANDAG 2011). Although eucalyptus woodlands are of limited value to most native plants and animals, they frequently provide nesting and perching sites for several raptor species.

Eucalyptus Woodland Semi-Natural Stands comprise 0.17 acres within the Property and is mapped in the northeastern portion of the Property (Figure 9a).

Coast Live Oak Woodland Alliance (3.6)

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

There are 46.04 acres of coast live oak woodland mapped within the Property. This habitat community is mapped mainly throughout the southwestern portion of the Property, but also in four other smaller areas along drainages in the southeastern region (Figure 9a).

Chamise Chaparral Alliance (4.1)

The chamise chaparral alliance is widespread throughout California and is dominated by chamise (*Adenostoma fasciculatum*) in the shrub canopy, along with other shrubs, such as manzanita (*Arctostaphylos* sp.), California yerba santa (*Eriodictyon californicum*), oaks (*Quercus* sp.), and sages (*Salvia* sp.) (SANDAG 2011). Other shrubs may occur as associates, co-dominants, or sub-dominants. Due to recent high intensity and frequent fires in San Diego County, much of this alliance is at risk of conversion to post-fire vegetation stands of laurel sumac or deerweed or to non-native grasslands (SANDAG 2011).

There are 153.9 acres of chamise chaparral alliance within the Property, and this alliance is the largest vegetation community found within the Property. This alliance is found primarily in the northern and eastern regions of the Property and is frequently surrounded by other associations within this alliance (Figure 9a).

Chamise Chaparral–Coastal Sage Scrub Association (4.1.2)

The chamise chaparral–coastal sage scrub association is widespread throughout California and is dominated by chamise in the shrub canopy, along with other sclerophyllous, woody chaparral species and drought deciduous, malacophyllous sage scrub species (SANDAG 2011). Characteristic species include chamise, coastal sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and laurel sumac (SANDAG 2011).

There are 2.4 acres of chamise chaparral–coastal sage scrub association within the southeastern area of the Property (Figure 9a).

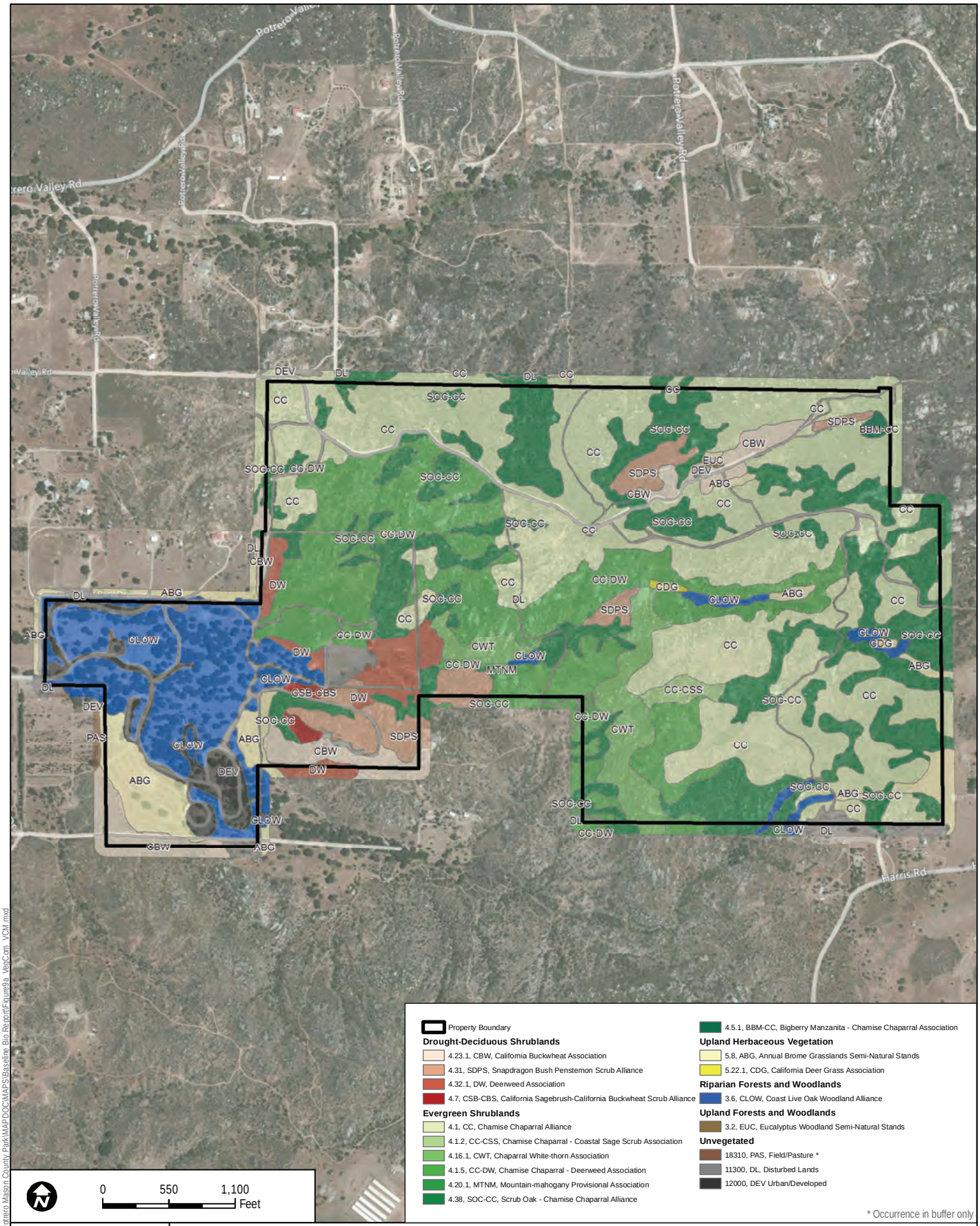
Table 4
Vegetation Communities and Land Covers[1]

VCM Code	VCM Alliance/Association	VCM Common Name	Holland Code	Holland Classification	Acres on Site[1]
Riparian Forests and Woodlands					
3.6	*Quercus agrifolia* Alliance	Coast Live Oak Woodland Alliance	71160	Coast Live Oak Woodland	46.04
				Riparian Forests and Woodlands Total	*46.04*
Upland Forests and Woodlands					
3.2	*Eucalyptus (globulus, camaldulensis)* Semi-Natural Stands	Eucalyptus Woodland Semi-Natural Stands	79100	Eucalyptus Woodland	0.17
				Upland Forests and Woodlands Total	*0.17*
Evergreen Shrublands					
4.1	*Adenostoma fasciculatum* Alliance	Chamise Chaparral Alliance	37200	Chamise Chaparral	153.90
4.1.2	*Adenostoma fasciculatum–(Eriogonum fasciculatum Artemisia californica, Salvia mellifera)* Association	Chamise Chaparral–Coastal Sage Scrub Association	37G00	Coastal Sage–Chaparral Transition	2.40
4.1.5	*Adenostoma fasciculatum–Lotus scoparius* Association	Chamise Chaparral–Deerweed Association	37200	Chamise Chaparral	79.02
4.5.1	*Arctostaphylos glauca–Adenostoma fasciculatum* Association	Bigberry Manzanita–Chamise Chaparral Association	37130	Northern Mixed Chaparral	0.82
4.16.1	*Ceanothus leucodermis* Association	Chaparral Whitethorn Association	37120	Southern Mixed Chaparral	16.36
4.20.1	*Cercocarpus minutiflorus* Association	Mountain Mahogany Provisional Association	37120	Southern Mixed Chaparral	0.36
4.38	*Quercus berberidifolia–Adenostoma fasciculatum* Alliance	Scrub Oak Chaparral–Chamise Chaparral Alliance	37900	Scrub Oak Chaparral	94.30
				Evergreen Shrublands Total	*347.16*

Table 4
Vegetation Communities and Land Covers[1]

VCM Code	VCM Alliance/Association	VCM Common Name	Holland Code	Holland Classification	Acres on Site[1]
Drought-Deciduous Shrublands					
4.23.1	*Eriogonum fasciculatum* Association	California Buckwheat Association	32500	Diegan Coastal Sage Scrub	13.44
4.31	*Keckiella antirrhinoides* Alliance	Snapdragon Penstemon Scrub Alliance	37120	Southern Mixed Chaparral	15.52
4.32.1	*Lotus scoparius* Association	Deerweed Association	32000/37000	Coastal Scrub/Chaparral	9.65
4.7	*Artemisia californica–Eriogonum fasciculatum* Alliance	California Sagebrush–California Buckwheat Scrub Alliance	32500	Diegan Coastal Sage Scrub	1.70
				Drought-Deciduous Shrublands Total	*40.31*
Upland Herbaceous Vegetation					
5.8	*Bromus (diandrus, hordaceus)–Brachypodium distachyon* Semi-Natural Stands	Annual Brome Grasslands Semi-Natural Stands	42200	Non-Native Grassland	15.84
5.22.1	*Muhlenbergia rigens* Association	California Deer Grass Association	42400	Foothill/Mountain Perennial Grassland	0.50
				Upland Herbaceous Vegetation Total	*16.34*
Unvegetated					
N/A	*N/A*	N/A	11300	Disturbed Land	17.42
N/A	*N/A*	N/A	12000	Urban/Developed	12.62
				Unvegetated Total	*30.04*
				Grand Total	**480.06**

[1] Does not include 100-foot buffer acreage



Z:\Projects\668000\668010 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure9a_VegCom_VCM.mxd

DUDEK

6680-10

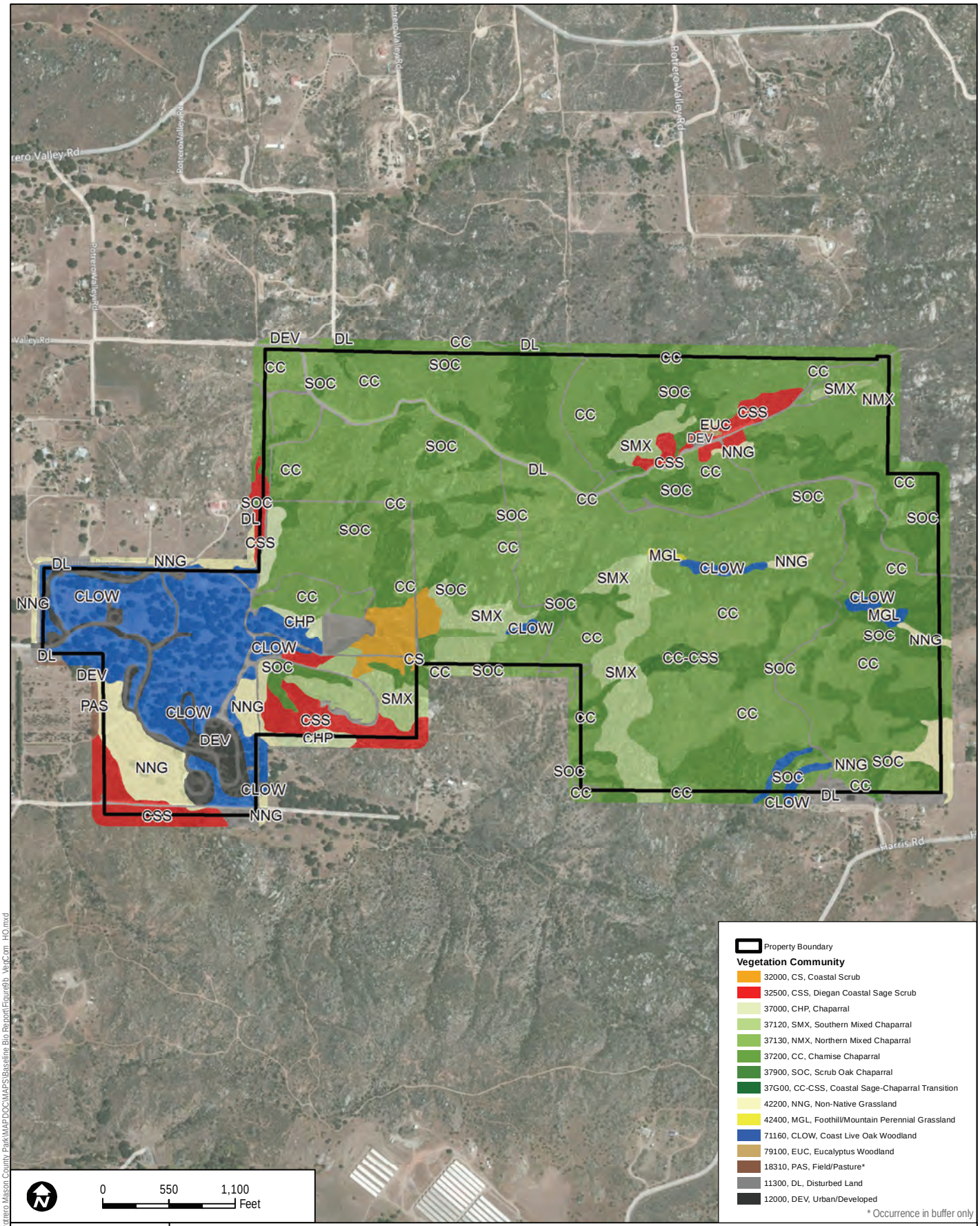
SOURCE: Bing 2012

FIGURE 9a

Vegetation Communities and Land Cover Types (VCM)

Potrero Mason Property - Baseline Biodiversity Survey

INTENTIONALLY LEFT BLANK



SOURCE: Bing 2012

DUDEK

6680-10

FIGURE 9b

Vegetation Communities and Land Cover Types (Holland)

Potrero Mason Property - Baseline Biodiversity Survey

Z:\Projects\6680000\6680010 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure9b_VegCom_HO.mxd

INTENTIONALLY LEFT BLANK

Chamise Chaparral–Deerweed Association (4.1.5)

The chamise chaparral–deerweed association is characterized by more open cover than other associations within this alliance and is composed of chamise and deerweed (*Acmispon glaber* ssp. *glaber*) (SANDAG 2011). It is a transitional association to other chaparral types that usually occurs due to fire or other disturbance. Other species found at low densities within this association include laurel sumac, California sagebrush, peak rush rose (*Helianthemum scoparium*), and caterpillar phacelia (*Phacelia cicutaria*) (SANDAG 2011).

The chamise chaparral–deerweed association is mapped as 79.02 acres within the Property, mostly in the west-central and central regions of the Property (Figure 9a).

Bigberry Manzanita–Chamise Chaparral Association (4.5.1)

Bigberry manzanita–chamise chaparral association is comprised of a dense mix of shrubs, usually bigberry manzanita (*Arctostaphylos glauca*), scrub oak (*Quercus berberidifolia)*, chamise, and ceanothus (*Ceanothus* sp.) (SANDAG 2011). In San Diego County, this community is found inland on dry, rocky, and steep slopes that are typically north facing (SANDAG 2011).

There is one polygon consisting of 0.82 acre of the bigberry manzanita–chamise chaparral association mapped in the northeastern corner of the Property (Figure 9a).

California Sagebrush–California Buckwheat Scrub Alliance (4.7)

The California sagebrush–California buckwheat scrub alliance is characterized by codominance between California sagebrush and Eastern Mojave buckwheat (*Eriogonum fasciculatum*) in an open shrub canopy (SANDAG 2011). Other species commonly found are chamise, ceanothus, deerweed, and sages. There is an open herbaceous layer characterized by high species diversity. This association is frequently a transitional stage due to fire or other disturbance (SANDAG 2011).

California sagebrush–California buckwheat scrub alliance occurs on 1.7 acres within the southwestern region of the Property (Figure 9a).

Chaparral Whitethorn Association (4.16.1)

Chaparral whitethorn (*Ceanothus leucodermis*) is fairly common on dry, rocky slopes within chaparral (SANDAG 2011). This association has a continuous to intermittent shrub canopy, and the herbaceous layer is sparse in mature stands. In this association, chaparral whitethorn comprises at least 30% of the relative cover in the shrub canopy (SANDAG 2011). Subdominant shrubs include chamise, oaks, ceanothus, sages, and laurel sumac (SANDAG 2011).

This association is mapped on 16.36 acres within the Property near the southern boundary (Figure 9a).

Mountain-Mahogany Provisional Association (4.20.1)

Mountain-mahogany provisional association is typically a drought- and fire-adapted dense community of woody shrubs (SANDAG 2011). This association is dominated by smooth mountain-mahogany (*Cercocarpus minutiflorus*); subdominant species include chamise, mission manzanita (*Xylococcus bicolor*), ceanothus, scrub oak, laurel sumac, and black sage (SANDAG 2011).

The mountain-mahogany provisional association occurs on 0.36 acre within the south-central area of the Property (Figure 9a).

California Buckwheat Scrub Association (4.23.1)

The California buckwheat scrub association is characterized by California buckwheat dominant in an open shrub canopy with California sagebrush, chamise, ceanothus, deerweed, and sages (SANDAG 2011). This association may be an early successional stage to a different shrub community, or it may persist as a stable association. Non-native grasses and forbs are commonly found in this association (SANDAG 2011).

California buckwheat scrub occurs on 13.44 acres within the Property. This association occurs in patches along the southwestern border and in the northeastern corner of the Property (Figure 9a).

Snapdragon Penstemon Scrub Alliance (4.31)

Snapdragon penstemon (*Keckiella antirrhinoides*) is considered a drought tolerant, deciduous shrub typically found in association with chaparral or sagebrush scrub (SANDAG 2011). There are 15.52 acres of snapdragon penstemon scrub alliance within the Property concentrated in the northeast and southwest region (Figure 9a).

Deerweed Association (4.32.1)

The deerweed association is dominated by deerweed, and subdominant shrubs include California buckwheat, California sagebrush, Mendocino bush mallow (*Malacothamnus fasciculatus*), chamise, and ceanothus (SANDAG 2011). This association frequently occurs in areas after fires (SANDAG 2011). A total of 9.65 acres of deerweed association is mapped within the southwestern portion of the Property (Figure 9a).

Scrub Oak Chaparral-Chamise Chaparral Alliance (4.38)

Scrub oak chaparral–chamise chaparral alliance is described as a dense, evergreen chaparral dominated by both scrub oak and chamise that occurs at various elevations (SANDAG 2011). Associated species include glandular manzanita (*Arctostaphylos glandulosa*), ceanothus, and toyon (SANDAG 2011). Scrub oak chaparral–chamise chaparral alliance is mapped on 94.30 acres throughout the Property, particularly in the eastern half of the Property (Figure 9a).

Annual Brome Grasslands Semi-Natural Stands (5.8)

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

There are 15.84 acres of annual brome grasslands in the southeastern and southwestern corners of the Property (Figure 9a). Throughout the Property, annual brome grassland is composed of wild oat (*Avena* spp.), bromes, and mustard (*Brassica* spp.).

California Deer Grass Association (5.22.1)

California deer grass association is found in all major valleys in the Palomar, Cuyamaca, and Laguna Mountains. This grassland community, dominated by deergrass (*Muhlenbergia rigens*) is described as an isolated grassland within chaparral, pine, or oak woodland and is largely associated with meadows (SANDAG 2011). Typical species associated with this community

type are purple needlegrass (*Stipa* [=*Nassella*] *pulchra*), beardless wildrye (*Elymus* [=*Leymus*] *triticoides*), meadow barley (*Hordeum brachyantherum*), bentgrass (*Agrostis* sp.), Kentucky bluegrass (*Poa pratensis*), meadow thistle (*Cirsium scariosum* var. *congdonii* [=*tioganum*]), hairy brackenfern (*Pteridium aquilinum*) and Rocky Mountain iris (*Iris missouriensis*) (SANDAG 2011).

The California deer grass association community makes up 0.50 acre of the Property in the eastern central region of the Property and is surrounded by chaparral and coast live oak woodland (Figure 9a).

Disturbed Land (Holland 11300)

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

There are 17.42 acres of disturbed land within the Property. Dirt trails and roads are mapped as disturbed land within the Property; most roads are concentrated within the southwestern and northeastern regions of the Property (Figure 9a).

Urban/Developed (Holland 12000)

Land designated as urban/developed is not addressed by the VCM; this description follows Oberbauer et al. (2008). Developed land is generally subject to significant human disturbance associated with development. This land cover type occupies 12.62 acres of the Property. The developed land is composed of paved roads and parking lots associated with the campground located in the southwestern corner of the Property (Figure 9a). Two historic houses within the Property are also mapped as developed.

4.2 Plants

A total of 249 vascular plant species were observed or detected within the Property during the 2012 baseline surveys. There are 202 native plant species and 47 non-native plant species within the Property. Appendix A lists all of the plant species observed on site.

4.2.1 Special-Status Plant Species Observed

Five special-status plant species were identified within the Property: Engelmann oak (*Quercus engelmannii*), Pride-of-California (*Lathyrus splendens*), rush-like bristleweed (*Xanthisma junceum*), sticky geraea (*Geraea viscida*), and Tecate tarplant (*Deinandra floribunda*).

Engelmann Oak (*Quercus engelmannii*)

CRPR 4.2, County List D, Proposed Covered–Draft East County MSCP

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

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

Within the Property, Engelmann oak is mapped in the southwestern region of the Property, just north of the coast live oak woodland (Figure 10). A total of 11 individuals were mapped.

Pride-of-California (*Lathyrus splendens*)

CRPR 4.3, County List D, Proposed Covered–Draft East County MSCP

Pride-of-California is a perennial herb in the Fabaceae family that is found in San Diego and Baja California, Mexico (CNPS 2012). This species blooms from March to June, and occurs at elevations from 200 to 1,525 meters (656 to 5,000 feet) AMSL (CNPS 2012). It is found in xeric chaparral habitats and typically grows tendrils for support on chamise or black sage. Low growing vegetation with a moderately open canopy typifies the characteristics of chaparral habitats where pride-of-California occurs.

This species occurs generally in Southern San Diego County, and previous records are from Dulzura, McCain Valley, Campo, Barrett Junciton, Jacumba, Boulevard, and Potrero (Reiser 1994). This species is stable within its distribution, although Reiser (1994) notes that residential development may be a potential threat.

Within the Property, pride-of-California is mapped in scattered locales in chamise chaparral and scrub oak–chamise chaparral habitats, scattered throughout the northern region of the Property (Figure 10). A total of 45 individuals are present.

Rush-Like Bristleweed (*Xanthisma junceum*)

CRPR 4.3, County List D, Proposed Covered–Draft East County MSCP

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

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

Within the Property, 55 individuals of this species are mapped within the southeastern region (Figure 10).

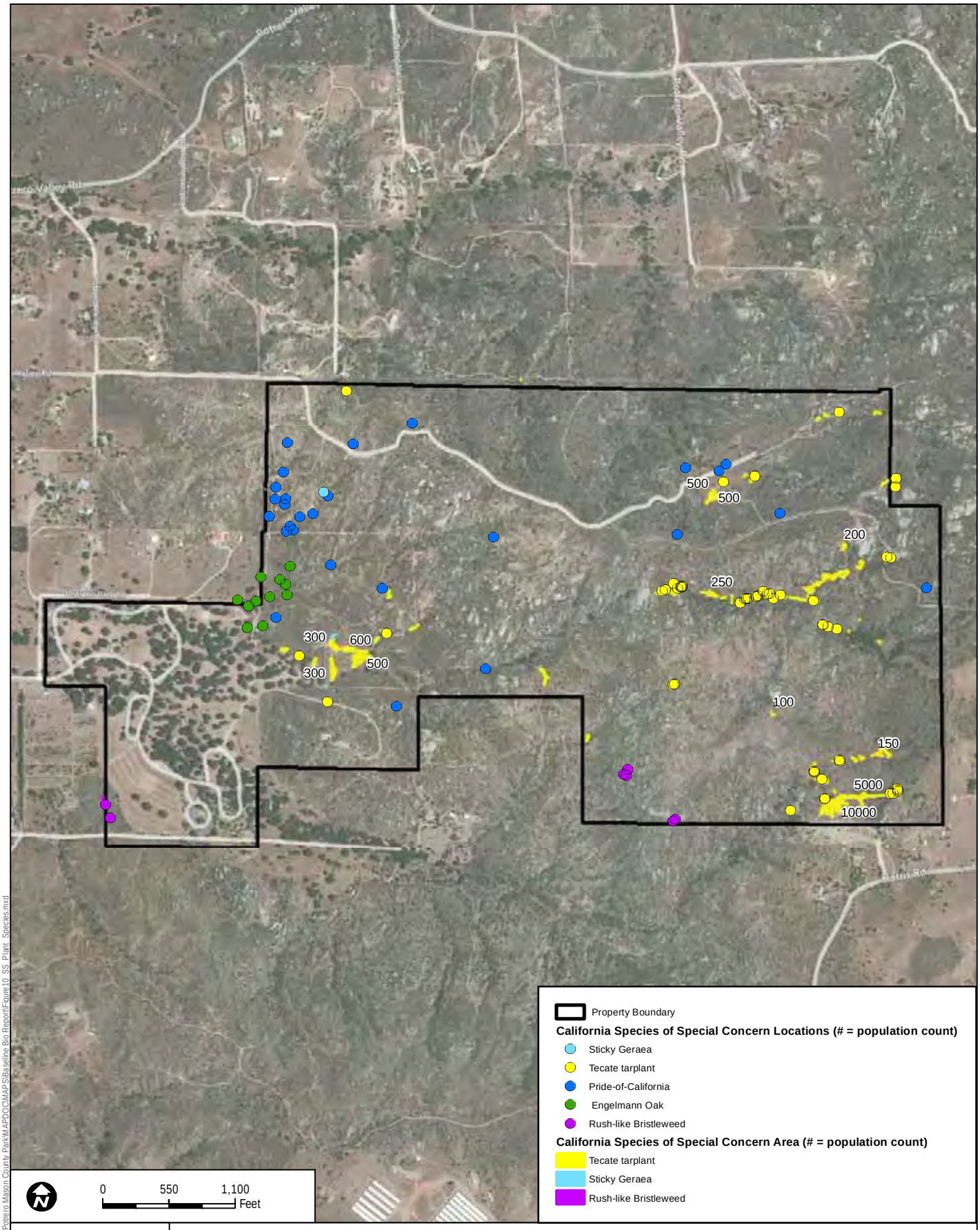
Sticky Geraea (*Geraea viscida*)

CRPR 2.3, County List B, Proposed Covered–Draft East County MSCP

Sticky geraea is a perennial herb in the Asteraceae family found at elevations from 450 to 1,700 meters (1,477 to 5,577 feet) AMSL (CNPS 2012). This species is found in high desert chaparral openings, especially in chamise chaparral and sandy xeric areas (Reiser 1994). Sticky geraea may require infrequent fires to induce seed germination (Reiser 1994).

Sticky geraea is known to appear from Smuggler's Cave east of Jacumba, Potrero, Campo, Dubber, Boulevard, and into the Sierra Juarez Mountains in Baja California (Reiser 1994). It is endemic to the San Diego and Imperial Counties, and Baja California (CNPS 2012). This species is presumed stable in its range in San Diego County, although development in rural areas may compromise the viability of this species.

Within the Property, a total of 33 individuals were found in the northwestern area (Figure 10).



DUDEK

6680-10

SOURCE: Bing 2012

FIGURE 10

Special-Status Plant Species

Potrero Mason Property - Baseline Biodiversity Survey

Z:\Projects\6680\0\6680-10 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure10_SS_Plant_Species.mxd

INTENTIONALLY LEFT BLANK

Tecate Tarplant (*Deinandra floribunda*)

CRPR 1B.2, County List A, Proposed Covered–Draft East County MSCP

Tecate tarplant is an annual herb in the Asteraceae family found in San Diego County and Baja California, at elevations from 70 to 1,220 meters (230 to 4,000 feet) AMSL (CNPS 2012, Reiser 1994). This species is typically found in sandy washes in the high desert and in areas where there is little vegetation cover and competition with other species (Reiser 1994). It grows on floodplains with sandy alluvium or gravelly loam soils (Reiser 1994).

This species is considered stable in San Diego County, and principal threats cited by Reiser (1994) include cattle grazing and degradation of habitat by cattle herds.

Approximately 22,335 individuals were mapped in the eastern region of the Property (Figure 10).

4.2.2 Special-Status Plant Species with High Potential to Occur

Based on an analysis of the elevation, soils, vegetation communities, and level of disturbance of the Property in conjunction with the known distribution of special-status species in the vicinity of the Property and the results of rare plant surveys, two special-status plant species have a high potential to occur in the Property: Dunn's mariposa lily (*Calochortus dunnii*) and Laguna Mountains jewel-flower (*Streptanthus bernardinus*).

Dunn's Mariposa Lily (*Calochortus dunnii*)

CRPR 1B.2, County List A, Proposed Covered–Draft East County MSCP

Dunn's mariposa lily is a bulbiferous herb in the Liliaceae family (CNPS 2012). This species is found in rocky openings in chaparral or grassland habitats (Reiser 1994) and typically on gabbroic or metavolcanic soils (CNPS 2012). It blooms from April to June and is found at elevations from 185 to 1,830 meters (607 to 6,000 feet) AMSL (CNPS 2012).

Dunn's mariposa lily has been recorded in the vicinity of the Property, including Descanso, and the Cuyamaca and Jamul Mountains (Reiser 1994). There is suitable chaparral habitat within the Property for this species to occur. This species is a County List A species and is proposed for coverage under the Draft East County MSCP.

Laguna Mountains Jewel-flower (*Streptanthus bernardinus*)

CRPR 4.3, County List D

Laguna Mountains jewel-flower is a perennial herb in the Brassicaceae family that occurs at elevations from 670 to 2,500 meters (2,198 to 8,202 feet) AMSL (CNPS 2012). This species is found in chaparral or lower montane coniferous forest habitats and is frequently found in mesic areas (CNPS 2012, Reiser 1994). Laguna Mountains jewel-flower often appears on stony loam soils, and adjacent to conifers.

This species has a limited distribution. In San Diego County, it is known to grow near Cuyamaca Peak, North Peak, Middle Peak, and the Little and Big Laguna Lakes in the Laguna Mountains (Reiser 1994). Additional records for this species list it in the Riverside and San Bernardino Counties (Reiser 1994). This species of jewelflower is stable within its range but occurs in low numbers. Drought may also be impacting this species, since it requires more mesic conditions and greater rainfall than has occurred in recent years (Reiser 1994).

Laguna Mountains jewel-flower has potential to occur within the Property. There are suitable stony loam soils and chaparral habitat on site. This species is a County List D species and is not proposed for coverage under the Draft East County MSCP.

4.2.3 Non-Native and/or Invasive Plants

A total of 47 non-native plant species have been identified in the Property. Table 5 lists the 24 invasive non-native plant species with a California Invasive Plant Council (Cal-IPC) Inventory rating of Limited, Moderate, or High that were identified within the Property, along with their associated rating. With the exception of nine non-native annual grasses (which are the dominant components of non-native annual grassland mapped on site and are impractical to map on an individual species basis), the species with a rating of Moderate or High were mapped within the Property (Figure 11). Additionally, perennial, invasive, non-native plant species with a rating of Limited were mapped within the Property (Figure 11), although they are not considered a management concern. Descriptions of the 15 Cal-IPC rated species mapped within the Property are provided below.

Table 5
Invasive Non-native Plant Species with a Cal-IPC Rating Observed at the Potrero Mason Property

Common Name	Scientific Name	Cal-IPC Rating*
Compact brome**	*Bromus madritensis*	High
Saltcedar	*Tamarix ramosissima*	High
Slender oat**	*Avena barbata*	Moderate
Ripgut brome**	*Bromus diandrus*	Moderate
Italian plumeless thistle	*Carduus pycnocephalus ssp. pycnocephalus*	Moderate
Maltese star-thistle	*Centaurea melitensis*	Moderate
Bull thistle	*Cirsium vulgare*	Moderate
Redstem stork's bill	*Erodium cicutarium*	Moderate
Tasmanian bluegum	*Eucalyptus globulus*	Moderate
Rat-tail fescue**	*Festuca myuros*	Moderate
Italian ryegrass**	*Festuca perennis*	Moderate
Shortpod mustard	*Hirschfeldia incana*	Moderate
Mouse barley**	*Hordeum murinum*	Moderate
London rocket	*Sisymbrium irio*	Moderate
Soft brome**	*Bromus hordeaceus*	Limited
River redgum	*Eucalyptus camaldulensis*	Limited
Smooth cat's ear	*Hypochaeris glabra*	Limited
Horehound	*Marrubium vulgare*	Limited
Olive	*Olea europaea*	Limited
Annual rabbitsfoot grass**	*Polypogon monspeliensis*	Limited
Curly dock	*Rumex crispus*	Limited
Peruvian peppertree	*Schinus molle*	Limited
Brazilian peppertree	*Schinus terebinthifolius*	Limited
Common Mediterranean grass**	*Schismus barbatus*	Limited

* **Source:** Cal-IPC California Invasive Plant Inventory Database, updated June 2012. Overall rating listed for southwest region, factoring impact, invasiveness, distribution, and documentation level.
Inventory Categories
High: Species have severe ecological impacts, are conducive to moderate to high rates of dispersal/establishment, and most are widely spread.
Moderate: Species have substantial and apparent, but generally not severe, ecological impacts; are conducive to moderate to high rates of dispersal, though establishment is generally dependent on ecological disturbance; and distribution may range from limited to widespread.
Limited: Species are invasive, but their ecological impacts are minor on a statewide level, or there was not enough information to justify a higher score; have low to moderate rates of invasiveness; and are generally limited but may be locally persistent and problematic.
** Individual species occurrences were not mapped within the Property.

Invasive Non-Native Plant Species Mapped within the Property

Saltcedar (*Tamarix ramosissima*)

Saltcedar is a shrub or tree typically found along waterways, drainages, and riparian areas (Cal-IPC 2012). It is commonly associated with dramatic changes in geomorphology, groundwater availability, soil chemistry, fire frequency, plant community composition, and native wildlife diversity (Cal-IPC 2012). Saltcedar presents the greatest risk of reducing habitat quality within riparian areas and vegetated ephemeral drainages, which are limited in presence within the Property. The Cal-IPC inventory categorizes saltcedar as having an overall rating of High. One individual of this species was observed in the southwestern portion of the Property on the edge of a small reservoir (Figure 11).

Italian Plumeless Thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*)

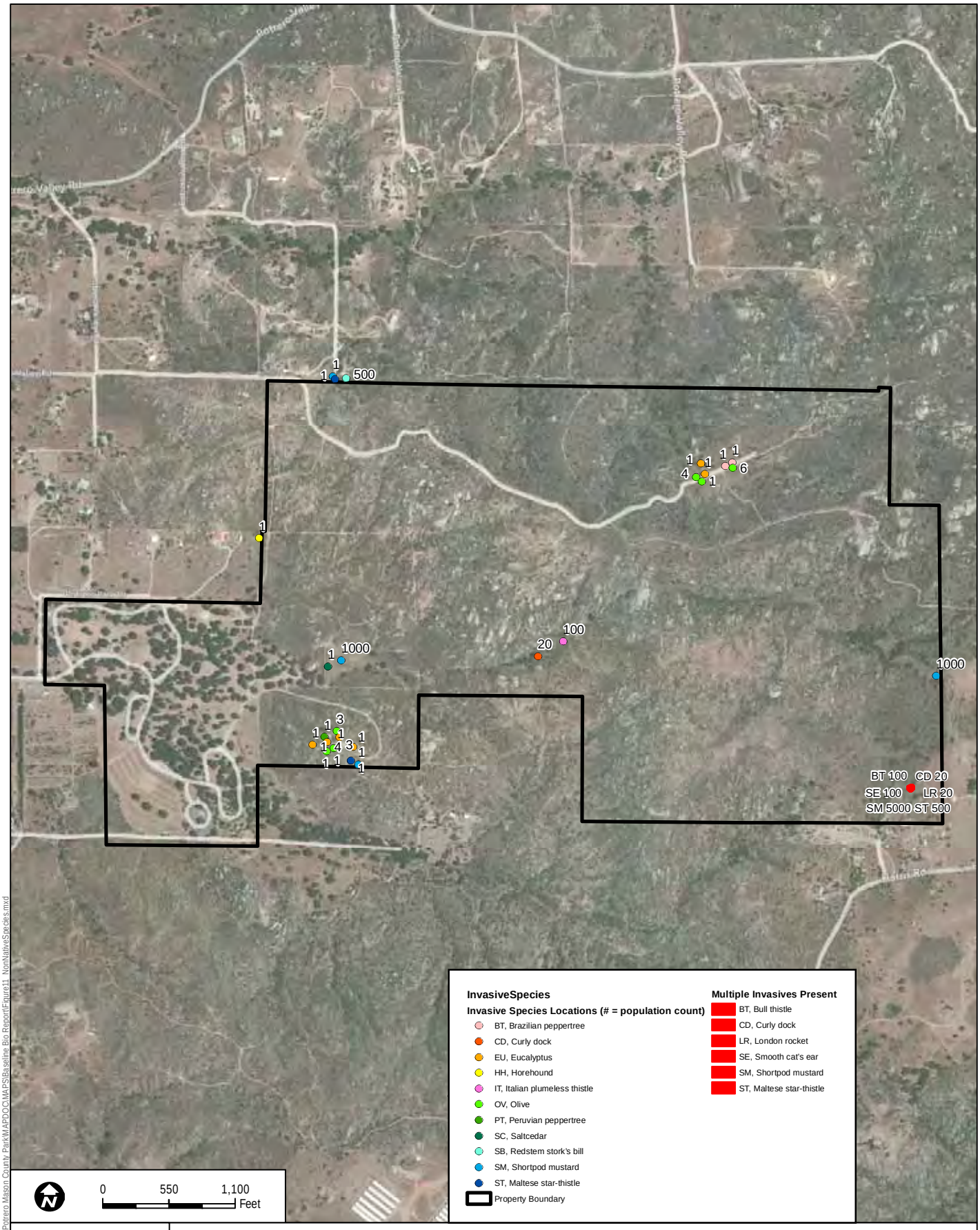
Italian plumeless thistle is an annual forb found in disturbed or open areas throughout California, including road edges, annual grasslands, and pastures (Cal-IPC 2012). In San Diego County, it is commonly found in disturbed drainages and riparian areas. This species has a Moderate Cal-IPC Inventory Rating (Cal-IPC 2012). The species was mapped within the south–central region of the Property, where there are approximately 100 individuals (Figure 11).

Maltese Star Thistle (*Centaurea melitensis*)

Maltese star thistle is widespread in open or disturbed areas in the Western United States. This species will occupy grasslands, open woodlands, roadsides, and agricultural fields (Cal-IPC 2012). This species has a Moderate Cal-IPC Inventory Rating (Cal-IPC 2012). The species was mapped in two locations in the Property, one in the southwestern corner and one along the northwestern border (Figure 11). The species is particularly prevalent in the southeastern corner of the Property, where approximately 500 individuals were mapped in the vicinity of several other non-native species (Figure 11).

Bull Thistle (*Cirsium vulgare*)

Bull thistle is common in coastal grassland, marsh, and forest habitats, although it is of particular management concern in areas that are repeatedly disturbed, including overgrazed pastures or areas of recent burns (Cal-IPC 2012). Bull thistle outcompetes native species for limited resources, such as water, nutrients, and space (Cal-IPC 2012). This species has a Moderate Cal-IPC Inventory Rating (Cal-IPC 2012). A patch of bull thistle containing approximately 100 individuals was mapped within the southeastern region of the Property in the vicinity of several other non-native species (Figure 11).



Z:\Projects\6680\0\6680-10 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure11_NonNativeSpecies.mxd

DUDEK

6680-10

SOURCE: Bing 2012

FIGURE 11

Invasive Non-native Plant Species Locations

Potrero Mason Property - Baseline Biodiversity Survey

INTENTIONALLY LEFT BLANK

Redstem Stork's Bill (*Erodium cicutarium*)

Redstem stork's bill is a small, aggressive annual/biannual in the Geraniaceae family that is very widespread throughout California and is commonly found along roadsides and in grasslands, fields, and semi-desert areas (Cal-IPC 2012). It often carpets large areas, out-competing native grasses and forbs (Cal-IPC 2012). This species has a Moderate Cal-IPC Inventory Rating (Cal-IPC 2012). Redstem stork's bill is ubiquitous in San Diego County and was observed occasionally within the Property. It was mapped in the northwest corner of the Property, where there are at least 500 individuals (Figure 11).

Gum Trees (*Eucalyptus camaldulensis and E. globulus*)

Gum trees (also called Eucalyptus trees) are found throughout California, and some species can be invasive in Coastal California areas (Cal-IPC 2012). They are historically the most common exotic landscape trees in the County of San Diego (Lightner 2011). Leaf litter from this species has allelopathic effects and excludes native species from taking root below the canopy (Cal-IPC 2012). The two most common species in San Diego County are Tasmanian bluegum and river redgum (*Eucalyptus camaldulensis*). Both species are considered invasive by Cal-IPC and can spread rapidly, particularly in riparian habitats. Tasmanian bluegum has a Moderate Cal-IPC Inventory Rating and river redgum has a Limited rating (Cal-IPC 2012). A total of 13 gum trees occur within the Property that were planted near two historic habitations: one in the southwest corner of the Property and the other in the northeast corner of the Property (Figure 11). The gum trees were not mapped to species, but both Tasmanian bluegum and river redgum were observed on site.

Shortpod Mustard (*Hirschfeldia incana*)

Shortpod mustard is a biennial or perennial forb found in coastal scrub and grassland habitats (Cal-IPC 2012). This species has a Moderate Cal-IPC Inventory Rating (Cal-IPC 2012). Shortpod mustard is prevalent in San Diego County and was observed sporadically within the Property and occasionally appeared concentrated in specific areas. One thousand individuals of shortpod mustard were mapped in the southwestern region of the Property, and 1,000 individuals were mapped in annual brome grasslands along the east–central border (Figure 11). An additional 5,000 individuals were mapped within the southeastern region of the Property.

London Rocket (*Sisymbrium irio*)

London rocket is a winter annual forb in the Brassicaceae family. The species can be found in abandoned fields, waste places, roadsides, and orchards (Cal-IPC 2012). London rocket matures earlier in the year than native species, allowing it to out-compete them (Cal-IPC 2012). London rocket is not abundant on the Property, but approximately 20 individuals were observed in annual brome grasslands in the southeast corner (Figure 11).

Smooth Cat's Ear (*Hypochaeris glabra*)

Smooth cat's ear is an annual flowering herb in the Asteraceae family found throughout California, except in the Great Basin and desert regions (Cal-IPC 2012). Smooth cat's ear prefers disturbed places, such as roadsides, orchards, and landscaped areas, as well as grasslands, woodland, and scrub, and is commonly found in overgrazed rangeland (Cal-IPC 2012). Smooth cat's ear is prevalent in San Diego County but was observed only occasionally within the Property. Approximately 100 individuals of smooth cat's ear were mapped in the southeastern corner of the Property (Figure 11).

Horehound (*Marrubium vulgare*)

Horehound is a shrub in the Lamiaceae family that is commonly found in disturbed areas in California, including grasslands and riparian areas (Cal-IPC 2012). This species most likely only has a minor impact on native species but can become locally prevalent in disturbed areas. It has a Limited Cal-IPC Inventory Rating (Cal-IPC 2012). One individual was mapped within the western border of the Property (Figure 11).

Olive (*Olea euopaea*)

Olive is a common agricultural crop in California, but it can spread to open space areas (Cal-IPC 2012). Olives produce hundreds of seeds that are easily dispersed. This species has invaded throughout Southern California and the Central Valley (Cal-IPC 2012). Olive has a Limited Cal-IPC Inventory Rating (Cal-IPC 2012). Five individuals were mapped in the southwestern region of the Property, and 11 individuals were mapped in the northeastern corner, apparently associated with historic habitations (Figure 11).

Curly Dock (*Rumex crispus*)

Curly dock is a perennial forb that grows in grassy areas, roadsides, flood plains, and agricultural areas (Cal-IPC 2012). In San Diego County, this species is particularly prevalent in disturbed drainages and riparian areas. This species has a Limited Cal-IPC Rating (Cal-IPC 2012). The species was mapped in the south–central region and also in the southeastern region of the Property, where approximately 40 individuals were documented (Figure 11).

Peruvian Peppertree (*Schinus molle*)

Peruvian peppertree is an aromatic, evergreen shrub or tree. Peruvian peppertree has escaped cultivation to become invasive in Central and Southern California (Cal-IPC 2012). This species has a Limited Cal-IPC Inventory Rating (Cal-IPC 2012). One Peruvian peppertree was mapped in the southwestern region of the Property and was likely planted (Figure 11).

Brazilian Peppertree (*Schinus terebinthifolius*)

Brazilian peppertree is not currently a large problem in California, but it has been an aggressive invader in Hawaii and Florida (Cal-IPC 2012). This species is found in riparian areas, canyons, fields, and roadsides in areas where water is available. Brazilian peppertree has a Limited Cal-IPC Inventory Rating (Cal-IPC 2012). Within the Property, there are two individuals mapped in northeastern corner that were likely planted (Figure 11).

Invasive Non-Native Plant Species Not Mapped within the Property

Non-Native Annual Grasses

Non-native annual grasses (e.g., slender oat [*Avena barbata*], brome grasses, rat-tail fescue [*Festuca myuros*], Italian ryegrass [*Festuca perennis*], mouse barley [*Hordeum murinum*], annual rabbitsfoot grass [*Polypogon monspeliensis*], and common Mediterranean grass [*Schismus barbatus*]) are common throughout the Property and comprise the majority of species of non-native grassland on site. Although non-native grassland consists primarily of non-native plant species, it is considered a natural vegetation community under the MSCP, because it is a naturalized community that provides habitat for native and special-status plants and wildlife species. Therefore, non-native grass species were not mapped on an individual species basis. Non-native grassland (Annual Brome Grasslands Semi-Natural Stands) occurs in the southeastern and southwestern corners of the Property (Figure 11).

4.2.2.1 Additional Non-Native Plant Species

Several additional non-native plant species are also present throughout the Property, which do not have a Cal-IPC rating. In general, these species do not pose a threat to native habitat but can become locally abundant in disturbed areas. Some examples of non-native plant species that are present but are of minimal concern include Barbary fig (*Opuntia ficus-indica*), narrowleaf cottonrose (*Logfia gallica*), annual yellow sweetclover (*Melilotus indicus*), and common catchfly (*Silene gallica*), among others. These non-native plant species were not mapped because of their relatively low abundance and low potential for invasion or management concern.

Invasive non-native plant species removal and control are discussed in Section 5.4.1 of this report.

4.3 Wildlife

A total of 109 wildlife species were observed or detected within the Property during the 2012 surveys, including 1 amphibian, 6 reptiles, 38 birds, 28 mammals, and 36 invertebrates. A total of 22 special-status species were observed or detected, including seven species proposed for coverage under the Draft East County MSCP. Appendix B lists all of the wildlife species observed or detected within the Property.

4.3.1 Invertebrates

A number of large invertebrates were captured within herpetological pitfall trap arrays. These were identified to genus where feasible. These included windscorpion (*Ammotrechidae* sp.), anthaxias beetle (*Anthaxia* sp.), centipede (*Chilopoda* sp.), millipede (*Diplopoda* sp.), wooly ground beetle (*Eleodes osculans*), armored stink beetle (*Eleodes armata*), wolf spider (Family Lycosidae), velvet ant (Family Mutillidae), jumping spider (Family Salticidae), darkling ground beetle (Family Tenebrionidae), common silverfish (*Lepisma* sp.), scorpion (Order Scopiones), Jerusalem cricket (*Stenopelmatus fuscus*), moth (caterpillar) (Subfamily Artiinae), field cricket (Subfamily Gryllinae), tarantula (Superfamily Theraphosidea), sac spider (*Trachelas* sp.), and venerable silverfish (*Tricholepidion* sp.). Other invertebrates observed during surveys included bees (Superfamily Apoidae, primarily *Apis mellifera* [European honey bee] or *Bombus* sp. [bumble bees]), wasps (Superfamily Vespoidea, primarily *Polistes* sp. [paper wasp]), harvester ant colonies (*Pygonomyrex* sp.), mosquitos (Family Culicidae), flies (Order Diptera), dragonflies (Infraorder *Anisoptera*), and damselflies (Suborder *Zygoptera*).

4.3.1.1 Butterflies

Ten butterfly species were observed during the survey conducted on the Property, including Behr's metalmark (*Apodemia mormo virgulti*), perplexing hairstreak (*Callophrys perplexa*), California dogface (*Colias eurydice*), funereal duskywing (*Erynnis funeralis*), southern blue (*Glaucopsyche lygdamus australis*), swallowtail (*Papilio* sp.), white (*Pieris* sp.), cabbage white (*Pieris rapae*), blue (*Plebejus* sp.), and acmon blue (*Plebejus acmon*).

No Quino checkerspot or Hermes copper butterflies were observed in the Property. The host plant for Quino checkerspot, exserted Indian paintbrush (*Castilleja exserta*.), was observed. The other larval host plant, dotseed plantain (*Plantago erecta*), was not observed within the Property.

During vegetation mapping, it was determined that the Property supports suitable habitat for Hermes copper butterfly. The two host plants for the butterfly, spiny redberry (*Rhamnus crocea*) and California buckwheat (*Eriogonum fasciculatum*), were identified in the Property. Spiny redberry is a larval host plant, and adults nectar almost exclusively on California buckwheat. Both species were scattered throughout the Property within the chamise chaparral alliance. Suitable habitat for Hermes copper includes a matrix of spiny redberry and California buckwheat that are concentrated within 10 feet of each other (County of San Diego 2010b). The habitat structure within the Property does not include the necessary clusters of spiny redberry and buckwheat that typify Hermes copper habitat.

No Hermes copper butterflies were observed during the general butterfly survey, which occurred outside of this species' flight period (mid-May through early July) (County of San Diego 2010b). However, biologists performing other surveys during the flight period for Hermes copper made records of butterfly species observed, but there were no observations of Hermes copper. There is moderate potential for this species to occur within the Property, because there are suitable habitat and host plants present, although not in the density needed.

4.3.2 Herpetofauna

4.3.2.1 Amphibians

One amphibian species was observed incidentally during biological surveys within the Property. The western toad (*Anaxyrus boreas*) was observed along dirt roads within the oak woodland near the camping area of the Property. No focused amphibian surveys were conducted.

4.3.2.2 Reptiles

Six reptile species were observed in the Property during herpetological and coverboard surveys and incidental sightings. Five species were observed during herpetological arrays: common side-blotched lizard (*Uta stansburiana*), coastal western whiptail (*Aspidoscelis tigris stejnegeri*), western fence lizard (*Sceloporus occidentalis*), glossy snake (*Arizona elegans*), and California striped racer (*Coluber lateralis*) (Table 6). Western fence lizard was the only species observed during coverboard surveys (Table 7). Coast horned lizard (*Phyrnosoma blainvillii* ssp. *coronatum*) was observed incidentally at multiple locations within the Property during other biological surveys. Coast horned lizard is a California Species of Special Concern (CSC) and is proposed for coverage under the Draft East County MSCP. Coastal western whiptail is a County Group 2 species. Side-blotched lizard was the most common reptile species observed. One side-blotched lizard was found dead in a pitfall trap on August 14, 2012.

Two small mammal species, Dulzura kangaroo rat (*Dipodomys simulans*) and mouse (*Peromyscus* sp.) were recorded during herpetological array surveys on the first and last pass.

Table 6, Pitfall Trap Results, provides a summary of the species observed during pitfall trap herpetological surveys. The results of the coverboard surveys are shown in Table 7, Coverboard Survey Results. Coverboard survey locations are shown in Figure 8.

Table 6
Pitfall Trap Results

Common Name	Scientific Name	Status[1]	June 5–8, 2012	July 10–13, 2012	August 14–17, 2012	Total
Common side-blotched lizard	*Uta stansburiana*	None	2 (3)	5 (5)	7 (7)	14 (15)
Coastal western whiptail	*Aspidoscelis tigris stejnegeri*	Group 2	2 (2)	2 (2)	1 (1)	5 (5)
Western fence lizard	*Sceloporus occidentalis*	None	5 (5)	2 (2)	—	7 (7)
Glossy snake	*Arizona elegans*	None	—	2 (2)	—	2 (2)
California striped racer	*Coluber lateralis lateralis*	None	—	—	1 (1)	1 (1)
Dulzura kangaroo rat	*Dipodomys simulans*	None	1 (1)	—	—	1 (1)
Mouse	*Peromyscus* sp.	None	—	—	1 (1)	1 (1)
		Total	**10 (11)**	**12 (12)**	**10 (10)**	**31 (32)**

[1]**Group 2:** Animals declining but not in immediate threat of extinction or extirpation (County).
Note: The first number is the number of new individuals captured, and the second number (in parentheses) is the total number captured, including recaptured individuals.

Table 7
Coverboard Survey Results

Coverboard Number	5/24/12	6/25/12	7/25/12
C-P-1	Western fence lizard (*Sceloporus occidentalis*)[1]	—	—
C-P-2	—	—	—
C-P-3	—	—	—
C-P-4	—	—	—
C-P-5	—	—	—
C-P-6	—	—	—
C-P-7	—	—	—
C-P-8	—	—	—
C-P-9	—	—	—
C-P-10	—	—	—

[1]Species Conservation Status: None

4.3.3 Birds

Thirty-six bird species were observed in the Property during avian point count surveys, and two additional species were observed during other biological surveys. A total of 38 species were recorded (Appendix B). The most common species observed in terms of numbers of individuals recorded were spotted towhee (*Pipilo maculatus*), common raven (*Corvus corax*), California quail (*Callipepla californica*), and western scrub-jay (*Aphelocoma californica*). The following birds were observed during the nocturnal surveys: California quail, California thrasher (*Toxostoma redivivum*), spotted towhee, western scrub jay, barn owl (*Tyto alba*), common poorwill (*Phalaenoptilus nuttallii*), and lesser nighthawk (*Chordeiles acutipennis*).

Eight special-status bird species were observed within the Property, including four that are proposed for coverage under the Draft East County MSCP: Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), and turkey vulture (*Cathartes aura*) (Figure 12). The four other special-status species recorded included the following: red-shouldered hawk (*Buteo lineatus*), prairie falcon (*Falco mexicanus*), western bluebird (*Sialia mexicana*), and barn owl. Rufous-crowned sparrow, western bluebird, white-tailed kite, turkey vulture, barn owl, and red-shouldered hawk were observed during avian point count surveys. Prairie falcon and loggerhead shrike were recorded as incidental observations during biological surveys (Figure 12).

During August surveys, a roost of approximately 15 to 20 white-tailed kites was recorded in the Property. It is presumed that most of these individuals were utilizing the Property on their migratory route southward. No nests were observed within the Property, although juveniles and/or nesting behaviors were exhibited by many species.

Table 8, Avian Point Count Survey Results, provides a summary of the results of the avian point counts for each survey point. The numbers in each cell represent the number of unique species counts on that particular day. The number in parentheses that follows is the total number of birds observed, including any flyovers. Survey locations are shown on Figure 8.

Table 8
Avian Point Count Survey Results

Survey Point	April 26, 2012		May 24, 2012		June 25, 2012		Total
	AM	*PM*	*AM*	*PM*	*AM*	*PM*	
BC-P-1	9 (20)	1 (5)	8 (18)	2 (4)	7 (16)	2 (4)	15 (67)
BC-P-2	4 (5)	2 (2)	11 (19)	1 (1)	9 (15)	1 (1)	19 (43)
BC-P-3	7 (10)	2 (4)	12 (20)	2 (2)	7 (9)	0 (0)	21 (49)
BC-P-4	10 (18)	1 (2)	15 (37)	1 (2)	9 (23)	1 (4)	20 (83)
BC-P-5	10 (22)	1 (1)	10 (19)	1 (2)	8 (11)	1 (1)	20 (55)
Total	**22 (75)**	**4 (14)**	**26 (113)**	**3 (11)**	**20 (74)**	**2 (10)**	**35 (297)**

Note: The numbers represent unique species counts. The number in parentheses is the total number of individuals, including flyover species if any were observed.

Avian diversity did not vary greatly among survey point locations, with approximately 20 avian species observed at each survey point over the course of the three surveys. Survey point BC-P-3 had the greatest species diversity. Survey point BC-P-4 had the greatest abundance, with a total of 83 individuals observed over the course of the three surveys.

Table 9, Avian Point Count Species Observed, describes the species recorded during avian point count surveys at the Property. The bird species observed during surveys are listed by site, date, and time of day.

4.3.4 Mammals

4.3.4.1 Small Mammals

Ten small mammals, all rodents, were trapped on the Property during the small mammal surveys, including the special-status species northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), Dulzura pocket mouse (*Chaetodipus californicus femoralis*), and San Diego desert woodrat (*Neotoma lepida intermedia*). These three species are CSC, and are not proposed for coverage under the Draft East County MSCP. The most common species trapped was the Dulzura kangaroo rat.

Table 10, Small Mammal Survey Results, provides a summary of total number of individuals captured in each trapline during the trapping sessions. The first number is the number of new individuals captured, and the second number, in parentheses, is the total number captured, including recaptured individuals.

Table 9
Avian Point Count Species Observed

Common Name	Scientific Name	4/26/12 AM					4/26/12 PM					5/24/2012 AM					5/24/2012 PM					6/25/2012 AM					6/25/2012 PM					Total
		BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	
Acorn woodpecker	*Melanerpes formicivorus*	—	—	—	3	1	—	—	—	—	—	—	—	—	6	—	—	—	—	—	—	—	—	—	2	2	—	—	—	—	—	14
American crow	*Corvus brachyrhynchos*	—	—	—	3	—	—	—	—	—	—	—	—	—	3	2	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	10
American kestrel	*Falco sparverius*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	2
American robin	*Turdus migratorius*	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Anna's hummingbird	*Calypte anna*	1	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	2	2	1	—	—	—	—	—	—	—	8
Ash-throated flycatcher	*Myiarchus cinerascens*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Barn owl	*Tyto alba*	—	—	—	1	—	—	—	1	2	1	—	—	—	—	—	—	—	1	1	2	—	—	—	—	—	—	—	—	4	1	14
Bewick's wren	*Thryomanes bewickii*	3	—	—	—	1	—	—	—	—	—	—	—	1	2	3	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	11
Black-chinned sparrow	*Spizella atrogularis*	1	—	—	—	—	—	—	—	—	—	1	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Blue-gray gnatcatcher	*Polioptila caerulea*	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Bushtit	*Psaltriparus minimus*	3	—	—	—	—	—	—	—	—	—	4	—	4	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
California quail	*Callipepla californica*	4	1	1	4	5	5	—	3	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24
California thrasher	*Toxostoma redivivum*	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
California towhee	*Melozone crissalis*	3	—	2	—	2	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8
Common poorwill	*Phalaenoptilus nuttallii*	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Common raven	*Corvus corax*	2	—	—	1	3	—	—	—	—	—	5	1	2	2	1	—	—	—	—	—	2	—	—	4	—	—	—	—	—	—	23
House finch	*Carpodacus mexicanus*	—	—	—	—	—	—	—	—	—	—	—	2	2	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	7
Hummingbird	*Calypte* sp.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Lesser goldfinch	*Spinus psaltria*	—	—	1	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	2	3	2	—	—	—	—	—	12
Lesser nighthawk	*Chordeiles acutipennis*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	1	1	—	—	—	—	—	—	—	3	1	—	—	—	9
Mourning dove	*Zenaida macroura*	—	—	—	1	—	—	—	—	—	—	——	1	—	2	1	—	—	—	—	—	1	1	1	1	—	—	—	—	—	—	9
Northern flicker	*Colaptes auratus*	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Oak titmouse	*Baeolophus inornatus*	—	—	—	1	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	6

Table 9
Avian Point Count Species Observed

Common Name	Scientific Name	4/26/12 AM					4/26/12 PM					5/24/2012 AM					5/24/2012 PM					6/25/2012 AM					6/25/2012 PM					Total
		BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	BC-P-1	BC-P-2	BC-P-3	BC-P-4	BC-P-5	
Phainopepla	*Phainopepla nitens*	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	4	—	1		—	—	—	—	—	—	7
Red-shouldered hawk	*Buteo lineatus*	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	3
Red-tailed hawk	*Buteo jamaicensis*	—	—	2	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	2	1	1	—	1	—	—	—	—	—	8
Sage sparrow	*Amphispiza belli*	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Say's phoebe	*Sayornis saya*	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Scott's oriole	*Icterus parisorum*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Spotted towhee	*Pipilo maculatus*	3	2	1	2	2	—	—	—	—	—	1	3	1	2	4	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	23
Turkey vulture	*Cathartes aura*	—	—	—	—	2	—	—	—	—	—	1	1	1	3	—	—	—	—	—	—	2	—	2	—	2	—	—	—	—	—	14
Western bluebird	*Sialia mexicana*	—	—	—	—	—	—	—	—	—	—	—	—	—	8	—	—	—	—	—	—	—	—	—	6	—	—	—	—	—	—	14
Western scrub-jay	*Aphelocoma californica*	—	—	2	1	—	—	—	—	—	—	3	2	4	3	3	—	—	—	—	—	3	4	—	1	—	1	—	—	—	—	27
White-tailed kite	*Elanus leucurus*	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Wrentit	*Chamaea fasciata*	1	1	1	—	4	—	—	—	—	—	—	2	—	1	2	—	—	—	—	—	—	1	—	—	1	—					14

Table 10
Small Mammal Survey Results

Species			8/6-8/12				9/4-6/12				
Common Name	*Scientific Name*	**Status**	*Array 1 A*	*Array 1 B*	*Array 2 A*	*Array 2 B*	*Array 1 A*	*Array 1 B*	*Array 2 A*	*Array 2 B*	**Total**
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	CSC, Group 2	—	—	—	2(2)	2(3)	2(2)	1(1)	2(2)	9(10)
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	CSC, Group 2	1(2)	—	—	2(2)	1(1)	—	5(7)	5(6)	14(18)
Dulzura kangaroo rat	*Dipodomys simulans*	None	8(15)	13(19)	0(1)	2(2)	14(26)	13(22)	8(8)	7(9)	65(102)
Big-eared woodrat	*Neotoma macrotis*	None	—	—	—	—	—	1(1)	—	—	1(1)
San Diego Desert woodrat	*Neotoma lepida intermedia*	CSC, Group2	2(3)	1(1)	1(1)	1(1)	—	3(3)	1(1)	—	9(10)
California mouse	*Peromyscus californicus*	None	11(16)	7(13)	2(2)	3(3)	10(18)	12(19)	2(3)	2(5)	49(79)
Cactus mouse	*Peromyscus eremicus*	None	1(3)	3(4)	1(1)	—	—	1(1)	—	—	6(9)
North American deer mouse	*Peromyscus maniculatus*	None	5(5)	1(1)	—	2(2)	3(4)	1(1)	1(1)	3(3)	16(17)
Botta's pocket gopher	*Thomomys bottae*	None	—	—	1(1)	—	—	—	—	—	1(1)
California ground squirrel	*Spermophilus beecheyi*	None	—	—	—	—	—	—	—	1(1)	1(1)
		Total	**28(44)**	**25(38)**	**5(6)**	**12(12)**	**30(52)**	**33(49)**	**18(21)**	**20(26)**	**171(248)**

[1] CSC: California Species of Special Concern (CDFG); Group 2: Animals declining but not in immediate threat of extinction or extirpation (County)

Note: The first number is the number of new individuals captured, and the second number, in parentheses, is the total number captured, including recaptured individuals. Also, individuals caught during the first trapping session may have been recaptured during the second trapping period but would have been recorded as new individuals.

4.3.4.2 Bats

Fourteen bat species were identified within the Property using the Anabat survey system, including pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), big brown bat (*Eptesicus fuscus*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), hoary bat (*Lasiurus cinereus*), western yellow bat (*Lasiurus xanthinus*), California myotis (*Myotis californicus*), western small-footed myotis (*Myotis ciliolabrum*), long-legged myotis (*Myotis volans*), Yuma myotis (*Myotis yumanensis*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), canyon bat (*Parastrellus hesperus*), and Brazilian free-tailed bat (*Tadarida basiliensis*). Two of these species, pallid bat and Townsend's big-eared bat, are

proposed for coverage under the Draft East County MSCP. The following bat species are also special-status species: western mastiff bat, western yellow bat, western red bat, western small-footed myotis, long-legged myotis, Yuma myotis, and pocketed free-tailed bat.

Table 11, Bat Survey Results by Survey Pass, shows the number of minutes of bat activity during each survey pass. Table 12, Bat Survey Results by Location, shows the number of minutes of bat activity for each bat survey location. Due to the difficulty associated with marking individual bats within the Property, the number of minutes of bat activity recorded is a sufficient substitute measure of bat individuals. The relative frequencies of different species can serve as a proxy for the number of individuals. Minutes of activity can be analyzed and compared to other sites more directly for future management and monitoring efforts.

Western small-footed myotis was the most common species recorded. Other relatively common species were canyon bat, big brown bat, and Yuma myotis. Surveys during the month of August were characterized by increased minutes of detection when compared with detection minutes during September surveys, although species diversity was equal across survey periods. There were more minutes of detection recorded at the East survey location, when compared with the West survey location.

Table 11
Bat Survey Results by Survey Pass (in minutes of detection)

Species			August[2]	September[2]	Total
Common Name	*Scientific Name*	*Status[1]*			
Pallid bat	*Antrozous pallidus*	CSC, Group 2, MSCP	1	3	**4**
Townsend's big-eared bat	*Corynorhinus townsendii*	CSC, Group 2, MSCP	12	7	**19**
Big brown bat	*Eptesicus fuscus*	None	105	24	**129**
Western mastiff bat	*Eumops perotis californicus*	CSC, Group 2	4	0	**4**
Western red bat	*Lasiurus blossevillii*	CSC, Group 2	2	0	**2**
Hoary bat	*Lasiurus cinereus*	None	0	9	**9**
Western yellow bat	*Lasiurus xanthinus*	CSC	8	1	**9**
California myotis	*Myotis californicus*	None	52	12	**64**
Western small-footed myotis	*Myotis ciliolabrum*	Group 2	278	154	**432**
Long-legged myotis	*Myotis volans*	Group 2	41	4	**45**
Yuma myotis	*Myotis yumanensis*	Group 2	115	22	**137**
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	CSC, Group 2	17	20	**37**
Canyon bat	*Parastrellus hesperus*	None	283	100	**383**
Brazilian free-tailed bat	*Tadarida brasiliensis*	None	10	19	**29**
		Total	**928**	**375**	**1303**

[1] CSC: California Species of Special Concern (CDFG); Group 2: Animals declining but not in immediate threat of extinction or extirpation (County); MSCP: Proposed for coverage under the Draft East County MSCP
[2] Refer to Table 3 for the specific dates of each bat survey location.

Table 12
Bat Survey Results by Location (in minutes of detection)

Species			Survey Location[2]		
Common Name	*Scientific Name*	*Status[1]*	*East*	*West*	**Total**
Pallid bat	*Antrozous pallidus*	CSC, Group 2, MSCP	2	2	**4**
Townsend's big-eared bat	*Corynorhinus townsendii*	CSC, Group 2, MSCP	18	1	**19**
Big brown bat	*Eptesicus fuscus*	None	19	110	**129**
Western mastiff bat	*Eumops perotis californicus*	CSC, Group 2	4	0	**4**
Western red bat	*Lasiurus blossevillii*	CSC, Group 2	0	2	**2**
Hoary bat	*Lasiurus cinereus*	None	3	6	**9**
Western yellow bat	*Lasiurus xanthinus*	CSC	5	4	**9**
California myotis	*Myotis californicus*	None	62	2	**64**
Western small-footed myotis	*Myotis ciliolabrum*	Group 2	174	258	**432**
Long-legged myotis	*Myotis volans*	Group 2	45	0	**45**
Yuma myotis	*Myotis yumanensis*	Group 2	113	24	**137**
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	CSC, Group 2	26	11	**37**
Canyon bat	*Parastrellus hesperus*	None	233	150	**383**
Brazilian free-tailed bat	*Tadarida brasiliensis*	None	28	1	**29**
		Total	**732**	**571**	**1303**

[1] CSC: California Species of Special Concern (CDFG); Group 2: Animals declining but not in immediate threat of extinction or extirpation (County); MSCP: Proposed for coverage under the Draft East County MSCP (February 2008)
[2] Survey locations are shown on Figure 8.

4.3.4.3 Medium and Large Mammals

Two large mammal species were detected by the camera stations located on the Property, coyote (*Canis latrans*) and bobcat (*Lynx rufus*). A summary of the camera study results are provided in Table 13. One avian species, American crow (*Corvus brachyrhynchos*), was recorded at a camera station. Domestic dog (*Canis lupus familiaris*) was also recorded. Brush rabbit (*Sylvilagus bachmani*) was observed while driving and hiking throughout the Property; this species was not recorded while conducting medium and large mammal surveys and is not included in Table 13.

Table 13
Medium and Large Mammal Survey Results

Common Name	Scientific Name	Status	Dates			Total
			5/2/12–6/4/12	*6/26/12–7/10/12*	*7/31/12–8/14/12*	
Domestic dog	*Canis lupus familiaris*	None	1	—	—	**1**
Coyote	*Canis latrans*	None	5	11	7	**23**

Table 13
Medium and Large Mammal Survey Results

Common Name	Scientific Name	Status	Dates			Total
			5/2/12–6/4/12	*6/26/12–7/10/12*	*7/31/12–8/14/12*	
American crow	*Corvus brachyrhynchos*	None	2	—	—	**2**
Bobcat	*Lynx rufus*	None	—	2	—	**2**
		Total	**8**	**14**	**7**	**29**

Note: Number identified refers to the total number of detections. In many cases, these represent numerous visits by the same individual(s) over the study period. However, due to the study design (i.e., no mark and recapture involved), it is not possible to differentiate between individuals in most cases.

4.3.5 Special-Status Wildlife Observed

Twenty-two special-status wildlife species were observed or detected within the Property during the 2012 surveys (Figure 12), seven of which are proposed for coverage under the Draft East County MSCP. Observed special-status species are discussed as follows.

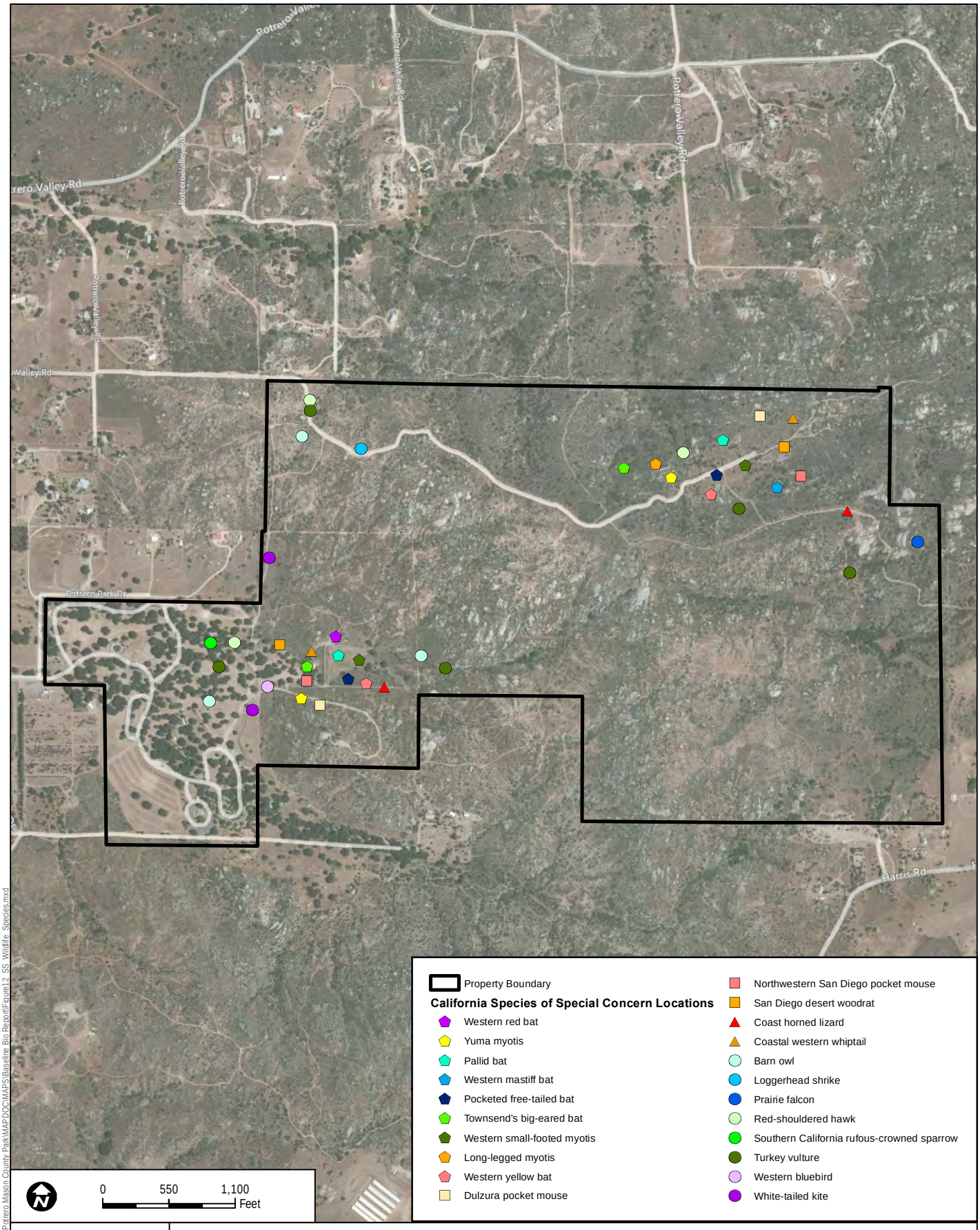
Reptiles

Coast Horned Lizard (*Phrynosoma blainvillii* ssp. *coronatum*)

California Species of Special Concern, County Group 2, Proposed Covered–Draft East County MSCP

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

Two coast horned lizards were recorded within the Property, one near the southern herpetological array and one on a road in the northeastern region of the Property (Figure 12). There is suitable chaparral habitat within the Property for this species.



Z:\Projects\6680010\668010 - Potrero Mason County Park\MAPDOC\MAPS\Baseline Bio Report\Figure12_SS_Wildlife_Species.mxd

DUDEK

6680-10

SOURCE: Bing 2012

FIGURE 12

Special-Status Wildlife Species

Potrero Mason Property - Baseline Biodiversity Survey

INTENTIONALLY LEFT BLANK

Coastal Western Whiptail (*Aspidoscelis tigris stejnegeri*)

County Group 2

Coastal western whiptail occurs primarily in hot, dry, open areas with little vegetation, including chaparral, woodland, and riparian habitats (CaliforniaHerps 2012). The coastal western whiptail occurs in Coastal Southern California, ranging north into Ventura County and south into Baja California. Coastal western whiptails forage on small lizards and invertebrates, especially spiders, scorpions, centipedes, and termites and lay eggs from April to August (CaliforniaHerps 2012).

Coastal western whiptails were observed at both locations of the herpetological arrays and in the southwest and northeastern regions of the Property during all three survey periods (Figure 12).

Birds

Barn Owl (*Tyto alba)*

County Group 2

The barn owl is common in open habitats, including grassland, chaparral, and riparian. The barn owl hunts from a perched position or on the wing for small mammals, such as mice, voles, gophers, and squirrels, as well as other small birds. Barn owls can occur throughout the state from sea level to 1,680 meters (5,500 feet) AMSL (Zeiner et al. 1990a).

Barn owls were recorded during all three passes of the avian bird count surveys. Most observations were during nighttime surveys. A total of 15 individuals were observed at locations BC-P-3, BC-P-4, and BC-P-5; most observations recorded were located within the oak woodland at BC-P-4 (Figure 12).

Loggerhead Shrike *(Lanius ludovicianus*)

California Species of Special Concern, County Group 1, Proposed Covered–Draft East County MSCP

The loggerhead shrike is widespread throughout the United States, Mexico, and portions of Canada (Humple 2008). While shrikes are widespread at the lower elevations in California, the largest breeding populations are located in portions of the Central Valley, the Coast Ranges, and the southeastern deserts (Humple 2008).

Preferred habitats for the loggerhead shrike include open areas with scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as

well as nearby spiny vegetation or man-made structures (such as the top of chain-link fences or barbed wire) that provide a location to impale prey items for storage or manipulation (Humple 2008). Loggerhead shrikes prey mainly on arthropods (primarily grasshoppers, crickets, beetles, and caterpillars), but also take reptiles, amphibians, fish, small birds, and rodents (Humple 2008).

One loggerhead shrike was recorded within the northwestern region of the Property on July 13, 2012 (Figure 12). It was perched on a shrub in chamise chaparral alliance.

Prairie Falcon *(Falco mexicanus)*

California Watch List, County Group 1

Prairie falcons are found in grasslands, savannas, rangelands, agriculture, desert scrub, and alpine meadows throughout the southeastern deserts, through the Central Valley, and along inner Coast Ranges and Sierra Nevada (Zeiner et al. 1990a). Prairie falcons hunt small mammals and birds over open terrain by diving from perch or flight. Usually the species will nest in canyons, cliffs, or rocky outcrops (Zeiner et al. 1990a).

One prairie falcon was observed shortly before the commencement of the evening avian bird count survey on April 26, 2012 near BC-P-1 (Figure 12). The individual flew overhead around dusk.

Red-Shouldered Hawk *(Buteo lineatus)*

County Group 1

Red-shouldered hawk inhabits low-elevation (below 1,524 meters or 5,000 feet AMSL) riparian woodlands, particularly in areas with interspersed swamps and emergent wetlands. This species is a permanent resident of much of the United States east of the Mississippi and inhabits coastal areas of the West Coast (Dykstra et al. 2008). Red-shouldered hawks forage primarily along wet meadow, swamp, and emergent wetland edges for a variety of prey, including mammals, snakes, lizards, amphibians, small or young birds, and large insects. They nest in dense riparian habitats near permanent water (Zeiner et al. 1990a). Red-shouldered hawks are diurnally active and yearlong residents. Breeding occurs from February through July (Zeiner et al. 1990a).

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

Red-shouldered hawks were recorded during all three survey passes of the avian bird count surveys. One individual was observed flying overhead at BC-P-3 on May 24, 2012 and at BC-P-2 and BC-P-4 on June 25, 2012 and was observed to be utilizing the site (Figure 12). Hawks were frequently observed near the coast live oak woodland habitat in the southwestern region of the Property.

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

California Watch List, County Group 1, Proposed Covered–Draft East County MSCP

Southern California rufous-crowned sparrows are found primarily in coastal sage scrub habitats in Southern California, although this species will also occupy sparse mixed chaparral or other coastal scrub habitats (Zeiner et al. 1990a). Steep and often rocky hillsides are preferred. Rufous-crowned sparrows forage on the ground for insects, spiders, seeds, and other vegetation. This species does very little migrating, although it may occasionally migrate upslope in other areas of its range. This species is threatened primarily by habitat loss and fragmentation. Brown-headed cowbird (*Molothrus ater*) parasitism has been recorded for this sparrow (Zeiner et al. 1990a).

One rufous-crowned sparrow was recorded within the Property during the avian point count surveys in May at BC-P-4 (Figure 12).

Turkey Vulture *(Cathartes aura)*

County Group 1, Proposed Covered–Draft East County MSCP

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

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

Two turkey vultures soared overhead at BC-P-5 on April 26, 2012. Six observations of turkey vultures were recorded on May 24, 2012, including three at BC-P-4 and one each at BC-P-1, BC-P-2, and BC-P-3 (Figure 12). Two individuals were recorded at sites BC-P-1, BC-P-3, and BC-P-5 on June 25, 2012. They were observed flying over, utilizing the Property. It was noted that

there were frequently large flocks of turkey vultures (approximately 15 individuals) soaring over the Property and within the vicinity.

Western Bluebird *(Sialia mexicana)*

County Group 2

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

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

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

Western bluebirds were observed within the oak woodland habitat at BC-P-4. Eight individuals were recorded on May 24, 2012, and six individuals were recorded on June 25, 2012 (Figure 12).

White-Tailed Kite *(Elanus leucurus)*

California Fully Protected, County Group 1, Proposed Covered–Draft East County MSCP

White-tailed kite is a common to uncommon year-long resident in coastal and valley lowlands up to the western Sierra Nevada foothills and southeast deserts (Small 1994; County of Riverside 2008). The white-tailed kite is commonly associated with agricultural areas (Grinnell and Miller 1944), but it also inhabits low-elevation grasslands, savannah-like habitats, open sage scrub, meadows, wetlands, and oak woodlands, particularly in areas with a dense population of voles (Waian and Stendell 1970). Riparian areas adjacent to open space areas are typically used for nesting (County of Riverside 2008), where kites select dense, broad-leafed deciduous trees for

nesting and roosting (Brown and Amadon 1968). They prey mostly on small mammals, with voles and other small rodents making up approximately 95% of their diet, but they occasionally take birds, insects, reptiles, and amphibians. White-tailed kites hunt in the morning and late afternoon for voles and mice, usually near farmlands. Nests are made of piled sticks and twigs and placed near the tops of oak, willow, or other trees near marshes and foraging areas (Zeiner et al. 1990a). Peak breeding occurs from May to August, and females lay three to five eggs, incubating for approximately one month (Zeiner et al. 1990a).

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

One white-tailed kite was recorded during the second pass of avian bird count surveys at location BC-P-4 (Figure 12). There were also incidental sightings of white-tailed kites during the general biological surveys. During late summer, a roost of approximately 15 to 20 individuals was observed to occupy a snag located in chaparral habitat along the western border of the Property.

Mammals - Small Mammals

Dulzura Pocket Mouse *(Chaetodipus californicus femoralis)*

California Species of Special Concern, County Group 2

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

A total of nine individual Dulzura pocket mice were captured during small mammal trapping in the Property. This species was detected at Array 2 during the August surveys and at both trapping locations during the September surveys (Figure 12).

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

California Species of Special Concern, County Group 2

Northwestern San Diego pocket mouse occurs mainly in the arid coastal and desert border areas of San Diego County, as well as in parts of the Riverside and San Bernardino Counties, from sea level

to 1,829 meters (6,000 feet) AMSL. It inhabits coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland habitats, usually in sandy herbaceous areas with rocks or coarse gravel (Zeiner et al. 1990b). Northwestern San Diego pocket mouse feeds mostly on the seeds of forbs, grasses, and shrubs, but it also eats some insects. This species will carry seeds in cheek pouches and store them in and around the burrow (Zeiner et al. 1990b). The San Diego pocket mouse generally breeds from March to May and has an average of four young per litter (Zeiner et al. 1990b).

Fourteen individual northwestern San Diego pocket mice were captured during small mammal trapping on the Property. This species was detected during both trapping sessions at both trapping locations (Figure 12).

San Diego Desert Woodrat (*Neotoma lepida intermedia*)

California Species of Special Concern, County Group 2

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

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

Nine San Diego desert woodrats were recorded during 2012 small mammal trapping. Individuals were recorded at both trapping locations during both August and September surveys (Figure 12).

Bats

Long-Legged Myotis (*Myotis volans*)

County Group 2

The long-legged myotis is found throughout California, including the coastal ranges, the Cascade and Sierra Nevada ranges to Southern California, the Great Basin, and the Mojave Desert area (Zeiner et al. 1990b). This species occupies woodland and forested habitats above 1,200 meters (4,000 feet) AMSL (Zeiner et al. 1990b). Long-legged myotis feeds on moths and

other flying insects and forages over water, trees, cliffs, and in openings in forest habitats. Trees are important day roots for this species, and like other bat species, it will night roost in rock crevices, buildings, mines, and caves (Zeiner et al. 1990b).

Within the Property, long-legged myotis was detected only at the East bat survey location during both August and September survey passes (Figure 12). It was more frequently detected during August.

Pallid Bat (*Antrozous pallidus*)

California Species of Special Concern, County Group 2, Proposed Covered–Draft East County MSCP

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

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

Pallid bat was detected at both the East and West survey locations during both the August and September survey passes (Figure 12).

Pocketed Free-Tailed Bat (*Nyctinomops femorosaccus*)

California Species of Special Concern, County Group 2

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

Pocketed free-tailed bat was detected during both passes of passive bat surveys at both survey locations (Figure 12).

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

California Species of Special Concern, County Group 2, Proposed Covered–Draft East County MSCP

Townsend's big-eared bat occurs throughout California, but little is known about its range, and it is currently considered uncommon in California. This species is insectivorous and primarily consumes small moths, although beetles and soft-bodied insects are consumed as well (Zeiner et al. 1990b). Townsend's big-eared bat forages using echolocation and will glean insects from foliage. Mesic habitats and habitat edges are preferred. Roosting sites are typically man-made structures that house fewer than 100 individuals (Zeiner et al. 1990b).

Townsend's big-eared bat was recorded during both survey passes at both the East and West survey locations, although more minutes of detection were recorded at the East survey location (Figure 12).

Western Mastiff Bat *(Eumops perotis californicus)*

California Species of Special Concern, County Group 2

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

Western mastiff bats were detected only during the August survey pass at the East bat survey location (Figure 12).

Western Red Bat (*Lasiurus blossevillii*)

California Species of Special Concern, County Group 2

Western red bat occurs in California from Shasta County to the Mexican border and west of the Sierra Nevada/Cascade crest and deserts. Roosting habitats include forests and woodlands from sea level up through mixed conifer forests (Zeiner 1990b). The species feeds over a wide variety of habitats, including grasslands, shrublands, open woodlands, open forests, and croplands.

Western red bat is not found in desert areas. It roosts primarily in trees, and less often in shrubs, in edge habitats adjacent to streams, fields, or urban areas. Western red bat prefers edges or habitat mosaics that have trees for roosting and open areas for foraging.

Western red bat was detected only during the August survey pass at the West bat survey location (Figure 12).

Western Small-Footed Myotis (*Myotis ciliolabrum*)

County Group 2

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

Western small-footed myotis was detected at both East and West survey locations during both survey passes (Figure 12).

Western Yellow Bat *(Lasiurus xanthinus)*

California Species of Special Concern

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

Western yellow bat was detected at both East and West survey locations during both survey passes (Figure 12).

Yuma Myotis (*Myotis yumanensis*)

County Group 2

Yuma myotis occurs throughout California but is uncommon in the Mojave and Colorado desert regions, except the mountain ranges bordering the Colorado River Valley. They can be found in many habitat types, but prefer open forests and woodlands with sources of water they can forage

over (Zeiner et al. 1990b). Yuma myotis ranges from sea level to 3,353 meters (11,000 feet) AMSL, but is generally found below 2,438 meters (8,000 feet) (Zeiner et al. 1990b). Yuma myotis roosts in groups of several thousands in caves, buildings, and mines and under bridges (Zeiner et al. 1990b). Reproduction for Yuma myotis begins in the fall, and a single litter of one young is born sometime between May and June (Zeiner et al. 1990b).

Yuma myotis was detected during both passes of passive bat surveys at both survey locations (Figure 12).

4.3.6 Special-Status Wildlife with High Potential to Occur

Based on an analysis of the elevation, soils, vegetation communities, and level of disturbance of the site in conjunction with the known distribution of special-status species in the vicinity of the Property and the results of focused wildlife surveys, eight wildlife species have a high potential to occur on the Property. The species with high potential to occur include one invertebrate, one reptile, two bird, and four mammal species.

Invertebrates

Monarch Butterfly (*Danaus plexippus*)

County Group 2

The monarch butterfly follows a pattern of seasonal migration. During summer, this species is found in New England, the Great Lakes region, and the Northern Rocky Mountains. These areas are occupied from May through late August to mid-September (Urquhart 1987). The New England and Great Lakes populations migrate southwest to wintering grounds in the Sierra Madre mountain range of Mexico. The Rocky Mountain population migrates southwest to wintering grounds along the California coast. The species' distribution is controlled by the distribution of its larval host plant (i.e., various milkweeds [*Asclepias* spp.]).

Wintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus or pine [*Pinus* spp.]) with nectar and water sources nearby that are generally near the coast. A few California sites (e.g., Pacific Grove and Natural Bridges State Park) support concentrated numbers of overwintering adults, but adults often winter as scattered individuals or in small clusters (Emmel and Emmel 1973).

Sexually mature monarch butterflies mate along their northern migratory route (while returning to their summer grounds) and deposit eggs on milkweed plants. Adults die shortly after mating and laying eggs, leaving the completion of the northern migration to their offspring.

Within the Property, there are large stands of coast live oak and some pines and eucalyptus. There is potentially suitable wintering habitat within the Property for this species.

Reptiles

Northern Red Diamond Rattlesnake (*Crotalus ruber ruber*)

California Species of Special Concern, County Group 2, Proposed Covered–Draft East County MSCP

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

There is suitable chaparral habitat within the Property for this species.

Birds

Cooper's Hawk (*Accipiter cooperii*)

California Watch List, County Group 1

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

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

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

There is suitable coast live oak woodland within the southwestern region of the Property for this species to nest and forage.

Golden Eagle (*Aquila chrysaetos*)

California Fully Protected, Watch List, County Group 1, Proposed Covered–Draft East County MSCP

Golden eagles are found throughout Western North America and are residents of Southern California. This species ranges from sea level up to 3,833 meters (11,500 feet) AMSL (Grinnell and Miller 1944). The golden eagle requires rolling foothills, mountain terrain, and wide arid plateaus deeply cut by streams and canyons, open mountain slopes and cliffs, and rock outcrops (Zeiner et al. 1990a).

Golden eagles breed from late January through August with peak breeding occurring in March through July. Nest construction in Southern California occurs in fall and continues through winter (Dixon 1937). This species nests on cliffs with canyons and escarpments and in large trees (generally occurring in open habitats) and is primarily restricted to rugged, mountainous country (Garrett and Dunn 1981; Johnsgard 1990).

The golden eagle was formerly considered common within suitable habitats in California (Grinnell and Miller 1944) and is now considered an uncommon resident throughout California (Garrett and Dunn 1981). A major threat to this species is human disturbance in the form of habitat loss, as well as human development and activity adjacent to golden eagle habitats.

Although there is no suitable nesting habitat for golden eagle located within the Property, this species has been recorded in the vicinity, and there are suitable cliffs or rocky outcrops for roosting or nesting habitat within the vicinity of the Property. There is suitable foraging habitat within the Property, and golden eagles could be expected to infrequently utilize this habitat.

Mammals - Small Mammals

Pallid San Diego Pocket Mouse (*Chaetodipus fallax pallidus*)

California Species of Special Concern, County Group 2

The pallid San Diego pocket mouse is commonly found in sandy herbaceous areas and occurs in the San Diego, Riverside, and San Bernardino Counties (Zeiner et al. 1990b). Typical habitats include chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland. This species commonly consumes the seeds of forbs, grasses, and shrubs, and research has indicated that grass seeds are preferred (Zeiner et al. 1990b). Seeds are placed in cheek pouches and brought back to the burrow for storage. Friable soil is needed to allow burrowing.

There are friable soils and suitable chaparral habitat on the Property for this species. Although this species was not recorded during small mammal trapping, there is potential that this species occurs elsewhere in the Property.

Medium Mammals

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

California Species of Special Concern, County Group 2

The subspecies San Diego black-tailed jackrabbit, which is one of nine subspecies of black-tailed jackrabbit (Dunn et al. 1982), is confined to coastal Southern California. The black-tailed jackrabbit occupies many diverse habitats but is primarily found in arid regions that support short-grass habitats. Black-tailed jackrabbits are not usually found in high grass or dense brush where it is difficult for them to move freely, and the openness of sparse scrub habitat is probably preferred over dense chaparral. Black-tailed jackrabbits are considered generalist herbivores (Johnson and Anderson 1984). The San Diego black-tailed jackrabbit is particularly sensitive to habitat fragmentation and the isolation of populations. Other documented threats to jackrabbits related to urban development are vehicle collisions and pet, stray, and feral dogs (Lechleitner 1958).

Within the Property, there is suitable habitat for San Diego black-tailed jackrabbit, including open chaparral habitat and arid climate.

Large Mammals

Mountain Lion *(Puma [=Felis] concolor*)

County Group 2

The mountain lion had an expansive range over much of North and South America, but hunting and habitat fragmentation have resulted in a severe constriction of the range to mostly mountains and unpopulated areas (Zeveloff and Collett 1988; Harlow et al. 1992).

Mountain lions are most abundant in riparian areas (Dickson and Beier 2002) and brushy habitats, although their historic range included diverse habitats such as montane coniferous forests, swamps, and lowland forests (Zeveloff and Collett 1988; Harlow et al. 1992). Grasslands are avoided, and home ranges are generally located away from high- and low-speed two-lane paved roads, although they will occupy habitats near active roads if riparian habitats are present (Dickson and Beier 2002).

Mountain lions typically prey on deer and elk, although they are known to be opportunistic and consume bighorn sheep, moose, beaver, badger, coyotes, ground squirrels, pocket gophers, and voles (Ross and Jalkotzy 1992). Cougars are mostly solitary, with the exception of courtship and reproduction, and occupy large territories (Nowak and Paradiso 1983; Ross and Jalkotzy 1992). The primary threats to mountain lions are habitat loss and fragmentation of existing habitat. Home ranges are quite large and vary from 30 square kilometers to almost 300 square kilometers (12 to 120 square miles) (Nowak and Paradiso 1983), making this species especially vulnerable to habitat fragmentation, especially if necessary habitat corridors are eliminated.

The Property is located within a large expanse of open space habitat, which facilitates large wildlife movement, and suitable habitat for this species occurs throughout the Property.

Mule Deer (*Odocoileus hemionus*)

County Group 2

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

There is suitable chaparral habitat within the Property for mule deer. Open space within the vicinity of the Property also facilitates deer movement within the region.

4.3.7 Invasive Species

While not considered to be "invasive species," domestic dogs were observed off-leash on the existing Nature Trail along with their hiking owners. These pets were not observed in native habitat, but there is always a risk. Dogs do not kill nearly as many native species as domestic cats; however, they do stress native species and have the potential to kill.

California ground squirrels (*Spermophilus [Otospermophilus] beecheyi*) were noted to dominate the rodent community within the developed area of the Property. Although they are a native species, they are not native to this landscape and would not be as prevalent without additional resources (e.g., food) provided by park attendees. Ground squirrels may be outcompeting other native or special-status species that would be expected to be found in this area, such as San Diego desert woodrat or Northwestern San Diego pocket mouse.

4.4 Wildlife Movement

The Property is located within a network of conserved habitats that most likely serve as an important center for wildlife in Eastern San Diego County. The Property is surrounded by land that is relatively undeveloped or is conserved. Cleveland National Forest is located north of the Property and serves as a wildlife corridor from Eastern San Diego County to Orange County and beyond.

The general area functions to convey large, medium, and small mammals within and through the Property as evidenced through wildlife camera data, track and scat observations, and visual observations of bobcat and coyote.

INTENTIONALLY LEFT BLANK

5.0 CONCLUSIONS AND MANAGEMENT RECOMMENDATIONS

Surveys conducted in 2012 documented 15 vegetation alliances, associations, or semi-natural stands, and 249 plant and 109 wildlife species were observed or detected within the Property during surveys, including 1 amphibian, 6 reptiles, 38 birds, 28 mammals, and 36 invertebrates. This list includes 22 special-status wildlife species and 5 special-status plant species, of which 10 are proposed for coverage under the Draft East County MSCP.

This section provides resource-specific conclusions and management recommendations for each vegetation alliance, association, semi-natural stand, and taxonomic group assessed during the 2012 survey effort. These recommendations are based on the results of the baseline biological diversity surveys and the management and monitoring guidelines and conservation goals provided in the MSCP Framework Management Plan (FMP) (County of San Diego 2008), since an FMP has yet to be developed for the Draft East County MSCP Plan. The FMP includes plan-wide stewardship and management guidelines, habitat- and species-specific management guidelines, and monitoring guidelines, as well as specific conservation goals for each of the three planning segments identified in the MSCP Subarea Plan. Specific biological resource management concerns for areas under the jurisdiction of the Draft East County MSCP likely include rural residential development and habitat fragmentation, edge effects, off-road vehicle activity, dumping or other adverse human disturbances, habitat restoration, and invasion of non-native plants and animals.

5.1 Vegetation Communities/Habitats

The Property consists of 15 vegetation alliances, associations, or semi-natural stands including eucalyptus woodland semi-natural stands, coast live oak woodland alliance, chamise chaparral alliance, chamise chaparral–coastal sage scrub association, chamise chaparral–deerweed association, bigberry manzanita–chamise chaparral association, California sagebrush–California buckwheat scrub alliance, chaparral whitethorn association, mountain-mahogany provisional association, California buckwheat association, snapdragon penstemon scrub alliance, deerweed association, scrub oak chaparral–chamise chaparral alliance, annual brome grasslands semi-natural stands, and California deer grass association. Conservation goals for these vegetation communities and habitats include minimizing impacts to sensitive habitats, conserving linkages important for wildlife dispersal, and maintaining active ecosystem processes to support stable populations of special-status species.

Coast live oak woodland alliance, located within the southwestern part of the Property, provides important habitat structure and resources. Several special-status bird species, such as barn owl, western bluebird, and red-shouldered hawk, were observed to either reside or forage within this vegetation alliance. Since campgrounds and park facilities are interspersed within this habitat,

there is regular disturbance resulting from human activity (e.g., trash, introduction of non-native species, pets, and trespassing or unauthorized access). Specific recommendations regarding invasive species and public access are discussed in Sections 5.4 and 5.8.1, respectively.

The Property also includes chamise chaparral alliance and related associations, and California sagebrush–California buckwheat scrub alliance. The challenges that these habitats face are primarily associated with fire and invasive species. Fire recommendations are discussed in Section 5.6, and invasive species recommendations are discussed in Section 5.4. Since these habitats likely serve as wildlife corridors to other areas of adjacent open space, management for species movement and dispersal is recommended (Section 5.7).

Additionally, it is recommended that the DPR conduct ongoing habitat monitoring within the Property to maintain an up-to-date inventory of the distribution and composition of species and other basic characteristics of the vegetation communities on site. Ongoing monitoring within the Property will identify any adverse changes in vegetation community distribution and habitat quality, such as changes from fire, invasion by non-natives, or decline of existing species, and monitoring will indicate whether modifications to current management actions are needed. According to the MSCP, vegetation mapping and monitoring should be repeated at least once every 5 years and should be consistent with recommendations provided by the San Diego Management and Monitoring Program (SDMMP) and the Institute for Ecological Monitoring and Management (IEMM) for preserve-level vegetation monitoring.

5.2 Plants

The 2012 survey effort documented five special-status plant species within the Property, and all are proposed for coverage under the Draft East County MSCP. These species, as well as other special-status plant species with potential to occur on site, are generally threatened by development, invasion by non-native plant species, and human activity. Suppressed or too active of fire regimes may also compromise special-status species that require natural fire regimes to thrive. Recommendations for the preservation of these species include monitoring and removal of non-native plant species, future trail construction that avoids special-status populations, maintenance of fences or other barriers to prevent unauthorized public access, and continued monitoring of known special-status plant populations. Specific monitoring or management requirements in accordance with the MSCP may need to be adopted when the Final East County MSCP is approved.

Future rare plant surveys within the Property should be conducted at appropriate times to monitor the known populations of special-status plant species and to maximize the detection of special-status plant species with high potential to occur on site.

Additional management strategies for special-status plant species within the Property include:

- Control of non-native plant populations (see Section 5.4.1)
- Maintenance of natural fire regimes (see Section 5.6)

5.3 Wildlife

The current survey effort documented 22 special-status wildlife species, including seven species proposed for coverage under the Draft East County MSCP. Species-specific measures for management and monitoring of special-status species, where applicable, follow those developed for the MSCP (County of San Diego 1998). Recommended measures reflect the best-known data and understanding of management strategies.

While regional MSCP monitoring protocols are being developed, preserve-level protocols have not yet been revised or identified. DPR will follow the habitat- and species-specific monitoring requirements outlined in Table 3-5 of the MSCP (County of San Diego 1998), as appropriate.

5.3.1 Invertebrates

No special-status invertebrate species were detected within the Property. There is high potential for Monarch butterfly to occur within the Property, since there is suitable woodland habitat within the southwestern region of the Property. There is moderate potential for Hermes copper to occur within the Property; spiny redberry, the larval host plant, and California buckwheat, the adult nectar plant, were recorded within the Property, although not in sufficient composition that would indicate that habitat is suitable for Hermes copper. The Property is located within the known range of this species, and habitat is generally suitable for this species. The most recent observation of Hermes copper was at Potrero (Klein pers. comm. 2012; SDG&E 2008, as cited in County of San Diego 2010b); no further specific location is given in the report. It is recommended that populations of spiny redberry be monitored periodically for Hermes copper. It is suggested that restoration opportunities within the Property focus on planting spiny redberry and California buckwheat within close proximity (i.e., less than 10 feet apart) in suitable areas within the Property.

Periodic monitoring for host plants or invertebrates should be done every 3 to 5 years.

5.3.2 Herpetofauna

Amphibians

Focused surveys for amphibian species were not conducted within the Property. No special-status amphibian species were detected during the 2012 surveys. There is low potential for special-status

amphibian species to occur within the Property, although management considerations should be mindful of these species, since several of them likely occur throughout the watershed. The federally endangered arroyo toad (*Anaxyrus californicus*) is known to occur within the Tijuana River Watershed, and USFWS-designated critical habitat for this species is located in the vicinity of the Property. Although there is no suitable habitat for this species within the Property, pesticide use and non-native plant species control could have impacts on populations located downstream from the Property. Therefore, management actions to increase the overall health of the watershed are recommended (Section 5.8.2).

Reptiles

Two special-status reptile species were detected within the Property: coast horned lizard and coastal western whiptail. Coast horned lizard is proposed for coverage under the Draft East County MSCP.

Management to reduce detrimental edge effects to these species is needed. Edge effects are likely more of an issue within the southwestern area of the Property, where native habitats abut a developed campground, picnic areas, and mesic areas that are artificially watered. Potential edge effects that could affect these species include incidental mortality on roads, mortality due to stray animals or pets, and increased incidence of non-native animal species.

Additional measures for managing populations of coast horned lizard include maintaining populations of native ant species and discouraging Argentine ants. Non-native Argentine ants often displace native ants, an important food source for the coast horned lizard. Management strategies include restriction of litter and food waste, inspection of planting stock, limiting watering of ornamental areas, and education of campground attendees on measures they can take to reduce the risk and extent of invasion (Dudek 2010). As Argentine ants are generally associated with a water source, DPR staff should restrict the extent of watering within the developed area of the Property. It is recommended that monitoring for this invasive species be conducted within the more mesic regions of the Property, particularly within the southern region of the Property and along the western border where the Property abuts homes.

Additionally, one special-status reptile species, the northern red diamond rattlesnake, has high potential to occur within the Property. It is presumed that general habitat management and the above ASMDs are appropriate management strategies for this species. Surveys for special-status reptiles should be conducted periodically; herpetological pitfall arrays and coverboard surveys should be conducted every 3 years to provide updates to the species inventory. Monitoring data will allow the Property managers to synthesize an inventory of species from which to evaluate and update management strategies.

Management strategies recommended by Dudek for special-status herpetofauna include:

- Install signage to enforce slow speeds on trails
- Coordinate with campground attendees and local landowners to control pets, mesopredators, and other species that may impact special-status herpetofauna
- Install "no trespassing" signs around the perimeter of the Preserve and perform regular security patrols
- Install signage along trails within the Property to inform public of impact of reptile collection and that there are penalties for unauthorized collection
- Control and/or remove non-native plants
- Exclude rock outcrops or other areas known to be suitable habitat for special-status species from future trail planning
- Strategically place fencing or berms to deter unauthorized access

5.3.3 Birds

Eight special-status birds were detected within the Property, including four proposed for coverage under the Draft East County MSCP: loggerhead shrike, Southern California rufous-crowned sparrow, turkey vulture, and white-tailed kite. The additional four special-status bird species are barn owl, prairie falcon, red-shouldered hawk, and western bluebird.

Management recommendations for the aforementioned special-status bird species reflect those outlined in the MSCP Subarea Plan. In general, it is suggested that natural ecosystem processes be maintained and that adverse environmental effects be minimized to the extent possible. Suitable chaparral habitat should be conserved for loggerhead shrikes. Management for the Southern California rufous-crowned sparrow requires preservation of dynamic processes (e.g., fire) to maintain open areas of coastal sage scrub with herbaceous components. Conservation of large home ranges for white-tailed kite and turkey vulture is needed, as well as preservation of suitable areas for roosting.

Direct threats to birds could result from the establishment or introduction of mesopredators within the developed area of the Property. Crows and ravens thrive in human-adapted environments. Pets were observed within the Property; they stress native species and have the potential to kill. Management strategies are outlined in 5.8.1.

Management directives that will help support bird species within the Property include:

- Limit habitat management activities (e.g., controlled burn and herbicide application) during the breeding season (generally mid-March through August)
- Control or remove non-native plants
- Maintain natural ecological processes (e.g., wildfires, habitat succession, and hydrologic processes)
- Coordinate with managers of adjacent conserved lands to facilitate spread of information, especially with respect to migratory birds or birds with larger home ranges (e.g., white-tailed kite)

5.3.4 Mammals

Twelve special-status mammal species were detected within the Property, two of which are proposed for coverage under the Draft East County MSCP: pallid bat and Townsend's big-eared bat. There is potential for three additional special-status species, mountain lion, mule deer, and pallid San Diego pocket mouse, to occur within the Property, as well.

Special-status bat species will likely benefit from conservation measures aimed to preserve habitat within and in the vicinity of the Property, maintenance of open areas suitable for foraging, and preserving abandoned structures, trees, or other cavities that can be utilized as suitable day or night roosts. For example, the abandoned house in the northeastern region of the Property is likely a suitable roosting area for bats.

Mule deer, mountain lion, and other special-status species with potential to occur within the Property are identified as benefiting from the recommended resource management actions for coastal sage scrub, chaparral, and grassland habitats as discussed in Section 5.1. Monitoring protocols for mule deer and mountain lion should follow the wildlife corridor monitoring recommendations, which are further discussed in Section 5.7. Camera stations used during the 2012 biological inventory surveys should be utilized for monitoring purposes.

Based on known biology and habitat requirements of large mammals such as mule deer and mountain lion, management actions should prioritize maintaining ecosystem function and processes within a network of preserves. Core and linkage areas in the preserve system should be monitored to allow for adaptive management. The Property is located in the vicinity of many other adjacent conserved lands, including the Cleveland National Forest, and other undeveloped lands to the east and west (Figure 3). As such, management of the Property should incorporate habitat and regional management to support existing biological functions and coordination with managers of conserved lands in the surrounding area to ensure that flow of wildlife is supported and large mammal monitoring is performed.

5.3.5 Critical Habitat

There is no USFWS-designated critical habitat within the boundaries of the Property, although there is critical habitat within the immediate vicinity. Critical habitat for arroyo toad is located west of the Property and is mapped in drainages within the Tijuana River Watershed. There is also critical habitat for Quino checkerspot butterfly to the east of the Property. Larger patches of critical habitat are located further west of the Property in the vicinity of Otay Lake. It is unlikely that either the arroyo toad or Quino checkerspot are found within the Property, although management strategies should consider these species due to the proximity to suitable habitats.

5.4 Non-Native Invasive Species Removal and Control

Conservation goals for the Property should consider the removal and control of invasive, non-native plant (e.g., shortpod mustard and eucalyptus) and wildlife species to enhance habitat quality.

5.4.1 Plants

Forty-seven non-native plant species were identified within the Property and 14 species have been identified as target species in need of removal and control. The species prioritized for removal and their removal priority ranking are listed in Table 14. Species ranked as high priority are recommended for control as soon as possible, species ranked as moderate priority are recommended for control as soon as high-priority species are under control, and species ranked as low priority are recommended for control after high and moderate priority species are under control.

Table 14
Removal Priority of Mapped Invasive Non-Native Plant Species

Common Name	Scientific Name	Removal Priority
Saltcedar	*Tamarix ramosissima*	High
Italian plumeless thistle	*Carduus pycnocephalus ssp. pycnocephalus*	Moderate
Maltese star-thistle	*Centaurea melitensis*	Moderate
Bull thistle	*Cirsium vulgare*	Moderate
Gum tree	*Eucalyptus globulus and E. camaldulensis*	Moderate
Redstem stork's bill	*Erodium cicutarium*	Low
Shortpod mustard	*Hirschfeldia incana*	Low
London rocket	*Sisymbrium irio*	Low
Smooth cat's ear	*Hypochaeris glabra*	Low
Horehound	*Marrubium vulgare*	Low
Olive	*Olea europaea*	Low
Curly dock	*Rumex crispus*	Low

Table 14
Removal Priority of Mapped Invasive Non-Native Plant Species

Common Name	Scientific Name	Removal Priority
Peruvian peppertree	*Schinus molle*	Low
Brazilian peppertree	*Schinus terebinthifolius*	Low

There is a reasonably good chance of eradicating perennial invasive non-native plant species (e.g., saltcedar, gum tree, and peppertree) within the Property. However, many of the annual species would require ongoing management for effective control (e.g., Italian plumeless thistle, Maltese star-thistle, and Bull thistle).

General recommendations for control include manual and mechanical removal, application of herbicides, and cut and daub. However, the appropriate removal methodology should ultimately be determined with consideration of many variables, including time of year, severity of infestation, presence of special-status species, the degree of intermixing of invasive species with sensitive native habitats, access, and proximity to surface water. Specific invasive non-native plant control recommendations are included in the Potrero/Mason Property Vegetation Management Plan (Dudek 2012).

Remaining non-native plant species not mapped or prioritized for removal, such as soft brome, annual yellow sweetclover, or common catchfly, should be included as species to monitor and control as components of general habitat management, but not targeted for control. These species are generally spread throughout the Property and management for these species would most likely not be cost-effective or successful. However, some methods, such as an active fire regime, may help control non-native plant species and make habitats more suitable for special-status plant and animal species.

5.4.2 Wildlife

The appearance of non-native wildlife species within the Property is a management concern. Because there is substantial human activity on the Property, particularly within the southwestern region, there are likely other non-native wildlife species established within the Property that were not observed during surveys. There is greater potential for other such species to become established given the level of human disturbance. Some species of management concern are native species that have been introduced into a novel environment where they thrive. These species include predators, such as crows or domestic animals, and potential resource competitors, such as California ground squirrels.

Management suggestions to control these species include means to modify the suitability of the habitat, which is often made suitable due to the presence of humans and human influence. Strategies include the removal of trash and debris, controlling rodent populations, limiting artificial watering, and removing old or abandoned structures. These strategies could be suggested for use within the southwestern region of the Property, where non-native and native (e.g., California ground squirrels) species are a management concern. Habitat restoration with native plant species may also help control non-native wildlife species. Native and undisturbed habitats are less likely to be invaded by non-native wildlife species (e.g., brown-headed cowbirds are more likely to invade disturbed habitat edges than intact forest interiors) (Didham et al. 2007).

California ground squirrels dominate the rodent community within the coast live oak woodland alliance and campground area. Trash and debris should be stored securely within the developed portion of the Property and be removed promptly to discourage ground squirrels. A modification of habitat can also be used to discourage squirrels. Examples include mowing grass to no higher than two inches (CDFG 2011c), removing brush or debris piles, and collapsing old burrows.

Non-native Argentine ants often displace native ants, an important food source for the coast horned lizard, which is found within the Property. Argentine ants were not recorded within the Property, although there is potential for this species to become established. Measures to reduce the risk and extent of invasion include removal of litter and food waste, inspection of planting stock, and education of nearby residents about Argentine ants (Dudek 2010). Argentine ants are generally associated with a water source. It is recommended that monitoring for this invasive species be conducted along the on-site drainages and within other mesic portions of the Property, as well as around habitat edges.

Since domestic animals (e.g., pets) are allowed within the Property, there is potential for these species to stress native species and result in mortality. It is suggested the County's ordinance (41.123(c)) regarding the leashing of pets be enforced on the Property.

5.5 Restoration Opportunities

Dudek will be preparing a Vegetation Management Plan for the Property that will include a discussion of restoration opportunities on the Property. The Property is generally composed of high-quality native vegetation communities. Restoration opportunities primarily include invasive plant species control accompanied by passive restoration, but there are also some opportunities for active restoration. In particular, invasive plant species control is recommended in two areas associated with historic habitations within the Property (Figure 11). Several invasive species that were likely planted at these locations have persisted and should be controlled before they further degrade native habitats. For example, peppertrees (*Schinus* sp.) and eucalyptus are allelopathic;

they prohibit native plant growth in their understory and in the vicinity. The targeted species for invasive plant species control were identified and prioritized in Table 14. Upon removal of the targeted invasive plant species, these two locations could be replanted with native coastal scrub and chaparral species to enhance the habitat.

While there are few dirt roads and trails within the Property, any unwanted dirt roads or trails could be passively restored with a combination of trail closure and potentially decompaction of soils accomplished through ripping. If soils are ripped, then the areas should also be seeded and weeded until native species begin to establish, since soil disturbance often promotes weed establishment. Opportunities for road and trail restoration will be evaluated in the Vegetation Management Plan to be prepared by Dudek.

There is a small reservoir located slightly east of the campground that could be restored to native habitat. The reservoir was dry during the 2012 surveys and is currently heavily disturbed and occupied by many non-native species. If the reservoir does not provide a meaningful function any longer, the area could be restored to native habitat. The dam could be re-graded to natural contours, and the area could be re-planted with native coastal scrub and chaparral species.

Finally, there are some non-native grasslands in the southeastern portion of the Property that could be targeted for enhancement (Figures 9a and 9b). Non-native annual weeds, including shortpod mustard, bull thistle, Italian plumeless thistle, and brome grasses, were abundant and should be controlled as part of the ongoing management of the Property (Section 5.4.1).

5.6 Fire Management

The Property is dominated by chamise and scrub oak chaparral alliances with areas of coast live oak woodland located in the southwest. Upland habitats are likely vulnerable to frequent burns, and the most recent wildfire burned the entirety of the Property in 2007.

While forest habitats are not typically susceptible to annual burning, grass cover can burn yearly (Minnich and Scott 2005). Forests tend to limit ground fuel accumulation with age. Canopy closure serves to “shade out” understory plants, resulting in mature riparian forests characterized by a dense canopy layer and an understory consisting primarily of leaf and twig litter and downed woody debris. Canopy closure also reduces habitat suitability for certain rare species, such as the arroyo toad. Edges of forest along ecotones or roadways often include shrub or grass understory, creating ladder fuels that allow the potential for canopy fire spread. The primary concern for vegetation type conversion and increased fire hazard in the Property is the presence and encroachment of non-native invasive plants into open space areas. This condition has increased the overall fuel load and likelihood for higher intensity fires.

Dudek is preparing a Vegetation Management Plan for the Property that will include a short-term tactical fire suppression plan and long-term strategic vegetation management plan, which considers strategic fire prevention activities, fire suppression with regard to fire effects on habitat, and post-fire monitoring and rehabilitation. Fuel management recommendations include prescriptions specific to the high-value vegetation resources present on site (i.e., coast live oak woodland and chamise chaparral alliances) based on a combination of prevention practices, including mowing, herbicides, prescribed fire, thinning, and fuel breaks. Management recommendations that would complement fuel reduction practices are also identified, including maintaining and delineating fuel modification zones, providing emergency fire access, promoting data sharing, controlling illegal access, increasing public education, reducing ignition, managing fuels, and suppressing fires.

5.7 Wildlife Linkages and Corridors

Wildlife is expected to move freely within the Property given that is relatively open and the entire area is accessible to medium and large mammals. Important wildlife movement trends through this area are the regional east–west movement of medium and large species through the deep canyons and north–south movement for large species through the Cleveland National Forest.

Target species for corridor use include mountain lion and mule deer. Corridor usage by mammals should be monitored as described below.

Permanent monitoring stations should be established using the camera stations established during the 2012 baseline biodiversity surveys. Monitoring stations should attempt to capture both north–south and east–west movement of wildlife. At these stations, track identification, scat identification, and video observation methods should be employed to determine use by target mammal species. Wildlife corridor monitoring should occur at least every 5 years. The scope of monitoring will be sufficient to determine if corridors are being utilized, but not to determine the extent of use (i.e., how many individuals of any given species use a corridor).

5.8 Additional Management Recommendations

5.8.1 Public Access

Public access currently occurs within the southwestern area of the Property, including access for hiking, camping, and picnicking. The existing "Nature Loop Trail" is the only trail currently authorized for use, and it passes through coast live oak woodland, chamise chaparral, and deerweed alliances. However, per the Public Access Plan, this trail will be realigned because it passes through sensitive cultural resources.

The DPR currently anticipates opening up other trails within the remainder of the Property. A further discussion of allowed public access will be presented in the Public Access Plan, to be prepared by Dudek. It is anticipated that existing roads and disturbed areas will be modified to create a trail system, in order to minimize impacts to undisturbed habitats. After trail construction, roads that are not needed are proposed for revegetation.

Fencing and gates may be needed in certain areas of the Property to control unauthorized public access and manage access to sensitive biological and cultural resources. Trespass has been noted to be an issue within the southern area of the Property; appropriate fencing and signage may reduce the threat of unauthorized access. An equestrian staging area is proposed within the southwestern area of the Property; analysis should include impacts of horses to special-status species, potential impacts to native vegetation, potential spread of non-native species, and impacts to wildlife. It is also proposed that only certain trails be permitted for equestrian use. These issues will be addressed in the Public Access Plan.

5.8.2 Hydrological Management

The Property drains northwest into Potrero Creek and, eventually, into the Tijuana River Watershed. There were two principal drainages observed within the Property. The northern drainage flows from east to west through the entire Property and connects with the southern drainage at the western border of the Property. Dominant vegetation along this drainage includes coast live oak woodland alliance, scrub oak chaparral–chamise chaparral alliance, and chamise chaparral–deerweed association. The southern drainage is highly incised and crosses through the campground area. There is no native vegetation within the drainage, although it passes through areas mapped as annual brome grasslands semi-natural stands and coast live oak woodland alliance. It appears that this drainage is human-altered.

Although no permanent hydrological features were observed within the Property, rain events likely connect the Property with Potrero Creek. Since the southern drainage passes through the developed campground and picnic area, there is greater potential for runoff, debris, and other contaminants to enter the watershed. Trash receptacles should be maintained and any potential contaminants should be properly contained and stored. Care should be taken to ensure that, as management proceeds, natural drainage patterns are maintained, best management practices (BMPs) are utilized as needed, and contaminants from runoff do not affect downstream riparian habitats. Trail construction should consider potential impacts to the northern drainage.

6.0 REFERENCES

AOU (American Ornithologists' Union). 2012. "AOU Checklist of North and Middle American Birds." Browse the Checklist. Accessed August 2012. http://checklist.aou.org /taxa/.

Bing. 2012. http://www.bing.com/maps/

Bleich, V.C. 1973. "Ecology of Rodents at the United States Naval Weapons Station; Seal Beach, Fallbrook Annex, San Diego County, California." Master's thesis; California State University, Long Beach.

Bleich, V.C. and O.A. Schwartz. 1975. "Observations on the Home Range of the Desert Woodrat." *Journal of Mammalogy* 56:518–519.

Brown, L. and D. Amadon. 1968. *Eagles, Hawks and Falcons of the World*. 2 Vols. London, United Kingdom: Country Life Books.

CAL FIRE. 2012. "Harris Fire Incident Information." Incident Information. November 5, 2007. Accessed online September 2012. http://cdfdata.fire.ca.gov/incidents/ incidents_details_info? incident_id=223.

CaliforniaHerps. 2012. "A Guide to the Amphibians and Reptiles of California." Accessed August 2012. http://www.californiaherps.com/index.html.

Cal-IPC (California Invasive Plant Council). "California Invasive Plant Inventory Database." Berkley, California: California Invasive Plant Council. 2006. Accessed April 2012. http://www.cal-ipc.org/ip/inventory/weedlist.php.

Cameron, G.N. and D.G. Rainey. 1972. "Habitat Utilization by Neotoma lepida in the Mojave Desert." *Journal of Mammalogy* 53:251–266.

CDFG (California Department of Fish and Game). 2000. *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities*. Sacramento, CA: California Department of Fish and Game. December 9, 1983. Revised May 8, 2000.

CDFG. 2011a. California Natural Diversity Database (CNDDB). *Special Animals*. Biannual Publication. Mimeo. January 2011.

CDFG. 2011b. CNDDB. *State and Federally Listed Endangered and Threatened Animals of California*. Biannual Publication. Mimeo. January 2011.

CDFG. 2011c. "Rodenticides." Accessed December 29, 2011. http://www.dfg.ca.gov/education/rodenticide.

CDFG. 2012a. CNDDB. Rarefind. Version 4. Computer database. Quadrangles used in query: Potrero, Cameron Corners, Campo, Morena Reservoir, Barrett Lake, Tecate.

CDFG. 2012b. CNDDB. *Special Vascular Plants, Bryophytes, and Lichens List*. Biannual Publication. Mimeo. July 2012.

CDFG. 2012c. CNDDB. *State and Federally Listed Endangered and Threatened, and Rare Plants of California*. Biannual Publication. Mimeo. July 2012.

CNPS (California Native Plant Society). 2001. *CNPS Botanical Survey Guidelines*. December 9, 1983. Revised June 2, 2001. Accessed April 15, 2011. http://cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf.

CNPS. 2004. *Vegetation Rapid Assessment Protocol*. CNPS Vegetation Committee. November 5, 2001, Revised February 21, 2007. http://www.cnps.org/cnps/vegetation/pdf/protocol-rapid_assess.pdf.

CNPS. 2012. *Inventory of Rare and Endangered Plants*. Online ed. Version 8-01a. Sacramento, California: CNPS. Accessed July 2012. http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi.

County of Riverside Transportation and Land Management Agency. 2008. "Birds." *Volume 2– The MSHCP Reference Document*. Western Riverside County Multiple Species Habitat Conservation Plan. Accessed August 2012. http://www.rctlma.org /mshcp/volume2/birds.html.

County of San Diego. 1998. "Final Multiple Species Conservation Program." *MSCP Plan*. August 1998. Accessed August 2012. http://www.sdcounty.ca.gov/dplu/mscp/docs / SCMSCP/FinalMSCPProgramPlan.pdf.

County of San Diego. 2008. *MSCP Framework Management Plan (FMP*). Accessed August 2012. http://www.sdcounty.ca.gov/dplu/mscp/docs/SCMSCP/Framework_Mgmt_Plan.pdf.

County of San Diego. 2009a. *County of San Diego Rare Species List*.

County of San Diego. 2009b. "East County Plan - Species List." MSCP. Updated March 2009. Accessed September 2012. http://www.sdcounty.ca.gov/pds/mscp/ec_species.html.

County of San Diego. 2010a. *Guidelines for Determining Significance and Report Format and Content Requirements*: *Biological Resources*. Revised September 15, 2010. Accessed August 2012. http://www.sdcounty.ca.gov/pds/docs/Biological_Guidelines.pdf.

County of San Diego. 2010b. "Attachment B: Interim Guidelines for Hermes Copper (Lycaena hermes)." In *County of San Diego Report Format and Content Requirements: Biological Resources*. 73–77.

County of San Diego. 2012. "East County Plan." MSCP. Accessed September 2012. http://www.sdcounty.ca.gov/pds/mscp/ec.html

Crother, B.I. 2008. "Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in our Understanding." 6th ed. *Herpetological Circular No. 37*, edited by J.J. Moriarty. Shoreview, Minnesota: Society for the Study of Amphibians and Reptiles.

Dickson, B.G., and P. Beier. 2002. "Home-Range and Habitat Selection by Adult Cougars in Southern California." *Journal of Wildlife Management* 66(4):1235–1245.

Didham, R.K., J.M. Tylianakis, N.J. Gemmell, T.A. Rand, and R.M. Ewers. 2007. "Interactive effects of habitat modification and species invasion on native species decline." *Trends in Ecology and Evolution* 22 (9): 489-496.

Dixon, J.B. 1937. "The Golden Eagle in San Diego County, California." *Condor* 39:49–56.

Dudek 2012. *Potrero/Mason Preserve Vegetation Management Plan*. Prepared for County of San Diego Department of Parks and Recreation. February 2013.

Dudek. 2010. *Final Baseline Biodiversity Survey for the Simon Preserve*. Prepared for County of San Diego Department of Parks and Recreation. March 2010.

Dunn, J.P., J.A. Chapman, and R.E. Marsh. 1982. "Jackrabbits." In *Wild Mammals of North America*, edited by G.A. Feldhamer, B.C. Thompson, and J.A. Chapman, 124–145. Baltimore, Maryland: The Johns Hopkins University Press.

Dykstra, Cheryl R., Jeffrey L. Hays and Scott T. Crocoll. 2008. "Red-shouldered Hawk (Buteo lineatus)." *The Birds of North America Online*, edited by A. Poole, Ithaca, New York: Cornell Lab of Ornithology. The Birds of North America Online. Accessed August 2012. http://bna.birds.cornell.edu/bna/species/107doi:10.2173/bna.107

Emmel, T.C. and J.F. Emmel. 1973. *The Butterflies of Southern California*. Science Series, no. 26. Los Angeles, CA: Natural History Museum of Los Angeles County.

FRAP (Fire and Resource Assessment Program). 2012. *"About the Fire and Resource Assessment Program."* California Department of Forestry and Fire Protection. Accessed August 2012. http://frap.cdf.ca.gov/.

Garrett, K. and J. Dunn. 1981. *The Birds of Southern California: Status and Distribution*. Los Angeles, CA: Los Angeles Audubon Society.

Grinnell, J. and A.H. Miller. 1944. "The Distribution of the Birds of California." *Pacific Coast Avifauna*, no. 27. Berkeley, California: Copper Ornithological Club. Reprinted in Lee Vining, California: Artemisia Press. April 1986.

Guinan, Judith A., Patricia A. Gowaty, and Elsie K. Eltzroth. 2008. "Western Bluebird (Sialia mexicana)." The Birds of North America Online, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. Accessed August 2012. http://bna.birds.cornell.edu/bna / species/510doi:10.2173 /bna.510.

Hall, E.R. 1981. *The Mammals of North America*. 2 vols. New York, New York: John Wiley and Sons, Inc.

Harlow, H.J., F.G. Lindzey, W.D. Van Sickle, and W.A. Gern. 1992. "Stress Response of Cougars to Nonlethal Pursuit by Hunters." *Canadian Journal of Zoology* 70:136-139.

Hermanson, J.W. and T.J. O'Shea. 1983. "Antrozous pallidus." *Mammalian Species*, 213:1–8. American Society of Mammalogists.

Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Prepared for California Department of Fish and Game. Sacramento, CA: Vegetation Ecologist Nongame-Heritage Program. October 1986.

Holland, D.C. and R.H. Goodman. 1998. *A Guide to the Amphibians and Reptiles of MCB Camp Pendleton, San Diego County, California*. Prepared for AC/S Environmental Security Resource Management Division MCB Camp Pendleton, California. Contract M00681-94-C-0039.

Humple, D. 2008. "Loggerhead Shrike (Lanius ludovicianus)." In *California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California*, ed. W.D. Shuford and T. Gardali, 271–277. In *Studies of Western Birds 1*. Camarillo, California: Western Field Ornithologists and Sacramento, California: California Department of Fish and Game.

Jennings, M.R., and M.P. Hayes. 1994. *Amphibian and Reptile Species of Special Concern in California*. Final report. Prepared for the California Department of Fish and Game, Inland Fisheries Division Endangered Species Project. November 1, 1994. Accessed August 2012. http://www.dfg.ca.gov/wildlife/nongame/publications/docs/herp_ssc.pdf.

Jepson Flora Project. 2012. "Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California." Berkeley, California: University of California. Accessed August 1, 2012. http://ucjeps.berkeley.edu/interchange/I_status_1+2.html.

Johnsgard, P.A. 1990. *Hawks, Eagles, and Falcons of North America*. Washington, D.C.: Smithsonian Institution Press.

Johnson, R.D. and J.E. Anderson. 1984. "Diets of Black-Tailed Jackrabbits in Relation to Population Density and Vegetation." *Journal of Wildlife Management* 37:46–47.

Kirk, David A. and Michael J. Mossman. 1998. "Turkey Vulture (Cathartes aura)." The Birds of North America Online, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. Accessed August 2012. http://bna.birds.cornell.edu/bna/species/339.

Klauber, L.M. 1939. "Studies of Reptiles Life in the Arid Southwest." Part I-III. *Bulletin of the Zoological Society of San Diego* 14:1–100.

Lechleitner, R.R. 1958. "Movements, Density, and Mortality in a Black-Tailed Jackrabbit Population." *Journal of Wildlife Management* 22:371–384.

Lightner, J. 2011. *San Diego County Native Plants*. San Diego, CA: San Diego Flora.

McEachern, K., B. Pavlik, J. Rebman, and R. Sutter. 2007. *San Diego Multiple Species Conservation Program (MSCP) rare plant monitoring review and revision*. United States Geological Survey Scientific Investigations Report 2007-5016. San Diego, California: Western Ecological Research Center.

Miller, B. W. 2001. "A method for determining relative activity of free flying bats using a new activity index for acoustic monitoring." *Acta Chiropterologica* 3:93–105.

Minnich, R.A. and Scott, T.A. 2005. *Wildland fire and the conservation of coastal sage scrub*. Accessed April 28, 2005. http://ecoregion.ucr.edu/review/cssfirex.pdf. Accessed April 28, 2005.

NABA (North American Butterfly Association). 2001. *Checklist & English Names of North American Butterflies*. 2nd ed. Morristown, New Jersey: NABA. Accessed August 2012. http://www.naba.org/pubs/enames2.html.

NatureServe. 2012. *NatureServe Explorer: An Online Encyclopedia of Life*. Version 7.1. February 2, 2009. Updated February 2012. Accessed August 2012. http://www.nature serve.org/explorer/index.htm.

Nowak, R.M., and J.L. Paradiso. 1983. *Walker's Mammals of the World*. Baltimore, Maryland: Johns Hopkins University Press.

NRCS (Natural Resources Conservation Service). 2012. "Official Soil Series Descriptions (OSD) with series extent mapping capabilities." United States Department of Agriculture. Accessed August 2012. http://soils.usda.gov/technical/classification/osd/index.html.

Nussbaum, R.A., E.D. Brode, Jr., and R.M. Storm. 1983. *Amphibians and Reptiles of the Pacific Northwest*. Moscow, Idaho: University of Idaho Press.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Vegetation Communities of San Diego County*. Draft. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California." Robert F. Holland, PhD., October 1986. March 2008.

O'Farrell, M. J., B. W. Miller, and W. L. Gannon. 1999. "Qualitative identification of free-flying bats using the Anabat detector." *Journal of Mammalogy* 80:11–23.

Pianka, E.R., and W.S. Parker. 1975. "Ecology of Horned Lizards: A Review with Special Reference to Phrynosoma platyrhinos." *Copeia* 1975:141–162.

Project Clean Water. 2012. "Watersheds." Accessed August 2012. http://projectcleanwater.org / index.php?option=com_content&view=article&id=2&Itemid=19.

Reiser, C.H. 1994. "San Diego Ambrosia." Rare Plants of San Diego County. May 1994. Accessed August 2012. http://sandiego.sierraclub.org/rareplants/008.html.

Ross, P.I., and M.G. Jalkotzy. 1992. "Characteristics of a Hunted Population of Cougars in Southwestern Alberta." *Journal of Wildlife Management* 56:417–426.

SANDAG (San Diego Association of Governments). 2011. *Vegetation Classification Manual for Western San Diego County*. February 2011. 1st ed. Accessed September 2012. http://www.sdmmp.com/reports_and_products/Monitoring_Reports/Vegetation_Classification/Manual/Vegetation%20Classification%20Manual%20for%20Western%20San%20Diego%20County.pdf

Small, A. 1994. *California Birds: Their Status and Distribution*. Vista, California: Ibis Publishing Company.

Stebbins, R.C. 2003. "Western Reptiles and Amphibians." In *Peterson Field Guide*, 3rd ed. New York, New York: Houghton Mifflin Company.

Stebbins, R.C. 1954. *Amphibians and Reptiles of Western North America*, 537. Boston, Massachusetts: McGraw Hill Book Company.

Thompson, S.D. 1982. "Spatial Utilization and Foraging Behavior of the Desert Woodrat, Neotoma lepida lepida." *Journal of Mammalogy* 63:570–581.

Unitt, P. 2004. *San Diego County Bird Atlas*. San Diego, California: San Diego Society of Natural History.

Urquhart, F.A. 1987. *The Monarch Butterfly: International Traveler*. Toronto, Canada: University of Toronto Press.

USDA (U.S. Department of Agriculture). 2012. "California." State PLANTS Checklist. Accessed August 2012. http://plants.usda.gov/dl_state.html.

USDA. 2012. *Natural Resources Conservation Service Web Soil Survey*. Accessed September 2012. http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm.

USGS (U.S. Geological Survey). 2008. "Herpetological Monitoring Using a Pitfall Trapping Design in Southern California." Technique and Methods 2-A5. Accessed September 2012. http://pubs.usgs.gov/tm/tm2a5/.

USFWS (U.S. Fish and Wildlife Service). 1996. *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants*.

Waian, L.B. and R.C. Stendell. 1970. "The White-Tailed Kite in California with Observations of the Santa Barbara Population." *California Fish and Game* 56:188–198.

Western Regional Climate Center (WRCC). 2012a. *Climate of California*. Accessed August 2012. http://www.wrcc.dri.edu/narratives/california/

WRCC (Western Regional Climate Center). 2012b. *Period of Record General Climate Summary, Poway Valley*. Accessed August 2012. http://www.wrcc.dri.edu/summary/sca.html

Wilson, D.E., and D.M. Reeder, eds. 2005. *Mammal Species of the World: A Taxonomic and Geographic Reference*. 3rd ed. Baltimore, Maryland: Johns Hopkins University Press.

Zeiner, D.C., W.F. Laudenslayer, Jr., and K.E. Mayer, eds. 1988. *California's Wildlife, Volume 1: Amphibians and Reptiles*. Sacramento, California: CDFG.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1990a. *California's Wildlife, Volume 2: Birds*. Sacramento, California: CDFG.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, ed. 1990b. *California's Wildlife, Volume 3: Mammals*. Sacramento, California: CDFG.

Zeveloff, S.I. and F.R. Collett. 1988. *Mammals of the Intermountain West*. Salt Lake City, Utah: University of Utah Press.

APPENDIX A

Observed Species List - Plants

APPENDIX A
Observed Species List – Plants

Scientific Name	Common Name	Status (Federal/State/ County/ CRPR) [1]
Vascular Species-Dicots		
***ADOXACEAE*—Muskroot Family**		
Sambucus nigra ssp. *caerulea*	Blue elderberry	None/None/None
***ANACARDIACEAE*—Sumac or Cashew Family**		
Rhus aromatica	Skunkbush sumac	None/None/None
Rhus ovata	Sugar sumac	None/None/None
**Schinus molle*	Peruvian peppertree	None/None/None
**Schinus terebinthifolius*	Brazilian peppertree	None/None/None
Toxicodendron diversilobum	Pacific poison oak	None/None/None
***APIACEAE*—Carrot Family**		
Apiastrum angustifolium	Mock parsley	None/None/None
Daucus pusillus	American wild carrot	None/None/None
Sanicula arguta	Sharptooth blacksnakeroot	None/None/None
Tauschia arguta	Southern umbrellawort	None/None/None
***APOCYNACEAE*—Dogbane Family**		
Asclepias fascicularis	Mexican whorled milkweed	None/None/None
**Nerium oleander*	Oleander	None/None/None
***ASTERACEAE*—Sunflower Family**		
Achillea millefolium	Common yarrow	None/None/None
Acourtia microcephala	Sacapellote	None/None/None
Ambrosia psilostachya	Cuman ragweed	None/None/None
Artemisia californica	Coastal sagebrush	None/None/None
Artemisia dracunculus	Tarragon	None/None/None
Artemisia tridentata	Big sagebrush	None/None/None
Baccharis salicifolia ssp. *salicifolia*	Mulefat	None/None/None
Baccharis sarothroides	Desertbroom	None/None/None
Brickellia californica	California brickellbush	None/None/None
**Carduus pycnocephalus* ssp. *pycnocephalus*	Italian plumeless thistle	None/None/None
**Centaurea melitensis*	Maltese star-thistle	None/None/None
Chaenactis artemisiifolia	White pincushion	None/None/None
Chaenactis glabriuscula	Yellow pincushion	None/None/None
Cirsium occidentale var. *californicum*	Cobwebby thistle	None/None/None
**Cirsium vulgare*	Bull thistle	None/None/None
Corethrogyne filaginifolia	Common sandaster	None/None/None
Deinandra floribunda	Tecate tarplant	None/None/List A, MSCP/1B.2
Encelia californica	California brittlebush	None/None/None
Ericameria linearifolia	Narrowleaf goldenbush	None/None/None
Erigeron canadensis	Canadian horseweed	None/None/None
Eriophyllum wallacei	Woolly easterbonnets	None/None/None
Euthamia occidentalis	Western goldentop	None/None/None
Geraea viscida	Sticky geraea	None/ None/ List B, MSCP/ 2.3

Scientific Name	Common Name	Status (Federal/State/ County/ CRPR) [1]
Gnaphalium palustre	Western marsh cudweed	None/None/None
Gutierrezia microcephala	Threadleaf snakeweed	None/None/None
Gutierrezia sarothrae	Broom snakeweed	None/None/None
Hazardia squarrosa	Sawtooth goldenbush	None/None/None
**Hedypnois cretica*	Cretanweed	None/None/None
Helianthus gracilentus	Slender sunflower	None/None/None
Heterotheca grandiflora	Telegraphweed	None/None/None
**Hypochaeris glabra*	Smooth cat's ear	None/None/None
**Lactuca serriola*	Prickly lettuce	None/None/None
**Logfia gallica*	Narrowleaf cottonrose	None/None/None
**Matricaria discoidea*	Disc mayweed	None/None/None
Osmadenia tenella	False rosinweed	None/None/None
Pseudognaphalium biolettii	Two-color rabbit-tobacco	None/None/None
Pseudognaphalium californicum	Ladies' tobacco	None/None/None
Pseudognaphalium canescens	Wright's cudweed	None/None/None
Pseudognaphalium stramineum	Cottonbatting plant	None/None/None
Rafinesquia californica	California plumeseed	None/None/None
Solidago velutina ssp. *californica*	Threenerve goldenrod	None/None/None
**Sonchus oleraceus*	Common sowthistle	None/None/None
**Sonchus asper* ssp. *asper*	Spiny sowthistle	None/None/None
Stephanomeria diegensis	San Diego wirelettuce	None/None/None
Stephanomeria exigua	Small wirelettuce	None/None/None
Stylocline gnaphaloides	Mountain neststraw	None/None/None
Tetradymia comosa	Hairy horsebrush	None/None/None
Uropappus lindleyi	Lindley's silverpuffs	None/None/None
Xanthisma junceum	Rush-like bristleweed	None/None/List D, MSCP/4.3
***BORAGINACEAE*—Borage Family**		
Amsinckia intermedia	Common fiddleneck	None/None/None
Amsinckia menziesii	Menzies' fiddleneck	None/None/None
Cryptantha angustifolia	Panamint cryptantha	None/None/None
Cryptantha intermedia	Clearwater cryptantha	None/None/None
Cryptantha muricata	Pointed cryptantha	None/None/None
Eriodictyon crassifolium	Thickleaf yerba santa	None/None/None
Eriodictyon trichocalyx	Hairy yerba santa	None/None/None
Eucrypta chrysanthemifolia	Spotted hideseed	None/None/None
Heliotropium curassavicum var. *oculatum*	Seaside heliotrope	None/None/None
Nemophila menziesii var. *integrifolia*	Baby blue eyes	None/None/None
Phacelia cicutaria	Caterpillar phacelia	None/None/None
Phacelia parryi	Parry's phacelia	None/None/None
Phacelia ramosissima	Branching phacelia	None/None/None
Plagiobothrys sp.	Popcornflower	None/None/None

Scientific Name	Common Name	Status (Federal/State/ County/ CRPR) [1]
***BRASSICACEAE*—Mustard Family**		
Caulanthus lasiophyllus	California mustard	None/None/None
Descurainia pinnata	Western tansymustard	None/None/None
**Hirschfeldia incana*	Shortpod mustard	None/None/None
**Sisymbrium irio*	London rocket	None/None/None
Tropidocarpum gracile	Dobie pod	None/None/None
***CACTACEAE*—Cactus Family**		
Cylindropuntia californica var. *parkeri*	Brownspined pricklypear	None/None/None
**Opuntia ficus-indica*	Barbary fig	None/None/None
Opuntia phaeacantha	Tulip pricklypear	None/None/None
***CARYOPHYLLACEAE*—Pink Family**		
Loeflingia squarrosa var. *artemisiarum*	Sagebrush loeflingia	None/None/None
**Silene gallica*	Common catchfly	None/None/None
**Stellaria media*	Common chickweed	None/None/None
***CHENOPODIACEAE*—Goosefoot Family**		
**Chenopodium album*	Lambsquarters	None/None/None
Chenopodium californicum	California goosefoot	None/None/None
***CISTACEAE* – Rock-rose Family**		
Helianthemum scoparium	Bisbee Peak rush-rose	None/None/None
***CONVOLVULACEAE*—Morning-glory Family**		
**Convolvulus arvensis*	Field bindweed	None/None/None
Calystegia macrostegia	Island false bindweed	None/None/None
Cuscuta californica	Chaparral dodder	None/None/None
***CRASSULACEAE*—Stonecrop Family**		
Dudleya pulverulenta	Chalk dudleya	None/None/None
***CUCURBITACEAE*—Gourd Family**		
Marah macrocarpa	Cucamonga manroot	None/None/None
DATISCACEAE – Datisca Family		
Datisca glomerata	Durango root	None/None/None
***ERICACEAE*—Heath Family**		
Arctostaphylos glauca	Bigberry manzanita	None/None/None
Arctostaphylos pungens	Pointleaf manzanita	None/None/None
***EUPHORBIACEAE*—Spurge Family**		
Croton californicus	California croton	None/None/None
Croton setigerus	Dove weed	None/None/None
***FABACEAE*—Legume Family**		
**Acacia baileyana*	Cootamundra wattle	None/None/None
Acmispon americanus var. *americanus*	American bird's-foot trefoil	None/None/None
Acmispon argophyllus var. *argophyllus*	Silver bird's-foot trefoil	None/None/None
Acmispon glaber	Common deerweed	None/None/None
Acmispon heermannii	Heermann's bird's-foot trefoil	None/None/None
Acmispon micranthus	San Diego bird's-foot trefoil	None/None/None

Scientific Name	Common Name	Status (Federal/State/ County/ CRPR) [1]
Acmispon strigosus	Strigose bird's-foot trefoil	None/None/None
**Caesalpinia gilliesii*	Bird-of-paradise shrub	None/None/None
Lathyrus splendens	Pride-of-California	None/None/List D, 4.3/ MSCP
Lupinus bicolor	Miniature lupine	None/None/None
Lupinus hirsutissimus	Stinging annual lupine	None/None/None
Lupinus truncatus	Collared annual lupine	None/None/None
**Melilotus indicus*	Annual yellow sweetclover	None/None/None
Parkinsonia aculeata	Jerusalem thorn	None/None/None
Trifolium depauperatum var. *depauperatum*	Cowbag clover	None/None/None
Trifolium obtusiflorum	Clammy clover	None/None/None
Trifolium willdenovii	Tomcat clover	None/None/None
Vicia ludoviciana ssp. *ludoviciana*	Louisiana vetch	None/None/None
***FAGACEAE*—Oak Family**		
Quercus ×acutidens	No common name	None/None/None
Quercus agrifolia	California live oak	None/None/None
Quercus berberidifolia	Interior scrub oak	None/None/None
Quercus engelmannii	Engelmann oak	None/ None/ List D, 4.3/ MSCP
Quercus wislizeni var. *wislizeni*	Interior live oak	None/None/None
***GERANIACEAE*—Geranium Family**		
**Erodium botrys*	Longbeak stork's bill	None/None/None
**Erodium cicutarium*	Redstem stork's bill	None/None/None
Geranium carolinianum	Carolina geranium	None/None/None
***GROSSULARIACEAE*—Gooseberry Family**		
Ribes aureum	Golden currant	None/None/None
***LAMIACEAE*—Mint Family**		
**Marrubium vulgare*	Horehound	None/None/None
Monardella breweri ssp. *lanceolata*	Mustang monardella	None/None/None
**Rosmarinus officinalis*	Rosemary	None/None/None
Salvia apiana	White sage	None/None/None
Salvia columbariae	Chia	None/None/None
Salvia mellifera	Black sage	None/None/None
Stachys rigida var. *rigida*	Rough hedgenettle	None/None/None
Tichostema lanceolatum	Vinegarweed	None/None/None
***MALVACEAE*—Mallow Family**		
Malacothamnus densiflorus	Yellowstem bushmallow	None/None/None
Malacothamnus fasciculatus	Mendocino bushmallow	None/None/None
***MONTIACEAE*—Montia Family**		
Claytonia parviflora	Streambank springbeauty	None/None/None
Claytonia perfoliata ssp. *perfoliata*	Miner's lettuce	None/None/None
***MYRSINACEAE*—Myrsine Family**		
**Anagallis arvensis*	Scarlet pimpernel	None/None/None

Scientific Name	Common Name	Status (Federal/State/ County/ CRPR) [1]
***MYRTACEAE*—Myrtle Family**		
**Eucalyptus camaldulensis*	River redgum	None/None/None
**Eucalyptus globulus*	Tasmanian bluegum	None/None/None
**Eucalyptus* sp.	Eucalyptus	None/None/None
**Melaleuca viminalis*	Weeping bottlebrush	None/None/None
***NYCTAGINACEAE*—Four O'clock Family**		
Mirabilis laevis var. *crassifolia*	California four o'clock	None/None/None
***OLEACEAE*—Olive Family**		
**Olea europaea*	Olive	None/None/None
***ONAGRACEAE*—Evening Primrose Family**		
Camissonia strigulosa	Sandysoil suncup	None/None/None
Camissoniopsis bistorta	Southern suncup	None/None/None
Camissoniopsis hirtella	Santa Cruz Island suncup	None/None/None
Clarkia purpurea ssp. *quadrivulnera*	Winecup clarkia	None/None/None
Clarkia similis	Ramona clarkia	None/None/None
Epilobium canum	Hummingbird trumpet	None/None/None
Epilobium ciliatum	Fringed willowherb	None/None/None
Eulobus californicus	California suncup	None/None/None
***OROBANCHACEAE*—Broom-rape Family**		
Castilleja exserta	Exserted Indian paintbrush	None/None/None
Castilleja minor ssp. *spiralis*	Lesser Indian paintbrush	None/None/None
Cordylanthus rigidus	Stiffbranch bird's beak	None/None/None
***PAEONIACEAE*—Peony Family**		
Paeonia californica	California peony	None/None/None
***PAPAVERACEAE*—Poppy Family**		
Eschscholzia californica	California poppy	None/None/None
Ehrendorferia chrysantha	Golden eardrops	None/None/None
Romneya trichocalyx	Bristly Matilija poppy	None/None/None
***PHRYMACEAE*—Lopseed Family**		
Mimulus aurantiacus	Orange bush monkeyflower	None/None/None
Mimulus breviflorus	Shortflower monkeyflower	None/None/None
Mimulus cardinalis	Scarlet monkeyflower	None/None/None
Mimulus guttatus	Seep monkeyflower	None/None/None
Mimulus palmeri	Palmer's monkeyflower	None/None/None
Mimulus pilosus	False monkeyflower	None/None/None
***PLANTAGINACEAE*—Plantain Family**		
Antirrhinum coulterianum	Coulter's snapdragon	None/None/None
Antirrhinum nuttallianum ssp. *nuttallianum*	Violet snapdragon	None/None/None
Collinsia heterophylla	Purple Chinese houses	None/None/None
Keckiella antirrhinoides var. *antirrhinoides*	Snapdragon penstemon	None/None/None

Scientific Name	Common Name	Status (Federal/State/ County/ CRPR) [1]
Keckiella ternata	Scarlet keckiella	None/None/None
Penstemon centranthifolius	Scarlet bugler	None/None/None
Penstemon spectabilis	Showy penstemon	None/None/None
***POLEMONIACEAE*—Phlox Family**		
Eriastrum filifolium	Lavender woollystar	None/None/None
Eriastrum sapphirinum ssp. *sapphirinum*	Sapphire woollystar	None/None/None
Gilia angelensis	Chaparral gilia	None/None/None
Gilia capitata	Bluehead gilia	None/None/None
Navarretia hamata ssp. *leptantha*	Hooked pincushionplant	None/None/None
***POLYGONACEAE*—Buckwheat Family**		
Chorizanthe fimbriata	Fringed spineflower	None/None/None
Chorizanthe procumbens	Prostrate spineflower	None/None/None
Chorizanthe staticoides	Turkish rugging	None/None/None
Eriogonum davidsonii	Davidson's buckwheat	None/None/None
Eriogonum fasciculatum var. *fasciculatum*	Eastern Mojave buckwheat	None/None/None
Eriogonum fasciculatum var. *polifolium*	Eastern Mojave buckwheat	None/None/None
Eriogonum gracile var. *gracile*	Slender woolly buckwheat	None/None/None
Pterostegia drymarioides	Woodland pterostegia	None/None/None
Rumex californicus	Toothed willow dock	None/None/None
**Rumex crispus*	Curly dock	None/None/None
***RANUNCULACEAE*—Buttercup Family**		
Aquilegia formosa	Western columbine	None/None/None
Clematis pauciflora	Ropevine clematis	None/None/None
Delphinium parishii	Desert larkspur	None/None/None
Thalictrum fendleri	Fendler's meadow-rue	None/None/None
***RHAMNACEAE*—Buckthorn Family**		
Ceanothus greggii var. *perplexans*	Desert ceanothus	None/None/None
Ceanothus leucodermis	Chaparral whitethorn	None/None/None
Rhamnus crocea	Spiny redberry	None/None/None
***ROSACEAE*—Rose Family**		
Adenostoma fasciculatum	Chamise	None/None/None
Cercocarpus betuloides var. *betuloides*	Birchleaf mountain mahogany	None/None/None
Cercocarpus betuloides	Birchleaf mountain mahogany	None/None/None
Heteromeles arbutifolia	Toyon	None/None/None
Prunus ilicifolia	Hollyleaf cherry	None/None/None
***RUBIACEAE*—Madder Family**		
Galium angustifolium	Narrowleaf bedstraw	None/None/None
Galium aparine	Stickywilly	None/None/None
***SALICACEAE*—Willow Family**		
Populus fremontii ssp. *fremontii*	Fremont cottonwood	None/None/None
Salix lasiolepis	Arroyo willow	None/None/None

Scientific Name	Common Name	Status (Federal/State/ County/ CRPR) [1]
***SCROPHULARIACEAE*—Figwort Family**		
Scrophularia californica	California figwort	None/None/None
***SOLANACEAE*—Nightshade Family**		
Datura wrightii	Sacred thorn-apple	None/None/None
**Nicotiana glauca*	Tree tobacco	None/None/None
Solanum douglasii	Greenspot nightshade	None/None/None
Solanum parishii	Parish's nightshade	None/None/None
Solanum xanti	Chaparral nightshade	None/None/None
***TAMARICACEAE*—Tamarisk Family**		
**Tamarix ramosissima*	Saltcedar	None/None/None
***URTICACEAE*—Nettle Family**		
**Urtica urens*	Dwarf nettle	None/None/None
Parietaria hespera	Rillita pellitory	None/None/None
***VISCACEAE*—Mistletoe Family**		
Phoradendron serotinum ssp. *tomentosum*	Christmas mistletoe	None/None/None
Vascular Species-Ferns and Fern Allies		
***PTERIDACEAE*—Brake Family**		
Cheilanthes covillei	Coville's lipfern	None/None/None
Cheilanthes newberryi	Newberry's lipfern	None/None/None
Cheilanthes viscida	Viscid lipfern	None/None/None
Pellaea andromedifolia	Coffee cliffbrake	None/None/None
Vascular Species-Gymnosperms and Gnetophytes		
***PINACEAE*—Pine Family**		
Pinus sp.	Pine	None/None/None
Vascular Species-Moncots		
***AGAVACEAE*—Agave Family**		
Hesperoyucca whipplei	Chaparral yucca	None/None/None
Yucca schidigera	Mojave yucca	None/None/None
***ALLIACEAE*—Onion Family**		
Allium peninsulare	Mexicali onion	None/None/None
***CYPERACEAE*—Sedge Family**		
Carex praegracilis	Clustered field sedge	None/None/None
Carex spissa	San Diego sedge	None/None/None
Cyperus esculentus	Yellow nutsedge	None/None/None
Eleocharis montevidensis	Sand spikerush	None/None/None
Schoenoplectus californicus	California bulrush	None/None/None
***JUNCACEAE*—Rush Family**		
Juncus bufonius	Toad rush	None/None/None
Juncus dubius	Questionable rush	None/None/None

Scientific Name	Common Name	Status (Federal/State/ County/ CRPR) [1]
***LILIACEAE*—Lily Family**		
Calochortus concolor	Goldenbowl mariposa lily	None/None/None
Calochortus splendens	Splendid mariposa lily	None/None/None
***POACEAE*—Grass Family**		
Agrostis pallens	Seashore bentgrass	None/None/None
**Avena barbata*	Slender oat	None/None/None
**Bromus diandrus*	Ripgut brome	None/None/None
**Bromus hordeaceus*	Soft brome	None/None/None
**Bromus madritensis*	Compact brome	None/None/None
Elymus glaucus	Blue wildrye	None/None/None
**Festuca myuros*	Rat-tail fescue	None/None/None
**Festuca perennis*	Italian ryegrass	None/None/None
**Hordeum murinum*	Mouse barley	None/None/None
**Lamarckia aurea*	Goldentop grass	None/None/None
Melica imperfecta	Smallflower melicgrass	None/None/None
Muhlenbergia rigens	Deergrass	None/None/None
**Polypogon monspeliensis*	Annual rabbitsfoot grass	None/None/None
Stipa coronata	Giant ricegrass	None/None/None
Stipa lepida	Foothill needlegrass	None/None/None
***THEMIDACEAE*—Brodiaea Family**		
Dichelostemma capitatum ssp. *capitatum*	Bluedicks	None/None/None
***TYPHACEAE*—Cattail Family**		
Typha latifolia	Broadleaf cattail	None/None/None
***VITACEAE*—Grape Family**		
**Vitis vinifera*	Wine grape	None/None/None

* Signifies non-native species.

[1] CRPR (California Rare Plant Rank):

1A Plants Presumed Extinct in California
1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2 Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 Plants About Which We Need More Information - A Review List
4 Plants of Limited Distribution - A Watch List

Threat Ranks

0.1 Seriously threatened in California
0.2 Fairly threatened in California
0.3 Not very threatened in California

County Designations:

County List A Plants rare, threatened or endangered in California and elsewhere
County List B Plants rare, threatened or endangered in California but common elsewhere
County List C Plants which may be rare, but need more information to determine their true rarity status
County List D Plants of limited distribution and are uncommon, but not presently rare or endangered
MSCP Proposed for Coverage under Draft East County MSCP

APPENDIX B

Observed Species List - Wildlife

APPENDIX B
Observed Species List – Wildlife

Scientific Name	Common Name	Status (Federal/State/County, MSCP)[1]
Amphibians		
***BUFONIDAE*—True Toads**		
Anaxyrus boreas	Western toad	None/None/None
Reptiles		
***IGUANIDAE*—Iguanid Lizards**		
Phrynosoma blainvillei ssp. *coronatum*	Coast horned lizard	None/CSC/Group 2, MSCP
Sceloporus occidentalis	Western fence lizard	None/None/None
Uta stansburiana	Common side-blotched lizard	None/None/None
***TEIIDAE*—Whiptail Lizards**		
Aspidoscelis tigris stejnegeri	Coastal western whiptail	None/None/Group 2
***COLUBRIDAE*—Colubrid Snakes**		
Arizona elegans occidentalis	California glossy snake	None/None/None
Coluber lateralis lateralis	California striped racer	None/None/None
Birds		
***CATHARTIDAE*—New World Vultures**		
Cathartes aura	Turkey vulture	None /None/Group 1, MSCP
***ACCIPITRIDAE*—Hawks, Kites, Eagles, and Allies**		
Buteo jamaicensis	Red-tailed hawk	None/None/None
Buteo lineatus	Red-shouldered hawk	None/None/Group 1
Elanus leucurus	White-tailed kite	None/FP/Group 1, MSCP
***FALCONIDAE*—Caracaras and Falcons**		
Falco mexicanus	Prairie falcon	None /WL/Group 1
Falco sparverius	American kestrel	None/None/None
***ODONTOPHORIDAE*—New World Quail**		
Callipepla californica	California quail	None/None/None
***COLUMBIDAE*—Pigeons and Doves**		
Zenaida macroura	Mourning dove	None/None/None
***TYTONIDAE*—Barn Owls**		
Tyto alba	Barn owl	None/None/Group 2
***CAPRIMULGIDAE*—Goatsuckers**		
Chordeiles acutipennis	Lesser nighthawk	None/None/None
Phalaenoptilus nuttallii	Common poorwill	None/None/None
***TROCHILIDAE*—Hummingbirds**		
Calypte anna	Anna's hummingbird	None/None/None
Calypte sp.	Hummingbird	None/None/None
***PICIDAE*—Woodpeckers and Allies**		
Colaptes auratus	Northern flicker	None/None/None
Melanerpes formicivorus	Acorn woodpecker	None/None/None
***TYRANNIDAE*—Tyrant Flycatchers**		
Myiarchus cinerascens	Ash-throated flycatcher	None/None/None
Sayornis saya	Say's phoebe	None/None/None

Scientific Name	Common Name	Status (Federal/State/County, MSCP)[1]
***CORVIDAE*—Crows and Jays**		
Aphelocoma californica	Western scrub-jay	None/None/None
Corvus brachyrhynchos	American crow	None/None/None
Corvus corax	Common raven	None/None/None
***PARIDAE*—Chickadees and Titmice**		
Baeolophus inornatus	Oak titmouse	None/None/None
***AEGITHALIDAE*—Long-Tailed Tits and Bushtits**		
Psaltriparus minimus	Bushtit	None/None/None
***TROGLODYTIDAE*—Wrens**		
Thryomanes bewickii	Bewick's wren	None/None/None
***POLIOPTILIDAE*—Gnatcatchers and Gnatwrens**		
Polioptila caerulea	Blue-gray gnatcatcher	None/None/None
***TURDIDAE*—Thrushes**		
Sialia mexicana	Western bluebird	None/None/Group 2
Turdus migratorius	American robin	None/None/None
***SYLVIIDAE*—Sylviid Warblers**		
Chamaea fasciata	Wrentit	None/None/None
***MIMIDAE*—Mockingbirds and Thrashers**		
Toxostoma redivivum	California thrasher	None/None/None
***PTILOGONATIDAE*—Silky-Flycatchers**		
Phainopepla nitens	Phainopepla	None/None/None
***LANIIDAE*—Shrikes**		
Lanius ludovicianus	Loggerhead shrike	None /CSC/Group 1, MSCP
***EMBERIZIDAE*—Emberizids**		
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None /WL/Group 1, MSCP
Amphispiza belli	Sage sparrow	None/None/None
Melozone crissalis	California towhee	None/None/None
Pipilo maculatus	Spotted towhee	None/None/None
Spizella atrogularis	Black-chinned sparrow	None /None/None
***ICTERIDAE*—Blackbirds**		
Icterus parisorum	Scott's oriole	None/None/None
***FRINGILLIDAE*—Fringilline and Cardueline Finches and Allies**		
Carpodacus mexicanus	House finch	None/None/None
Spinus psaltria	Lesser goldfinch	None/None/None
Mammals		
***VESPERTILIONIDAE*- Evening Bats**		
Antrozous pallidus	Pallid Bat	None/CSC/Group 2, MSCP
Corynorhinus townsendii	Townsend's big-eared bat	None/CSC/Group 2, MSCP
Eptesicus fuscus	Big brown bat	None/None/None
Lasiurus blossesvillii	Western red bat	None/CSC/Group 2
Lasiurus cinereus	Hoary bat	None/None/None
Lasiurus xanthinus	Western yellow bat	None/CSC/None

Scientific Name	Common Name	Status (Federal/State/County, MSCP)[1]
Myotis californicus	California myotis	None/None/None
Myotis ciliolabrum	Western small-footed myotis	None/None/Group 2
Myotis yumanensis	Yuma myotis	None/None/Group 2
Myotis volans	Long-legged myotis	None/None/Group 2
Parastrellus hesperus	Canyon bat	None/None/None
***MOLOSSIDAE*- Free-tailed Bats**		
Eumops perotis californicus	Western mastiff bat	None/CSC/Group 2
Nyctinomops femorosaccus	Pocketed free-tailed bat	None/CSC/Group 2
Tadarida basiliensis	Brazilian free-tailed bat	None/None/None
***CANIDS*—Wolves and Foxes**		
Canis latrans	Coyote	None/None/None
Canis lupus familiaris	Domestic dog	None/None/None
***FELDAE*—Cats**		
Lynx rufus	Bobcat	None/None/None
***LEPORIDAE*—Hares and Rabbits**		
Sylvilagus bachmani	Brush rabbit	None/None/None
***GEOMYIDAE*—Pocket Gophers**		
Thomomys bottae	Botta's pocket gopher	None/None/None
***HETEROMYIDAE*—Pocket Mice and Kangaroo Rats**		
Chaetodipus fallax fallax	Northwestern San Diego pocket mouse	None/CSC/Group 2
Chaetodipus californicus femoralis	Dulzura pocket mouse	None/CSC/Group 2
Dipodomys simulans	Dulzura kangaroo rat	None/None/None
***MURIDAE*—Rats and Mice**		
Neotoma lepida intermedia	San Diego desert woodrat	None/CSC/Group 2
Neotoma macrotis	Big-eared woodrat	None/None/None
Peromyscus californicus	California deermouse	None/None/None
Peromyscus eremicus	Cactus deermouse	None/None/None
Peromyscus maniculatus	North American deer mouse	None/None/None
***SCIURIDAE*—Squirrels**		
Spermophilus beecheyi	California ground squirrel	None/None/None
Invertebrates - Butterflies		
***LYCAENIDAE*—Blues, Hairstreaks, and Coppers**		
Callophrys perplexa	Perplexing hairstreak	None/None/None
Glaucopsyche lygdamus australis	Southern blue	None/None/None
Plebejus sp.	Blue	None/None/None
Plebejus acmon	Acmon blue	None/None/None
***RIODINIDAE*—Metalmarks**		
Apodemia mormo virgulti	Behr's metalmark	None/None/None
***HESPERIIDAE*—Skippers**		
Erynnis funeralis	Funereal duskywing	None/None/None
***PAPILIONIDAE*—Swallowtails**		
Papilio sp.	Swallowtail	None/None/None

Scientific Name	Common Name	Status (Federal/State/County, MSCP)[1]
***PIERIDAE*—Whites and Sulfurs**		
Colias eurydice	California dogface	None/None/None
Pieris sp.	White	None/None/None
Pieris rapae	Cabbage white	None/None/None
Invertebrates - Other		
Ammotrechidae spp.	Windscorpion	None/None/None
Anthaxia sp.	Anthaxias beetle	None/None/None
Apis mellifera	European honey bee	None/None/None
Bombus sp.	Bumblebee	None/None/None
Chilopoda sp.	Centipede	None/None/None
Diplopoda sp.	Millipede	None/None/None
Eleodes osculans	Wooly ground beetle	None/None/None
Eloedes armata	Armored stink beetle	None/None/None
Family Culicidae	mosquito	None/None/None
Family Lycosidae	wolf spider	None/None/None
Family Mutillidae	velvet ant	None/None/None
Family Salticidae	jumping spider	None/None/None
Family Tenebrionidae	darkling ground beetle	None/None/None
Lepisma sp.	Common silverfish	None/None/None
Infraorder Anisoptera	dragonfly	None/None/None
Order Diptera	fly	None/None/None
Order Scorpiones	scorpion	None/None/None
Pygonomyrex sp.	Harvester ant	None/None/None
Stenopelmatus fuscus	Jerusalem cricket	None/None/None
Subfamily Arctiinae	moth (caterpillar)	None/None/None
Subfamily Gryllinae	field cricket	None/None/None
Suborder Zygoptera	damselfly	None/None/None
Superfamily Theraphosidea	tarantula	None/None/None
Superfamily Vespoidea	wasp	None/None/None
Trachelas sp.	Sac spider	None/None/None
Tricholepidion sp.	Venerable silverfish	None/None/None

[1] Status Designations:

Federal Designations:

FE Federally listed as endangered
FT Federally listed as threatened

State Designations:

SE State listed as endangered
ST State listed as threatened
CSC California Species of Special Concern
FP California Department of Fish and Game Fully Protected Species
WL California Department of Fish and Game Watch List Species

County Designations:

Group 1 Animals of high sensitivity (listed or specific natural history requirements)
Group 2 Animals declining, but not in immediate threat of extinction or extirpation
MSCP Proposed Covered—Draft East County MSCP

APPENDIX C

Avian Point Location Photographs

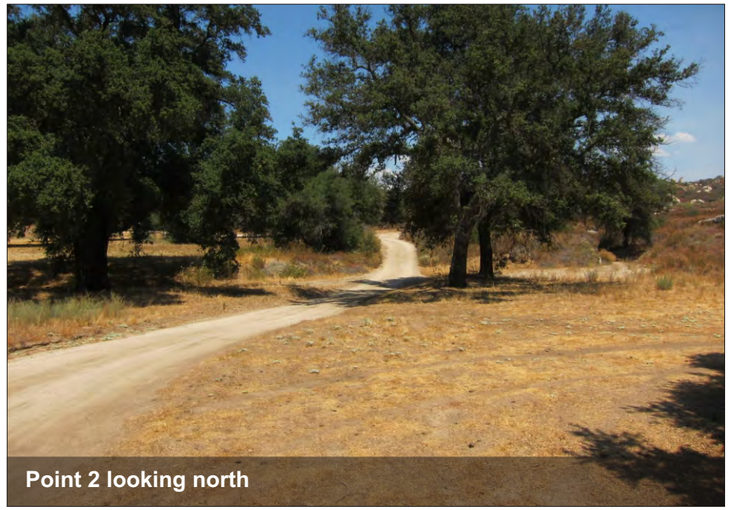
Point 1 looking west

Point 1 looking north

Point 1 looking south

Point 1 looking east

Point 2 looking west



Point 2 looking north

Point 2 looking south

Point 2 looking east

Point 3 looking west

Point 3 looking north

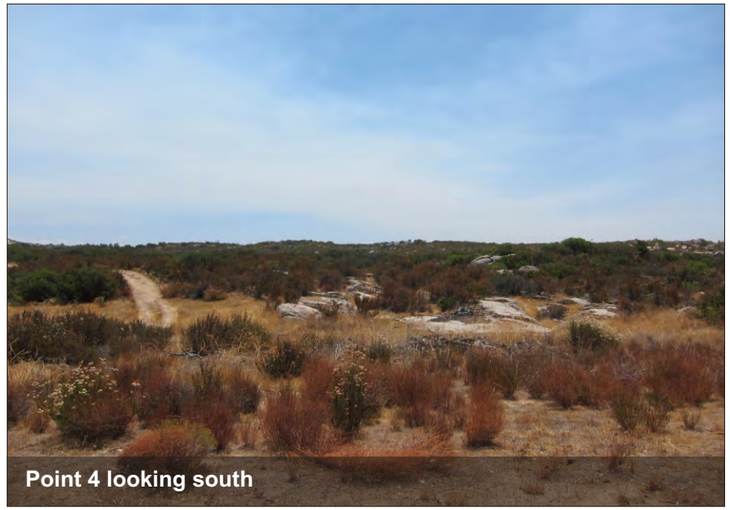
Point 3 looking east

Point 3 looking south

Point 4 looking west

Point 4 looking north

Point 4 looking east

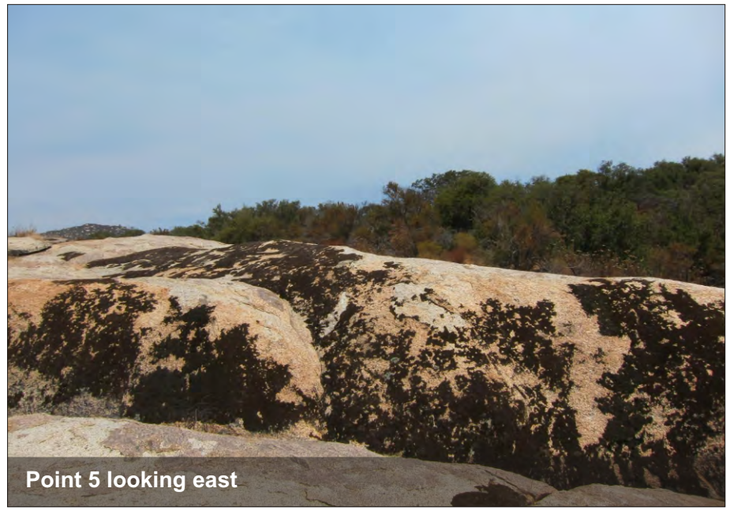


Point 4 looking south

Point 5 looking west

Point 5 looking north

Point 5 looking south



Point 5 looking east

INTENTIONALLY LEFT BLANK

APPENDIX D

Special-Status Plant Species Detected or Potentially Occurring within the Potrero Mason Property Site elevation 725 to 870 meters AMSL (2380-2853 feet)

APPENDIX D
Special-Status Plant Species Detected or Potentially Occurring within the Potrero Mason Property
Site elevation 725 to 870 meters AMSL (2380-2853 feet)

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Carlowrightia arizonica	*Acanthaceae*	Arizona carlowrightia	None/ None/ List B, MSCP/ 2.2	Sonoran desert scrub/ sandy, granitic alluvium/ deciduous shrub/ March-May/ 285 - 430 meters	Not recorded in the vicinity[2].	No suitable habitat or soils on site. Outside elevation range.	Not expected to occur. No suitable habitat or soils on site. Outside elevation range. Not recorded in the vicinity[2].
Agave shawii	*Agavaceae*	Shaw's agave	None/ None/ List B/ 2.1	Coastal bluff scrub, coastal scrub/ leaf succulent/ Sep-May/ 10 - 75 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].Would likely have been detected during surveys if present
Rhus trilobata var. *simplicifolia*	*Anacardiaceae*	Single-leaf basketbush	None/ None/ List B/ 2.3	Pinyon and juniper woodland/ deciduous shrub/ March – April/ 1220 - 1370 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Below elevation range.	Low potential to occur. No suitable habitat. Below elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys.
Eryngium aristulatum var. *parishii*	*Apiaceae*	San Diego button-celery	FE/ SE/ List A/ 1B.1	Coastal scrub, valley and foothill grassland, vernal pools, mesic areas/ annual-perennial herb/ April-June/ 20 - 620 meters	Not recorded in the vicinity[2].	No suitable habitat or soils. Outside elevation range.	Not expected to occur. No suitable habitat or soils. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Eryngium pendletonensis	*Apiaceae*	Pendleton button-celery	None/ None/ List A/ 1B.1	Coastal bluff scrub, valley and foothill grassland, vernal pools; clay, vernally mesic/ perennial herb/ April – June/ 15 - 110 meters	Not recorded in the vicinity[2].	No suitable habitat or soils. Outside elevation range.	Not expected to occur. No suitable habitat or soils. Outside elevation range. Not recorded in the vicinity[2].
Perideridia gairdneri ssp. *gairdneri*	*Apiaceae*	Gairdener's yampah	None/ None/ List D/ 4.2	Broadleafed upland forest, chaparral, coastal prairie, valley and foothill grassland, vernal pools; vernally mesic / perennial herb / June – October / 0 – 610 meters	Not recorded in the vicinity[2].	Moderately suitable habitat; outside elevation range.	Low potential to occur. Moderately suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Spermolepis echinata	*Apiaceae*	Spermolepis	None/ None/ List B/ 2.3	Sonoran desert scrub; sandy or rocky/ annual herb/ March – April/ 60 - 1500 meters	Not recorded in the vicinity[2].	Suitable sandy soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable sandy soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Funastrum [=Cynanchum] utahense	*Apocynaceae*	Utah vine milkweed	None/ None/ List D/ 4.2	Mojavean desert scrub, Sonoran desert scrub; sandy or gravelly/ perennial herb/ April-June/ 150 - 1435 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Matelea parvifolia	*Apocynaceae*	Climbing spearleaf	None/ None/ List B/ 2.3	Mojavean desert scrub, Sonoran desert scrub; rocky/ perennial herb/ March-May/ 440 - 1095 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Pilostyles thurberi	*Apodanthaceae*	Thurber's pilostyles	None/ None/ List D/ 4.3	Sonoran desert scrub/ perennial herb parasitic/ January / 0 - 365 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. No suitable habitat. Outside elevation range. Desert species. Not recorded in the vicinity[2].
Asplenium vespertinum	*Aspleniaceae*	Western spleenwort	None/ None/ List D/ 4.2	Chaparral, cismontane woodland, coastal scrub; rocky/ rhizomatous herb/ February-June/ 180 - 1000 meters	Not recorded in the vicinity[2].	Suitable chaparral habitat and rocky loam soils. Within elevation range.	Moderate potential to occur. Suitable habitat and soils on site. Within elevation range. Not recorded in the vicinity[2].
Ambrosia chenopodiifolia	*Asteraceae*	San Diego bur-sage	None/ None/ List B/ 2.1	Coastal scrub/ shrub/ April-June/ 55 - 155 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].Would likely have been detected during surveys if present.
Ambrosia monogyra	*Asteraceae*	Singlewhorl burrobrush	None/ None/ None/ 2.2	Chaparral, Sonoran desert scrub/sandy/ perennial shrub/ Aug-Nov/ 10 – 500 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat on site. Outside elevation range.	Low potential to occur. No suitable habitat on site. Outside elevation range. Not recorded in the vicinity[2].Would likely have been detected during surveys if present.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Ambrosia pumila	*Asteraceae*	San Diego ambrosia	FE/ None/ List A/ 1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; sandy loam or clay, sometimes alkaline, often in disturbed areas/ rhizomatous herb/ April – October/ 20 - 415 meters	Recorded within surrounding Barrett Lake quadrangle.	Suitable habitat and sandy loam soils on site. Outside elevation range.	Low potential to occur. Suitable habitat and sandy loam soils on site. Outside elevation range. Recorded in the vicinity[2].
Artemisia palmeri	*Asteraceae*	San Diego sagewort	None/ None/ List D/ 4.2	Chaparral, coastal scrub, riparian forest and scrub, riparian woodland; sandy, mesic/ deciduous shrub/ May-September/ 15 - 915 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Within elevation range.	Moderate potential to occur. Suitable habitat and soils on site. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Baccharis vanessae	*Asteraceae*	Encinitas baccharis	FT/ SE/ List A/ 1B.1	Chaparral, cismontane woodland; sandstone/ deciduous shrub/ August-November/ 60 - 720 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable sandstone soils. Slightly outside elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Slightly outside elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Centromadia [=Hemizonia] parryi ssp. *australis*	*Asteraceae*	Southern tarplant	None/ None/ List A/ 1B.1	Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools/ annual herb/ May-November/ 0 - 425 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Centromadia [=Hemizonia] pungens ssp. *laevis*	*Asteraceae*	Smooth tarplant	None/ None/ List A/ 1B.1	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline/ annual herb/ April-September/ 0 - 640 meters	Not recorded in the vicinity[2].	No suitable habitat or soils on site. Outside elevation range.	Low potential to occur. No suitable habitat or soils on site. Outside elevation range. Not recorded in the vicinity[2].
Chaenactis carphoclinia var. *peirsonii*	*Asteraceae*	Peirson's pincushion	None/ None/ List A/ 1B.3	Sonoran desert scrub; sandy/ annual herb/ March-April/ 3 - 500 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Chaenactis glabriuscula var. *orcuttiana*	*Asteraceae*	Orcutt's pincushion	None/ None/ List A/ 1B.1	Coastal bluff scrub, sandy; coastal dunes/ annual herb/ January – August/ 0 - 100 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. Coastal species. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Chaenactis parishii	*Asteraceae*	Parish's chaenactis	None/ None/ List A, MSCP/ 1B.3	Chaparral; rocky/ perennial herb / May-July/ 1300 - 2500 meters	Recorded within surrounding Cameron Corners quadrangle.	Suitable habitat and soils on site. Below elevation range.	Moderate potential to occur. Suitable habitat and soils on site. Recorded in the vicinity[2] but site is below elevation range.
Corethrogyne filaginifolia var. *incana*	*Asteraceae*	San Diego sand aster	None/ None/ List A/ 1B.1	Chaparral, coastal bluff scrub, coastal scrub/ perennial herb/ June-September/ 3 - 115 meters	Not recorded in the vicinity[2].	Suitable habitat on site. Outside elevation range.	Not expected to occur. Coastal species. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Corethrogyne filaginifolia var. *linifolia*	*Asteraceae*	Del Mar Mesa sand aster	None/ None/ List A / 1B.1	Maritime chaparral (openings), coastal bluff scrub, coastal scrub; sandy/ perennial herb/ May-September/ 15 - 150 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. Coastal species. Outside elevation range. Not recorded in the vicinity[2].
Deinandra [=Hemizonia] conjugens	*Asteraceae*	Otay tarplant	FT/ SE/ List A/ 1B.1	Coastal scrub, valley and foothill grassland; clay/ annual herb/ May-June/ 25 - 300 meters	Not recorded in the vicinity[2].	No suitable habitat or soils. Outside elevation range.	Not expected to occur. No suitable habitat or soils. Outside elevation range. Not recorded in the vicinity[2].
Deinandra [=Hemizonia] floribunda	*Asteraceae*	Tecate tarplant	None/ None/ List A, MSCP/ 1B.2	Chaparral, coastal scrub/ annual herb/ August-October/ 70 - 1220 meters	Recorded within Potrero and surrounding Morena Reservoir, Barrett Lake, and Tecate quadrangles.	Suitable habitat; no preferred soils identified for this species. Within elevation range.	Recorded on site.
Deinandra [=Hemizonia] mohavensis	*Asteraceae*	Mojave tarplant	None/ SE/ List A, MSCP/ 1B.3	Chaparral, coastal scrub, riparian scrub; mesic/ annual herb/ June-October/ 640 - 1600 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Within elevation range. Not recorded in the vicinity[2].
Deinandra [=Hemizonia] paniculata	*Asteraceae*	Paniculate tarplant	None/ None/ List D/ 4.2	Coastal scrub, valley and foothill grassland; usually vernally mesic/ annual herb/ April-November/ 25 - 940 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Dieteria [=Machaeranthera] asteroides var. *lagunensis*	*Asteraceae*	Mount Laguna Aster	None/ SR/ List B, MSCP/ 2.1	Cismontane woodland, lower montane coniferous forest/ perennial herb/ July-August/ 800 - 2400 meters	Not recorded in the vicinity[2].	No suitable habitat; no preferred soils identified for this species. Within elevation range.	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Ericameria cuneata var. *macrocephala*	*Asteraceae*	Laguna Mountains goldenbush	None/ None/ List A, MSCP/ 1B.3	Chaparral; granitic/ shrub/ September-December/ 1195 - 1850 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils. Below elevation range.	Low potential to occur. No suitable soils. Below elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Ericameria palmeri ssp. *palmeri*	*Asteraceae*	Palmer's goldenbush	None/ None/ List B, MSCP/ 1B.1	Chaparral, coastal scrub; mesic/ evergreen shrub/ September-November/ 30 - 600 meters	Recorded within surrounding Barrett Lake and Tecate quadrangles.	Suitable habitat; no preferred soils identified for this species. Outside elevation range.	Moderate potential to occur. Suitable habitat. Recorded in the vicinity[2]. Outside elevation range. Would likely have been detected during surveys if present.
Erigonum evanidum [=foliosum]	*Asteraceae*	Vanishing wild buckwheat (leafy buckwheat)	None/ None/ List A, MSCP/ 1B.1	Chaparral, cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland; sandy/ annual herb/ July-October/ 1100 - 2225 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Below elevation range.	Low potential to occur. Suitable habitat and soils on site. Below elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Geraea viscida	*Asteraceae*	Sticky geraea	None/ None/ List B, MSCP/ 2.3	Chaparral (often disturbed)/ perennial herb/ May-June/ 450 - 1700 meters	Recorded within Potrero and surrounding Campo, Cameron Corners, and Tecate quadrangles.	Suitable habitat. Within elevation range.	Recorded on site
Grindelia hallii [=G. hirsutula var. *hallii]*	*Asteraceae*	San Diego gumplant	None/ None/ List A/ 1B.2	Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland/ perennial herb/ July-October/ 185 - 1745 meters	Recorded within surrounding Barrett Lake quadrangle.	Suitable habitat; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat on site. Within elevation range. Recorded in the vicinity[2].
Hazardia orcuttii	*Asteraceae*	Orcutt's hazardia	FC/ ST/ List A/ 1B.1	Chaparral (maritime), coastal scrub; often clay/ evergreen shrub/ August-October/ 80 - 85 meters	Not recorded in the vicinity[2].	No suitable habitat or soils. Outside elevation range.	Not expected to occur. Coastal species. No suitable soils. Outside elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Heterotheca sessiliflora ssp. *sanjacintensis*	*Asteraceae*	San Jacinto golden-aster	None/ None/ List D/ None	Woodlands/ 366 - 1390 meters/ unresolved in Jepson	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Holocarpha virgata ssp. *elongata*	*Asteraceae*	Graceful tarplant	None/ None/ List D, MSCP/ 4.2	Coastal scrub, cismontane woodland, chaparral, valley and foothill grassland/ annual herb/ May-November/ 60 - 1100 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Low potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2].
Hulsea californica	*Asteraceae*	San Diego sunflower	None/ None/ List A, MSCP/ 1B.3	Chaparral, lower montane coniferous forest, upper montane coniferous forest; openings and burned areas/ perennial herb/ April-June/ 915 - 2915 meters	Recorded within surrounding Cameron Corners and Campo quadrangles.	Suitable habitat on site; preferred soils not identified for this species. Below elevation range.	Low potential to occur. Suitable habitat on site. Below elevation range. Recorded in the vicinity[2].
Hulsea mexicana	*Asteraceae*	Mexican hulsea	None/ None/ List B, MSCP/ 2.3	Chaparral (volcanic, often on burns or disturbed areas)/ annual-perennial herb/ April-June/ 1200 - 1200 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Below elevation range.	Low potential to occur. Suitable habitat on site. Below elevation range. Not recorded in the vicinity[2].
Hulsea vestita ssp. *callicarpha*	*Asteraceae*	Beautiful hulsea	None/ None/ List D, MSCP/ 4.2	Chaparral, lower montane coniferous forest; rocky or gravelly, granitic/ perennial herb/ May-October/ 915 - 3050 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Below elevation range.	Low potential to occur. Suitable habitat and soils on site. Below elevation range. Not recorded in the vicinity[2].
Hymenothrix wrightii	*Asteraceae*	Wright's hymenothrix	None/ None/ List D/ 4.3	Cismontane woodland, lower montane coniferous forest, valley and foothill grassland/ perennial herb/ June-October/ 1400 - 1550 meters	Not recorded in the vicinity[2].	No suitable habitat on site; preferred soils not identified for this species. Below elevation range.	Low potential to occur. No suitable habitat on site. Below elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Isocoma menziesii var. *decumbens*	*Asteraceae*	Decumbent goldenbush	None/ None/ List A/ 1B.2	Chaparral, coastal scrub (sandy, often disturbed areas)/ shrub/ April-November/ 10-135 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Outside elevation range.	Low potential to occur. Suitable habitat and soils on site. Outside elevation range. Not recorded in the vicinity[2].
Iva hayesiana	*Asteraceae*	San Diego marsh-elder	None/ None/ List B/ 2.2	Marshes and swamps, playas/ perennial herb/ April-October/ 10 - 500 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Lasthenia glabrata ssp. *coulteri*	*Asteraceae*	Coulter's goldfields	None/ None/ List A/ 1B.1	Saltwater marsh and swamps, playas, vernal pools/ annual herb/ February-June/ 1-1220 meters	Not recorded in the vicinity[2].	No suitable habitat; no vernal pools. Within elevation range.	Low potential to occur. No suitable habitat; no vernal pools. Within elevation range. Not recorded in the vicinity[2].
Leptosyne [=Coreopsis] maritima	*Asteraceae*	Sea dahlia	None/ None/ List B/ 2.2	Coastal bluff scrub, coastal scrub/ perennial herb/ March-May/ 5 - 150 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Above elevation range.	Not expected to occur. No suitable habitat. Above elevation range. Coastal species. Not recorded in the vicinity[2].
Lessingia glandulifera var. *tomentosa*	*Asteraceae*	Warner Springs lessingia	None/ None/ List A, MSCP/ 1B.3	Chaparral; sandy/ annual herb/ August-October/ 870 - 1220 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Within elevation range.	Low potential to occur. Suitable habitat and soils on site. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Malperia tenuis	*Asteraceae*	Brown turbins	None/ None/ List B/ 2.3	Sonoran desert scrub; sandy, gravelly/ annual herb/ March-April/ 15 - 335 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. Desert species. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Microseris douglasii var. *platycarpha*	*Asteraceae*	Small-flowered microseris	None/ None/ List D/ 4.2	Cismontane woodland, coastal scrub, valley and foothill grassland, clays/ annual herb/ March-May/ 15 - 1070 meters	Not recorded in the vicinity[2].	No suitable habitat or soils. Within elevation range.	Low potential to occur. No suitable habitat or soils. Within elevation range. Not recorded in the vicinity[2].
Packera [=Senecio] ganderi	*Asteraceae*	Gander's ragwort	None/ SR/ List A, MSCP/ 1B.2	Chaparral (burned areas and gabbroic outcrops)/ perennial herb/ April-June/ 400 - 1200 meters	Recorded within surrounding Barrett Lake and Tecate quadrangles.	Within elevation range; suitable habitat on site.	Moderate potential to occur. Within elevation range; suitable habitat on site. Recorded in the vicinity[2].
Pentachaeta aurea ssp. *aurea*	*Asteraceae*	Golden-rayed pentachaeta	None/ None/ List D/ 4.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, valley and foothill grassland / annual herb/ March – July/ 80 - 1850 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Low potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2].
Senecio aphanactis	*Asteraceae*	Rayless ragwort	None/ None/ List B/ 2.2	Chaparral, cismontane woodland, coastal scrub; sometimes alkaline/ annual herb/ January – April/ 15 - 800 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils on site. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils on site. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Stylocline citroleum	*Asteraceae*	Oil neststraw	None/ None/ List A/ 1B.1	Chenopod scrub, coastal scrub, valley and foothill grassland; clay/ annual herb/ March – April/ 50 - 400 meters	Not recorded in the vicinity[2].	No suitable soils or habitat on site. Outside elevation range.	Not expected to occur. No suitable soils or habitat on site. Outside elevation range. Not recorded in the vicinity[2].
Viguiera laciniata	*Asteraceae*	San Diego County viguiera	None/ None/ List D/ 4.2	Chaparral, coastal scrub/ shrub/February-June/ 60 - 750 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Low potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys.
Viguiera purissimae	*Asteraceae*	La Purissima viguiera	None/ None/ List A/ 2.3	Coastal bluff scrub, chaparral/ shrub/ April – September/ 365 - 425 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. Suitable habitat on site. Outside elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys.
Xanthisma (=Machaeranthera) junceum	*Asteraceae*	Rush-like bristleweed	None/ None/ List D, MSCP/ 4.3	Chaparral, coastal scrub/ perennial herb/ June-January/ 240 - 1000 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Recorded on site.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Xylorhiza orcuttii	*Asteraceae*	Orcutt's woody aster	None/ None/ List A, MSCP/ 1B.2	Sonoran desert scrub/ perennial herb/ March – April/ 0 - 365 meters	Not recorded in the vicinity[2].	No suitable habitat on site; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. No suitable habitat on site. Outside elevation range. Not recorded in the vicinity[2].
Azolla microphylla [=mexicana]	*Azollaceae*	Mexican mosquito fern	None/ None/ List D/ 4.2	Marshes and swamps; ponds, slow water/ annual/perennial herb/ August/ 30 - 100 meters	Not recorded in the vicinity[2].	No suitable habitat on site; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. No suitable habitat on site. Outside elevation range. Not recorded in the vicinity[2].
Berberis fremontii [=B. higginsiae]	*Berberidaceae*	Fremont barberry	None/ None/ List C, MSCP/ 3	Chaparral , Joshua tree "woodland", pinyon and juniper woodland; rocky/ evergreen shrub/ April-June/ 840 - 1850 meters	Recorded within surrounding Barrett Lake quadrangle.	Suitable habitat and soils on site. Within elevation range.	Moderate potential to occur. Suitable habitat and soils on site. Within elevation range. Recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Berberis nevinii	*Berberidaceae*	Nevin's barberry	FE/ SE/ List A/ 1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub; sandy or gravelly/ evergreen shrub/ March-June/ 274 - 825 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Within elevation range.	Low potential to occur. Suitable habitat and soils on site. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Cryptantha costata	*Boraginaceae*	Ribbed cryptantha	None/ None/ List D, MSCP/ 4.3	Desert dunes, Mojavean desert scrub, Sonoran desert scrub; sandy/ annual herb/ February-May/ -60 - 500 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. Desert species. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Cryptantha ganderi	*Boraginaceae*	Gander's cryptantha	None/ None/ List A, MSCP/ 1B.1	Desert dunes, Sonoran desert scrub; sandy/ annual herb/ February-May/ 160 - 400 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. Desert species. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Cryptantha holoptera	*Boraginaceae*	Winged cryptantha	None/ None/ List D/ 4.3	Mojavean desert scrub, Sonoran desert scrub/ annual herb/ March-April/ 100 - 1690 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2].
Harpagonella palmeri	*Boraginaceae*	Palmer's grapplinghook	None/ None/ List D, MSCP/ 4.2	Chaparral, coastal scrub, valley and foothill grassland; clay/ annual herb/ March-May/ 20 - 955 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Within elevation range. Not recorded in the vicinity[2].
Nama stenocarpum	*Boraginaceae*	Mud nama	None/ None/ List B/ 2.2	Marsh and swamps, lake margins and riverbanks/ annual-perennial herb/ January-July/ 5 - 500 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Pectocarya peninsularis	*Boraginaceae*	Baja California bur-comb	None/ None/ List D/ Not listed	Sonoran desert; washes, roadsides, clearings/ annual herb/ 30–300 meters	Not recorded in the vicinity[2].	No suitable habitat. Outside elevation range.	Not expected to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Phacelia nashiana	*Boraginaceae*	Charlotte's phacelia	None/ None/ MSCP/ 1B.2	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland; usually granitic, sandy/ annual herb/ March-June/ 600-2200 meters	Not recorded in the vicinity[2].	No suitable habitat but suitable sandy soils. Within elevation range.	Low potential to occur. No suitable habitat but suitable sandy soils. Within elevation range. Not recorded in the vicinity[2].
Phacelia stellaris	*Boraginaceae*	Brand's phacelia	FC/ None/ List A/ 1B.1	Coastal dunes, coastal scrub/ annual herb/ March – June/ 1 - 400 meters	Not recorded in the vicinity[2].	No suitable habitat. Outside elevation range.	Not expected to occur. No suitable habitat. Outside elevation range. Coastal species. Not recorded in the vicinity[2].
Pholistoma auritum var. *arizonicum*	*Boraginaceae*	Arizona fiesta flower	None/ None/ MSCP/ 2.3	Mojavean desert scrub/ annual herb/ March/ 275-835 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Boechera johnstonii [=B. hirshbergiae (=Arabis h.)]	*Brassicaceae*	Hirshberg's rockcress	None/ None/ List A, MSCP/ Not listed	Chaparral, oak-pine savanna; rocky or gravelly soil/ perennial herb/ April-June/ 1357 - 2072 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Below elevation range.	Low potential to occur. Suitable habitat and soils on site. Below elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Caulanthus simulans	*Brassicaceae*	Payson's jewel-flower	None/ None/ List D, MSCP/ 4.2	Chaparral, coastal scrub; sandy and granitic/ annual herb/ March-May/ 90 - 2200 meters	Not recorded in the vicinity[2].	Suitable habitat and soils. Within elevation range.	Moderate potential to occur. Suitable habitat and soils. Within elevation range. Not recorded in the vicinity[2].
Erysimum ammophilum	*Brassicaceae*	Coast wallflower	None/ None/ None/ 1B.2	Chaparral, coastal dunes, coastal scrub (sandy, openings)/ perennial herb/ February-June/ 0-60 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. Coastal species. Outside elevation range. Not recorded in vicinity[2].
Lepidium flavum var. *felipense*	*Brassicaceae*	Borrego Valley pepper-grass	None/ None/ List A, MSCP/ 1B.2	Pinyon and juniper woodland, Sonoran desert scrub; sandy/ annual herb/ March-May/ 455 - 840 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Lepidium virginicum var. *robinsonii*	*Brassicaceae*	Robinson pepper-grass	None/ None/ List A/ 1B.2	Chaparral, coastal scrub/ annual herb/ January-July/ 1- 885 meters	Recorded within surrounding Campo, Morena Reservoir and Tecate quadrangles.	Suitable habitat; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Within elevation range; suitable habitat on site. Recorded in the vicinity[2].
*Lyrocarpa coulteri [*var. *palmeri]*	*Brassicaceae*	Palmer's lyrepod	None/ None/ List D/ 4.3	Sonoran desert scrub; gravelly or rocky/ perennial herb/ December-April/ 120 - 795 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Nasturtium [=Rorippa] gambellii	*Brassicaceae*	Gambel's watercress	FE/ ST/ List A/ 1B.1	Marshes and swamps, freshwater or brackish/ rhizomatous herb/ April – October/ 5 - 330 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Sibaropsis hammittii	*Brassicaceae*	Hamitt's clay cress	None/ None/ List A, MSCP/ 1B.2	Chaparral (openings), valley and foothill grassland; clay/ annual herb/ March – April/ 720 - 1065 meters	Not recorded in the vicinity[2].	Within elevation range; suitable habitat but no suitable soils on site.	Low potential to occur. Within elevation range; suitable habitat but no suitable soils on site. Not recorded in the vicinity[2].
Streptanthus bernardinus	*Brassicaceae*	Laguna Mountains jewelflower	None/ None/ List D/ 4.3	Chaparral, lower montane coniferous forest/ perennial herb/ May - August/ 670 - 2500 meters	Recorded within surrounding Cameron Corners, Campo, and Morena Reservoir quadrangles.	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	High potential to occur. Suitable habitat on site. Within elevation range. Recorded in the vicinity[2].
Streptanthus campestris	*Brassicaceae*	Southern jewelflower	None/ None/ List A/ 1B.3	Chaparral, lower montane coniferous forest, pinyon and juniper woodland; rocky/ perennial herb/ May – July/ 900 - 2300 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Below elevation range.	Low potential to occur. Suitable habitat and soils on site. Slightly below elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Bursera microphylla	*Burseraceae*	Little-leaf elephant tree	None/ None/ List B, MSCP/ 2.3	Sonoran desert scrub; rocky/ deciduous tree/ June-July/ 200 - 700 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Slightly outside elevation range.	Not expected to occur. Desert species. No suitable habitat. Not recorded in the vicinity[2].
Bergerocactus emoryi	*Cactaceae*	Golden-spined cereus	None/ None/ List B/ 2.2	Closed-cone coniferous forest, chaparral, coastal scrub; sandy/ stem succulent/ May-June/ 3 - 395 meters	Not recorded in the vicinity[2].	Suitable habitat and sandy loam soils. Outside elevation range.	Low potential to occur. Suitable habitat and soils. Outside elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Cylindropuntia (=Opuntia) wolfii	*Cactaceae*	Wolf's cholla	None/ None/ List D, MSCP/ 4.3	Sonoran desert scrub/ stem succulent/ March-May/ 100 - 1200 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. No suitable habitat; preferred soils not identified for this species. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Cylindropuntia fosbergii	*Cactaceae*	Mason Valley cholla	None/ None/ MSCP/ 1B.3	Sonoran desert scrub/ stem succulent/ March-May/ 85 - 850 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. No suitable habitat; preferred soils not identified for this species. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Ferocactus viridescens	*Cactaceae*	San Diego barrel cactus	None/ None/ List B / 2.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/ stem succulent/ May-June/ 3 - 450 meters	Recorded within surrounding Tecate quadrangle.	Suitable habitat but no suitable soils. Outside elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Outside elevation range. Recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Opuntia californica var. *californica [= O. parryi* var. *serpentina]*	*Cactaceae*	Snake cholla	None/ None/ List A / 1B.1	Chaparral, coastal scrub/ stem succulent/ April-May/ 30 - 150 meters	Not recorded in the vicinity[2].	Suitable habitat. Outside elevation range.	Low potential to occur. Suitable habitat. Outside elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Opuntia wigginsii	*Cactaceae*	Wiggins cholla	None/ None/ List C/ 3.3	Sonoran desert scrub; sandy/ stem succulent/ March/ 30 - 885 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Downingia concolor var. *brevior*	*Campanulaceae*	Cuyamaca Lake downingia	None/ SE/ List A, MSCP/ 1B.1	Meadows and seeps (vernally mesic), vernal pools/ annual herb/ May-July/ 1380 - 1500 meters	Not recorded in the vicinity[2].	No suitable habitat or mesic areas on site. Below elevation range.	Low potential to occur. No suitable habitat. Below elevation range. Not recorded in the vicinity[2].
Githopsis diffusa ssp. *filicaulis*	*Campanulaceae*	Mission Canyon bluecup	None/ None/ List C/ 3.1	Chaparral (mesic, disturbed areas)/ annual herb/ April-June/ 450 - 700 meters	Not recorded in the vicinity[2].	Suitable habitat, including mesic areas. Within elevation range.	Moderate potential to occur. Suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Aphanisma blitoides	*Chenopodiaceae*	Aphanisma	None/ None/ List A/ 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub; sandy/ annual herb/ March – June/ 1 - 305 meters	Not recorded in the vicinity[2].	No suitable habitat but suitable sandy soils. Outside elevation range.	Not expected to occur. Coastal species. No suitable habitat but suitable soils. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Atriplex coulteri	*Chenopodiaceae*	Coulter's saltbush	None/ None/ List A/ 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay/ perennial herb/ March-October/ 3 - 460 meters	Not recorded in the vicinity[2].	No suitable habitat or soils on site. Outside elevation range.	Not expected to occur. No suitable habitat or soils on site. Outside elevation range. Not recorded in the vicinity[2].
Atriplex pacifica	*Chenopodiaceae*	South Coast saltscale	None/ None/ List A/ 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, playas/ annual herb/ March-October/ 0 - 140 meters	Not recorded in the vicinity[2].	No suitable habitat or soils on site. Outside elevation range.	Not expected to occur. No suitable habitat or soils on site. Outside elevation range. Not recorded in the vicinity[2]. More commonly found on the coast.
Atriplex parishii	*Chenopodiaceae*	Parish's brittlescale	None/ None/ List A/ 1B.1	Chenopod scrub, playas, vernal pools; alkaline/ annual herb/ June – October/ 25 - 1900 meters	Not recorded in the vicinity[2].	No suitable habitat or soils on site. Within elevation range.	Low potential to occur. No suitable habitat or soils on site. Within elevation range. Not recorded in the vicinity[2].
Atriplex serenana var. *davidsonii*	*Chenopodiaceae*	Davidson's saltscale	None/ None/ List A/ 1B.2	Coastal bluff scrub, coastal scrub; alkaline/ annual herb/ April-October/ 10 - 200 meters	Not recorded in the vicinity[2].	No suitable habitat or soils. Outside elevation range.	Not expected to occur. No suitable habitat or soils. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Suaeda esteroa	*Chenopodiaceae*	Estuary seablite	FE/ None/ List A/ 1B.1	Coastal saltmarshes and swamps/ evergreen shrub/ July-October/ 0 - 15 meters	Not recorded in the vicinity[2].	No suitable habitat on site; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. No suitable habitat on site. Outside elevation range. Coastal species. Not recorded in the vicinity[2]. Would likely have been detected during surveys.
Suaeda taxifolia	*Chenopodiaceae*	Woolly seablite	None/ None/ List D/ 4.2	Coastal bluff scrub, coastal dunes, margins of coastal saltmarshes and swamps/ evergreen shrub/ January – December/ 0 - 50 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. No suitable habitat. Outside elevation range. Coastal species. Not recorded in the vicinity[2]. Would likely have been detected during surveys.
Convolvulus simulans	*Convolvulaceae*	Small-flowered morning-glory	None/ None/ List D/ 4.2	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, serpentinite seeps/ annual herb/ March-July/ 30 - 700 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils on site. Slightly outside elevation range.	Low potential to occur. Suitable habitat but no suitable soils on site. Slightly outside elevation range. Not recorded in the vicinity[2].
Dichondra occidentalis	*Convolvulaceae*	Western dichondra	None/ None/ List D/ 4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/ rhizomatous herb/ March-July/ 50 - 500 meters	Not recorded in the vicinity[2].	Suitable habitat; no preferred soils identified for this species. Outside elevation range.	Low potential to occur. Suitable habitat on site. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Dudleya alainae	*Crassulaceae*	Banner dudleya (Reiser's dudleya)	None/ None/ List C/ 3.2	Chaparral, lower montane coniferous forest, Sonoran desert scrub; rocky/ perennial herb/ May-July/ 740 - 1200 meters	Not recorded in the vicinity[2].	Suitable habitat and soils. Within elevation range.	Moderate potential to occur. Suitable habitat and soils. Within elevation range. Not recorded in the vicinity[2].
Dudleya attenuata ssp. *orcuttii*	*Crassulaceae*	Orcutt's dudleya	None/ None/ List B/ 2.1	Coastal bluff scrub, chaparral, coastal scrub; rocky or gravelly/ perennial herb/ May-July/ 3 - 50 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. Coastal species. Outside elevation range. Not recorded in the vicinity[2].
Dudleya blochmaniae ssp. *blochmaniae*	*Crassulaceae*	Blochman's dudleya	None/ None/ List A/ 1B.1	Chaparral, coastal bluff scrub, coastal scrub, valley and foothill grassland, rocky; often clay or serpentinite/ perennial herb/ April-June/ 5 - 450 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Outside elevation range.	Low potential to occur. Suitable habitat and soils on site. Outside elevation range. Not recorded in the vicinity[2].
Dudleya brevifolia [=D. blochmaniea ssp. *brevifolia]*	*Crassulaceae*	Short-leaved dudleya	None/ SE / List A/ 1B.1	Maritime chaparral (openings), coastal scrub, Torrey sandstone/ perennial herb/ April- May/ 30 - 250 meters	Not recorded in the vicinity[2].	No suitable habitat. Outside elevation range.	Not expected to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Dudleya multicaulis	*Crassulaceae*	Many-stemmed dudleya	None/ None/ List A/ 1B.2	Chaparral, coastal scrub, valley and foothill grassland; often clays/ perennial herb/ April-July/ 15 - 790 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils on site. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils on site. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Dudleya variegata	*Crassulaceae*	Variegated dudleya	None/ None/ List A/ 1B.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools/ perennial herb/ April-June/ 3 - 580 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. Suitable habitat on site. Outside elevation range. Not recorded in the vicinity[2].
Dudleya viscida	*Crassulaceae*	Sticky dudleya	None/ None/ List A / 1B.2	Coastal bluff scrub, chaparral, cismontane woodland, coastal scrub; rocky/ perennial herb/ May-June/ 10 - 550 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Outside elevation range.	Low potential to occur. Suitable habitat and soils on site. Outside elevation range. Not recorded in the vicinity[2].
Hesperocyparis [=Cupressus] stephensonii	*Cupressaceae*	Cuyamaca cypress	None/ None/ List A, MSCP/ 1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland, riparian forest; gabbroic/ evergreen tree/ NA/ 1035 - 1705 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils. Below elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Below elevation range. Not recorded in the vicinity[2].
Hesperocyparis [=Cupressus] forbesii	*Cupressaceae*	Tecate cypress	None/ None/ List A, MSCP/ 1B.1	Closed-cone coniferous forest, chaparral; clay, gabbroic or metavolcanic/ evergreen tree/ NA/ 80 - 1500 meters	Recorded within surrounding Campo and Tecate quadrangles.	Suitable habitat but no clay soils. Within elevation range.	Moderate potential to occur. Suitable habitat but no clay soils. Within elevation range. Recorded in the vicinity[2].
Carex obispoensis	*Cyperaceae*	San Luis Obispo sedge	None/ None/ None, MSCP/ 1B.2	Closed-cone coniferous forest, Chaparral, Coastal prairie, Coastal scrub, Valley and foothill grassland/ often serpentinite seeps, sometimes gabbro; often on clay soils/ perennial rhizomatous herb/ April-June/ 10 -820 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils on site. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils on site. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Arctostaphylos glandulosa ssp. *crassifolia*	*Ericaceae*	Del Mar manzanita	FE/ None/ List A/ 1B.1	Maritime chaparral; sandy/ evergreen shrub/ December-June/ 0 - 365 meters	Not recorded in the vicinity[2].	No suitable habitat but suitable sandy soils. Outside elevation range.	Low potential to occur. No suitable habitat but suitable soils on site. Outside elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Arctostaphylos otayensis	*Ericaceae*	Otay manzanita	None/ None/ List A, MSCP/ 1B.2	Chaparral, cismontane woodland; metavolcanic/ evergreen shrub/ January-April/ 275 - 1700 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Arctostaphylos rainbowensis	*Ericaceae*	Rainbow manzanita	None/ None/ List A/ 1B.1	Chaparral/ evergreen shrub/ December-March/ 205 - 670 meters	Not recorded in the vicinity[2].	Suitable chaparral habitat on site; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. Suitable habitat on site, but outside elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Comarostaphylis diversifolia ssp. *diversifolia*	*Ericaceae*	Summer holly	None/ None/ List A/ 1B.2	Chaparral, cismontane woodland/ evergreen shrub/ April-June/ 30 - 790 meters	Not recorded in the vicinity[2].	Suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Ornithostaphylos oppositifolia	*Ericaceae*	Palo blanco	None/ SE/ List B/ 2.1	Chaparral/ evergreen shrub/ January-April/ 55 - 800 meters	Not recorded in the vicinity[2].	Suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. Suitable habitat. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Chamaesyce arizonica	*Euphorbaceae*	Arizona spurge	None/ None/ List B/ 2.3	Sonoran desert scrub; sandy/ perennial herb/ March-April/ 50 - 300 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Chamaesyce platysperma	*Euphorbaceae*	Flat-seeded spurge	None/ None/ List A/ 1B.2	Desert dunes, Sonoran desert scrub; sandy/ annual herb/ February-September/ 65 - 100 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. Desert species. No suitable habitat onsite. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Chamaesyce revoluta	*Euphorbaceae*	Thread-stemmed spurge	None/ None/ List D/ 4.3	Mojavean desert scrub; rocky/ annual herb/ August-September/ 1095 - 3100 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Below elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Below elevation range. Not recorded in the vicinity[2].
Ditaxis serrata var. *californica*	*Euphorbaceae*	California ditaxis	None/ None/ List C/ 3.2	Sonoran desert scrub/ perennial herb/ March-December/ 30 - 1000 meters	Not recorded in the vicinity[2].	No suitable habitat; no preferred soils identified for this species. Within elevation range.	Low potential to occur. No suitable habitat. Not recorded in the vicinity[2].
Euphorbia misera	*Euphorbiaceae*	Cliff spurge	None/ None/ List B/ 2.2	Coastal bluff scrub, coastal scrub; rocky/ shrub/ December-August/ 10 - 500 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Acmispon [=Lotus] haydonii	*Fabaceae*	Pygmy lotus	None/ None/ List A, MSCP/ 1B.3	Pinyon and juniper woodland, Sonoran desert scrub; rocky/ perennial herb/ January-June/ 520 - 1200 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Astragalus crotalariae	*Fabaceae*	Salton milkvetch	None/ None/ List D, MSCP/ 4.3	Sonoran desert scrub; sandy or gravelly/ perennial herb/ January-April/ -60 - 250 meters	Not recorded in the vicinity[2].	No suitable habitat but suitable sandy loam soils. Outside elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Astragalus deanei	*Fabaceae*	Dean's milkvetch	None/ None/ List A, MSCP/ 1B.1	Chaparral, cismontane woodland, coastal scrub, riparian forest / perennial herb/ February-May/ 75 – 695 meters	Recorded within surrounding Morena Reservoir and Barrett Lake quadrangles.	Suitable chaparral habitat; preferred soils not identified for this species. Slightly outside elevation range.	Low potential to occur. Suitable habitat on site; however very few known occurrences. Outside elevation range. Recorded in the vicinity[2].
Astragalus douglasii var. *perstrictus*	*Fabaceae*	Jacumba milkvetch	None/ None/ List A, MSCP/ 1B.2	Chaparral, cismontane woodland, pinyon and juniper woodland, riparian scrub, valley and foothill grassland; rocky/ perennial herb/ April-June/ 900 - 1370 meters	Recorded within surrounding Cameron Corners, Campo, and Morena Reservoir quadrangles.	Suitable chaparral habitat and rocky loam soils. Below elevation range.	Moderate potential to occur. Suitable habitat and soils. Slightly below elevation range. Recorded in the vicinity[2].
Astragalus insularis var. *harwoodii*	*Fabaceae*	Harwood's milkvetch	None/ None/ List B, MSCP/ 2.2	Desert dunes, Mojavean desert scrub; sandy or gravelly/ annual herb/ January-May/ 0 - 710 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Slightly outside elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Slightly outside elevation range. Not recorded in the vicinity[2].
Astragalus lentiginosus var. *borreganus*	*Fabaceae*	Borrego milkvetch	None/ None/ List D, MSCP/ 4.3	Mojavean desert scrub, Sonoran desert scrub; sandy/ annual herb/ February-May/ 30 - 320 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. Desert species. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Astragalus magdalenae var. *peirsonii*	*Fabaceae*	Peirson's milk-vetch	FT/ SE/ List A/ 1B.2	Desert dunes/ perennial herb/ December-April/ -55 - 250 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. Desert species. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Astragalus oocarpus	*Fabaceae*	San Diego milk-vetch	None/ None/ List A, MSCP/ 1B.2	Chaparral (openings), cismontane woodland/ perennial herb/ May-August/ 305 - 1524 meters	Recorded within surrounding Tecate quadrangle.	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat on site. Within elevation range. Recorded in the vicinity[2].
Astragalus pachypus var. *jaegeri*	*Fabaceae*	Jaeger's milk-vetch	None/ None/ List A/ 1B.1	Chaparral, cismontane woodland, coastal scrub, valley and foothill grasslands; rocky or sandy/ shrub/ December – June/ 365 - 915 meters	Not recorded in the vicinity[2].	Suitable habitat and rocky or sandy loam soils on site. Within elevation range.	Moderate potential to occur. Suitable habitat and soils on site. Within elevation range. Not recorded in the vicinity[2].
Astragalus tener var. *titi*	*Fabaceae*	Coastal dunes milk-vetch	FE/ SE/ List A/ 1B.1	Coastal bluff scrub, coastal dunes, coastal prairie; often vernally mesic areas/ annual herb/ March-May/ 1 - 50 meters	Not recorded in the vicinity[2].	No suitable habitat or soils on site. Outside elevation range. More of a coastal species.	Not expected to occur. Coastal species. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2]. More of a coastal species.
Calliandra eriophylla	*Fabaceae*	Pink fairy Duster	None/ None/ List B, MSCP/ 2.3	Sonoran desert scrub; sandy or rocky/ deciduous shrub/ January-March/ 120 - 1500 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Hosackia [=Lotus] crassifolius var. *otayensis*	*Fabaceae*	Otay Mountains lotus	None/ None/ List A/ 1B.1	Chaparral (metavolcanic, often in disturbed areas)/ perennial herb/ May-August/ 915 - 1005 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Below elevation range.	Low potential to occur. No suitable soils onsite. Below elevation range. Not recorded in the vicinity[2].
Lathyrus splendens	*Fabaceae*	Pride of California	None/ None/ List D, MSCP/ 4.3	Chaparral/ perennial herb/ March-June/ 200 - 1525 meters	Not recorded in the vicinity[2].	Suitable habitat. Within elevation range.	Recorded on site.
Lotus nuttallianus	*Fabaceae*	Nuttall's lotus	None/ None/ List A / 1B.1	Coastal dunes, coastal scrub; sandy/ annual herb/ March-June/ 0 - 10 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. No suitable habitat. Coastal species. Outside elevation range. Not recorded in the vicinity[2].
Lupinus excubitus var. *medius*	*Fabaceae*	Mountain Springs bush lupine	None/ None/ List A, MSCP/ 1B.3	Pinyon and juniper woodland, Sonoran desert scrub/ shrub/ March-May/ 425 - 1370 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Rupertia rigida	*Fabaceae*	Parish psoralea	None/ None/ List D, MSCP/ 4.3	Chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, pebble plain, valley and foothill grassland/ perennial herb/ June – August/ 700 - 2500 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Senna covesii	*Fabaceae*	Cove's cassia	None/ None/ List B/ 2.2	Sonoran desert scrub; sandy/ perennial herb/ March – June/ 305 - 1070 meters	Not recorded in the vicinity[2].	Suitable sandy soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable sandy soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Thermopsis californica var. *semota*	*Fabaceae*	Velvety false lupine	None/ None/ List A, MSCP/ 1B.2	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland/ rhizomatous herb/ March – June/ 1000 - 1870 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Below elevation range.	Low potential to occur. Suitable habitat on site. Below elevation range. Not recorded in the vicinity[2].
Quercus cedrosensis	*Fagaceae*	Cedros Island oak	None/ None/ List B/ 2.2	Closed-cone coniferous forest, chaparral, coastal scrub/ evergreen tree/ April – May/ 255 - 960 meters	Recorded within surrounding Tecate quadrangle.	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat on site. Within elevation range. Recorded in the vicinity[2]. Would likely have been detected during surveys.
Quercus dumosa	*Fagaceae*	Nuttall's scrub oak	None/ None/ List A/ 1B.1	Closed-cone coniferous forest, chaparral, coastal scrub, sandy and clay loam soils/ shrub/ February-April / 15 - 400 meters	Not recorded in the vicinity[2].	Outside elevation range; suitable habitat and soils on site.	Not expected to occur. Outside elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Quercus engelmannii	*Fagaceae*	Engelmann oak	None/ None/ List D, MSCP/ 4.2	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland/ deciduous tree/ March – June/ 50 - 1300 meters	Not recorded in the vicinity[2].	Suitable chaparral habitat on site. Within elevation range.	Recorded on site.
Frankenia palmeri	*Frankeniaceae*	Palmer's frankenia	None/ None/ List B/ 2.1	Coastal dunes, coastal saltwater marsh and swamps, playas/ perennial herb/ May-July/ 0 - 10 meters	Not recorded in the vicinity[2].	No suitable habitat or soils on site. Outside elevation range.	Not expected to occur. No suitable habitat or soils on site. Coastal species. Outside elevation range. Not recorded in the vicinity[2].
Gentiana fremontii	*Gentianaceae*	Fremont's gentian	None/ None/ None/ 2.3	Meadows and seeps, mesic, upper montane coniferous forest/ annual herb/ June-August/ 2400-2700 meters	Recorded within surrounding Cameron Corners and Barrett Lake quadrangles.	No suitable habitat. Below elevation range.	Low potential to occur. No suitable habitat or soils. Below elevation range.
California [=Erodium] macrophyllum	*Geraniaceae*	Round-leaved filaree	None/ None/ List B/ 1B.1	Cismontane woodland, valley and foothill grassland; clay / annual herb/ March – May/ 15 - 1200 meters	Not recorded in the vicinity[2].	Within elevation range; no suitable soils or habitat on site.	Low potential to occur. Within elevation range; no suitable soils or habitat on site. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Ribes canthariforme	*Grossulariaceae*	Moreno currant	None/ None/ List A, MSCP/ 1B.3	Chaparral, riparian scrub/ deciduous shrub/ February – April/ 340 - 1200 meters	Recorded within surrounding Morena Reservoir and Barrett Lake quadrangles.	Within elevation range; suitable habitat on site; preferred soils not identified for this species.	Moderate potential to occur. Within elevation range; suitable habitat on site. Recorded in the vicinity[2]. Would likely have been detected during surveys.
Ribes viburnifolium	*Grossulariaceae*	Santa Catalina Island currant	None/ None/ List A/ 1B.2	Chaparral, cismontane woodland/ evergreen shrub/ February – April/ 30 - 305 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. Outside elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys.
Juglans californica	*Juglandaceae*	California black walnut	None/ None/ List D/ 4.2	Chaparral, cismontane woodland, coastal scrub; alluvial/ deciduous tree/ March-August/ 50 - 900 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys.
Juncus acutus var. *leopoldii*	*Juncaceae*	Southwestern spiny rush	None/ None/ List D/ 4.2	Coastal dunes (mesic), meadows and seeps (alkaline seeps), coastal saltwater marsh/ rhizomatous herb/ May-June/ 3 - 900 meters	Not recorded in the vicinity[2].	No suitable habitat or soils. Within elevation range.	Low potential to occur. No suitable habitat or soils. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Juncus cooperi	*Juncaceae*	Cooper's rush	None/ None/ List D/ 4.3	Meadows and seeps, mesic, alkaline or saline/ perennial herb/ April-May/ -260 - 1770 meters	Not recorded in the vicinity[2].	No suitable habitat or soils. Within elevation range.	Low potential to occur. No suitable habitat or soils. Within elevation range. Not recorded in the vicinity[2].
Acanthomintha ilicifolia	*Lamiaceae*	San Diego thornmint	FT/ SE/ List A, MSCP/ 1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay, openings/ annual herb/ April-June/ 10 - 960 meters	Not recorded in the vicinity[2].	Suitable chaparral habitat but no clay soils. Within elevation range.	Low potential to occur. Suitable habitat on site but no suitable soils. Within elevation range. Not recorded in the vicinity[2].
Lepechinia cardiophylla	*Lamiaceae*	Heart-leaved pitcher sage	None/ None/ List A/ 1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland/ shrub/ April-July/ 520 - 1370 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Within elevation range; suitable habitat on site. Not recorded in the vicinity[2].
Lepechinia ganderi	*Lamiaceae*	Gander's pitcher sage	None/ None/ List A/ 1B.3	Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland; gabbroic or metavolcanic/ shrub/ June-July/ 305 - 1005 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Within elevation range. Not recorded in the vicinity[2].
Monardella hypoleuca ssp. *lanata*	*Lamiaceae*	Felt-leaved monardella	None/ None/ List A, MSCP/ 1B.2	Chaparral, cismontane woodland/ rhizomatous herb/ June-August/ 300 - 1575 meters	Recorded within surrounding Barrett Lake and Tecate quadrangles.	Within elevation range; suitable habitat on site.	Moderate potential to occur. Within elevation range; suitable habitat on site. Recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Monardella macrantha ssp. *hallii*	*Lamiaceae*	Hall's monardella	None/ None/ List A/ 1B.3	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland/ rhizomatous herb/ June-October/ 730 - 2195 meters	Not recorded in the vicinity[2].	Suitable habitat; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Monardella nana ssp. *leptosiphon*	*Lamiaceae*	San Felipa monardella	None/ None/ List A, MSCP/ 1B.2	Chaparral, lower montane coniferous forest/ rhizomatous herb/ June-July/ 1200 - 1855 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Below elevation range.	Low potential to occur. Suitable habitat. Below elevation range. Not recorded in the vicinity[2].
Monardella stoneae	*Lamiaceae*	Jennifer's monardella	None/ None/ List A/ 1B.2	Closed-cone coniferous forest, chaparral, coastal scrub, riparian scrub; usually rocky intermittent streambeds/ perennial herb/ June-September/ 10 - 790 meters	Recorded within surrounding Tecate quadrangle.	Suitable habitat on site. Within elevation range.	Moderate potential to occur. Suitable habitat on site. Within elevation range. Recorded in the vicinity[2].
Monardella viminea	*Lamiaceae*	Willowy monardella	FE/ SE/ List A / 1B.1	Chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland; alluvial ephemeral washes/ perennial herb/ June-August/ 50 - 225 meters	Not recorded in the vicinity[2].	Suitable habitat; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. Outside elevation range. Not recorded in the vicinity[2].
Pogogyne abramsii	*Lamiaceae*	San Diego mesa mint	FE/ SE/ List A / 1B.1	Vernal pools/ annual herb/ March-July/ 90 - 200 meters	Not recorded in the vicinity[2].	No vernal pools. Outside elevation range.	Not expected to occur. No vernal pools. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Pogogyne nudiuscula	*Lamiaceae*	Otay Mesa mint	FE/ SE/ List A/ 1B.1	Vernal pools/ annual herb/ May-July/ 90 - 250 meters	Not recorded in the vicinity[2].	No vernal pools. Outside elevation range.	Not expected to occur. No vernal pools. Outside elevation range. Not recorded in the vicinity[2].
Salvia eremostachya	*Lamiaceae*	Desert sage	None/ None/ List D/ 4.3	Sonoran desert scrub; rocky or gravelly/ evergreen shrub/ March – May/ 700 - 1400 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Salvia munzii	*Lamiaceae*	Munz's sage	None/ None/ List B/ 2.2	Chaparral, coastal scrub/ evergreen shrub/ February-April/ 120 - 1065 meters	Not recorded in the vicinity[2].	Suitable habitat; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys.
Satureja chandleri	*Lamiaceae*	San Miguel savory	None/ None/ List A / 1B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland; rocky, gabbroic or metavolcanic / shrub/ March-July/ 120 - 1075 meters	Not recorded in the vicinity[2].	Within elevation range; suitable habitat and soils on site.	Moderate potential to occur. Within elevation range; suitable habitat and soils on site. Not recorded in the vicinity[2]. Would likely have been detected during surveys.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Scutellaria bolanderi ssp. *austromontana*	*Lamiaceae*	Southern skullcap	None/ None/ List A/ 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest; mesic/ rhizomatous herb/ June – August/ 425 - 2000 meters	Recorded within surrounding Morena Reservoir quadrangle.	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat on site. Within elevation range. Recorded in the vicinity[2].
Calochortus catalinae	*Liliaceae*	Catalina mariposa lily	None/ None/ List D/ 4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/ bulbiferous herb/ March-June/ 15 - 700 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Slightly outside elevation range.	Low potential to occur. Suitable habitat on site. Slightly outside elevation range. Not recorded in the vicinity[2].
Calochortus dunnii	*Liliaceae*	Dunn's mariposa lily	None/ SR/ List A, MSCP/ 1B.2	Closed-cone coniferous forest, chaparral, valley and foothill grassland; gabbroic or metavolcanic, rocky/ bulbiferous herb/ April-June/ 185 - 1830 meters	Recorded within surrounding Morena Reservoir, Barrett Lake, and Tecate quadrangles.	Within elevation range; suitable habitat and soils on site.	High potential to occur. Within elevation range; suitable habitat and soils on site. Recorded in the vicinity[2].
Lilium humboldtii ssp. *ocellatum*	*Liliaceae*	Ocellated Humboldt lily	None/ None/ List D, MSCP/ 4.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland; openings/ bulbiferous herb/ March-July/ 30 - 1800 meters	Not recorded in the vicinity[2].	Suitable habitat; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Lilium parryi	*Liliaceae*	Lemon Lily	None/ None/ List A, MSCP/ 1B.2	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest; mesic/ bulbiferous herb/ July-August/ 1220 - 2745 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Below elevation range.	Low potential to occur. No suitable habitat. Below elevation range. Not recorded in the vicinity[2].
Fritillaria biflora	*Lilliaceae*	Chocolate lily	None/ None/ List D/ None	Valley grassland, foothill woodland/ perennial herb/ 0 -1200 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Limnanthes gracilis ssp. *parishii*	*Limnanthaceae*	Cuyamaca meadowfoam	None/ SE/ List A, MSCP/ 1B.2	Lower montane coniferous forest, meadows and seeps, vernal pools; vernally mesic/ annual herb/ April-June/ 600 - 2000 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Mentzelia hirsutissima	*Loasaceae*	Hairy stickleaf	None/ None/ List B/ 2.3	Sonoran desert scrub; rocky/ annual herb/ March-May/ 0 - 700 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Slightly outside elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Slightly outside elevation range. Not recorded in the vicinity[2].
Eucnide rupestris	*Losaceae*	Rock nettle	None/ None/ List B/ 2.2	Sonoran desert scrub/ annual herb/ December-April/ 500 - 600 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Ayenia compacta	*Malvaceae*	California ayenia	None/ None/ List B/ 2.3	Mojavean desert scrub, Sonoran desert scrub; rocky/ perennial herb/ March-April/ 150 - 1095 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Fremontodendron mexicanum	*Malvaceae*	Mexican flannelbush	FE/ SR/ List A/ 1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland; gabbroic, metavolcanic, or serpentintite/ evergreen shrub/ March-June/ 10 - 716 meters	Recorded within surrounding Barrett Lake quadrangle.	Suitable habitat but no suitable soils. Slightly outside elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Slightly outside elevation range. Recorded in the vicinity[2].
Herissantia crispa	*Malvaceae*	Curly herissantia	None/ None/ List B/ 2.3	Sonoran desert scrub/ annual-perennial herb/ August-September/ 700 - 725 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Slightly within elevation range.	Low potential to occur. No suitable habitat. Slightly within elevation range. Not recorded in the vicinity[2].
Horsfordia newberryi	*Malvaceae*	Newberry's velvet-mallow	None/ None/ List D/ 4.3	Sonoran desert scrub; rocky/ shrub/ February-December/ 3 - 800 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Malacothamnus aboriginum	*Malvaceae*	Indian Valley bush mallow	None/ None/ List A, MSCP/ 1B.2	Chaparral, cismontane woodland; rocky, granitic, often in burned areas/ deciduous shrub/ April-October/ 150 - 1700 meters	Not recorded in the vicinity[2].	Suitable habitat and soils. Within elevation range.	Moderate potential to occur. Suitable habitat and soils. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Proboscidea althaeifolia	*Martyniaceae*	Desert unicorn-plant	None/ None/ List D/ 4.3	Sonoran desert scrub; sandy/ perennial herb/ May – August/ 150 - 1000 meters	Not recorded in the vicinity[2].	Suitable sandy soils but no suitable habitat. Within elevation range	Not expected to occur. Desert species. No suitable habitat. Not recorded in the vicinity[2].
Calandrinia breweri	*Montiaceae*	Brewer's calandrinia	None/ None/ List D/ 4.2	Chaparral, coastal scrub; sandy or loamy, disturbed sites and burns/ annual herb/ March-June/ 10 - 1220 meters	Not recorded in the vicinity[2].	Suitable habitat and sandy loam soils. Within elevation range.	Moderate potential to occur. Suitable habitat and sandy loam soils. Within elevation range. Not recorded in the vicinity[2].
Cistanthe [=Calandrinia] maritima	*Montiaceae*	Seaside cistanthe (calandrinia)	None/ None/ List D/ 4.2	Coastal bluff scrub, coastal scrub, valley and foothill grassland; sandy/ annual herb/ March – June/ 5 - 300 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Lewisia brachycalyx	*Montiaceae*	Southwestern bitterroot	None/ None/ List B, MSCP/ 2.2	Lower montane coniferous forest, meadows and seeps; mesic/ perennial herb/ February-June/ 1370 - 2300 meters	Not recorded in the vicinity[2].	No suitable habitat or mesic areas. Below elevation range.	Low potential to occur. No suitable habitat or mesic areas. Below elevation range. Not recorded in the vicinity[2].
Triquetrella californica	*N/A*	Coastal triquetrella	None/ None/ None/ 1B.2	Coastal bluff scrub, Coastal scrub/soil/ moss/ 10 - 100 meters	Not recorded in the vicinity[2].	No suitable habitat on site; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. Outside elevation range; no suitable habitat on site. Coastal species. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Mirabilis tenuiloba	*Nycaginaceae*	Slender-lobed four o'clock	None/ None/ List D/ 4.3	Sonoran desert scrub/ perennial herb/ March-May/ 300 - 1095 meters	Not recorded in the vicinity[2].	No suitable habitat. Within elevation range.	Not expected to occur. Desert species. Not recorded in the vicinity[2].
Abronia maritima	*Nyctaginaceae*	Red sand-verbena	None/ None/ List D/ 4.2	Coastal dunes/ perennial herb/ February-November/ 0 - 100 meters	Not recorded in the vicinity[2].	No suitable habitat. Above elevation range.	Not expected to occur. No suitable habitat. Not recorded in the vicinity[2].
Abronia villosa var. *aurita*	*Nyctaginaceae*	Chaparral sand-verbena	None/ None/ List A/ 1B.1	Chaparral, coastal scrub, desert dunes; sandy/ annual herb/ January – September/ 75 - 1600 meters	Not recorded in the vicinity[2].	Suitable habitat and sandy soils. Within elevation range.	Moderate potential to occur. Suitable habitat and soils. Within elevation range. Not recorded in the vicinity[2].
Fraxinus parryi	*Oleaceae*	Chaparral ash	None/ None/ None/ 2.2	Chaparral/ shrub/ March-May/ 213-620 meters	Recorded within surrounding Tecate quadrangle.	Suitable habitat on site; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. Suitable habitat on site. Outside elevation range. Recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Camissonia lewisii	*Onagraceae*	Lewis's evening primrose	None/ None/ List C/ 3	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy or clay/ annual herb/ March-May/ 0 - 300 meters	Not recorded in the vicinity[2].	Suitable sandy soils on site but no suitable habitat. Outside elevation range.	Low potential to occur. Suitable sandy soils on site but no suitable habitat. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Clarkia delicata	*Onagraceae*	Delicate clarkia	None/ None/ List A, MSCP/ 1B.2	Chaparral, cismontane woodland; often gabbroic/ annual herb/ April-June/ 235 - 1000 meters	Recorded within surrounding Morena Reservoir and Barrett Lake quadrangles.	Suitable habitat but no gabbroic soils. Within elevation range.	Moderate potential to occur. Suitable habitat. Within elevation range. Recorded in the vicinity[2].
Ophioglossum californicum	*Ophioglossaceae*	California adder's-tongue	None/ None/ List D/ 4.2	Chaparral, valley and foothill grassland, vernal pools (margins); mesic/ rhizomatous herb/ January-June/ 60 - 525 meters	Not recorded in the vicinity[2].	Suitable habitat. Outside elevation range.	Low potential to occur. Suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Piperia cooperi	*Orchidaceae*	Cooper's rein orchid	None/ None/ List D, MSCP/ 4.2	Chaparral, cismontane woodland, valley and foothill grassland/ perennial herb/ March – June/ 15 - 1585 meters	Not recorded in the vicinity[2].	Suitable habitat; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2].
Piperia leptopetala	*Orchidaceae*	Narrow-petaled rein orchid	None/ None/ List D, MSCP/ 4.3	Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest/ perennial herb/ May – July/ 380 - 2225 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Chloropyron maritimum ssp. *maritimum [=Cordylanthus maritimus* ssp. *maritimus]*	*Orobanchaceae*	Salt marsh bird's-beak	FE/ SE/ List A / 1B.2	Coastal dunes, coastal saltwater marshes and swamps/ annual herb hemiparisitic/ May-October/ 0 - 30 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. Coastal species. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Dicranostegia orcuttiana [=Cordylanthus orcuttianus]	*Orobanchaceae*	Orcutt's bird's-beak	None/ None/ List B / 2.1	Coastal scrub/ annual herb hemiparisitic/ April-June/ 10 - 350 meters	Not recorded in the vicinity[2].	No suitable habitat; no preferred soils identified for this species. Outside elevation range.	Not expected to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Orobanche parishii ssp. *brachyloba*	*Orobanchaceae*	Short-lobed broomrape	None/ None/ List D/ 4.2	Coastal bluff scrub, coastal dunes, coastal scrub; sandy/ perennial herb parasitic/ April-October/ 3 - 305 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Romneya coulteri	*Papaveraceae*	Coulter's matilija poppy	None/ None/ List D/ 4.2	Chaparral, coastal scrub; often in burns/ rhizomatous herb/ March – July/ 20 - 1200 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2].
Mimulus auranticus var. *aridus*	*Phrymaceae*	Desert monkey flower	None/ None/ List D, MSCP/ 4.3	Chaparral, rocky; Sonoran desert scrub/ evergreen shrub/ April-July/ 750 - 1200 meters	Not recorded in the vicinity[2].	Suitable habitat and soils. Within elevation range.	Low potential to occur. Suitable habitat and soils. Within elevation range. Not recorded in the vicinity[2].
Mimulus clevelandii	*Phrymaceae*	Cleveland's monkeyflower	None/ None/ List D, MSCP/ 4.2	Chaparral, cismontane woodland, lower montane coniferous forest; gabbroic, often in disturbed areas, openings, rocky/ rhizomatous herb/ April-July/ 450 - 2000 meters	Not recorded in the vicinity[2].	Suitable habitat and soils. Within elevation range.	Moderate potential to occur. Suitable habitat and soils. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Mimulus latidens	*Phrymaceae*	Vernal pool monkeyflower	None/ None/ List A/ considered but rejected	Valley grassland, foothill woodland, wetland-riparian/ annual herb/ 0 - 2500 meters	Not recorded in the vicinity[2].	No suitable habitat. Within elevation range.	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Mimulus palmeri [=diffusus]	*Phrymaceae*	Palomar monkeyflower	None/ None/ List D, MSCP/ 4.3	Chaparral, lower montane coniferous forest; sandy or gravelly/ annual herb/ April-June/ 1220 - 1830 meters	Not recorded in the vicinity[2].	Suitable habitat and soils. Below elevation range.	Low potential to occur. Suitable habitat and soils. Below elevation range. Not recorded in the vicinity[2].
Tetracoccus dioicus	*Picrodendraceae*	Parry's tetracoccus	None/ None/ List A / 1B.2	Chaparral, coastal sage scrub/ deciduous shrub/ April-May/ 165 - 1000 meters	Recorded within Potrero and surrounding Barrett Lake quadrangles.	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Within elevation range; suitable habitat on site. Recorded in the vicinity[2]. Would likely have been detected during surveys.
Pinus torreyana ssp. *torreyana*	*Pinaceae*	Torrey pine	None/ None/ List A / 1B.2	Closed-cone coniferous forest, chaparral; sandstone/ evergreen tree/ NA/ 75 – 160 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils. Outside elevation range.	Not expected to occur. No suitable soils. Outside elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Penstemon clevelandii var. *connatus*	*Plantaginaceae*	San Jacinto beardtongue	None/ None/ List D/ 4.3	Chaparral, pinyon and juniper woodland, Sonoran desert scrub; rocky/ perennial herb/ March-May/ 400 - 1500 meters	Not recorded in the vicinity[2].	Suitable habitat and soils. Within elevation range.	Moderate potential to occur. Suitable habitat and soils on site. Within elevation range. Not recorded in the vicinity[2].
Penstemon thurberi	*Plantaginaceae*	Thurber's beardtongue	None/ None/ List D/ 4.2	Chaparral, Joshua tree "woodland", pinyon and juniper woodland, Sonoran desert scrub/ perennial herb/ May-July/ 500 - 1220 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2].
Stemodia durantifolia	*Plantaginaceae*	Purple stemodia	None/ None/ List B/ 2.1	Sonoran desert scrub (often mesic, sandy) / perennial herb / January – December/ 180 - 300 meters	Not recorded in the vicinity[2].	Outside elevation range; no suitable habitat but suitable soils found on site.	Low potential to occur. Outside elevation range; no suitable habitat but suitable soils found on site. Not recorded in the vicinity[2].
Hordeum intercedens	*Poaceae*	Vernal barley	None/ None/ List C/ 3.2	Coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), vernal pools/ annual herb/ March-June/ 5 - 1000 meters	Recorded within Potrero quadrangle.	Suitable habitat; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat. Within elevation range. Recorded in the vicinity[2].
Orcuttia californica	*Poaceae*	California Orcutt grass	FE/ SE/ List A/ 1B.1	Vernal pools/ annual herb/ April-August/ 15 - 660 meters	Recorded within surrounding Barrett Lake quadrangle.	No vernal pools. Outside elevation range.	Low potential to occur. No vernal pools. Outside elevation range. Recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Poa atropurpurea	*Poaceae*	San Bernardino bluegrass	FE/ None/ List A, MSCP/ 1B.2	Meadows and seeps; mesic/ rhizomatous herb/ May – July/ 1360 - 2455 meters	Not recorded in the vicinity[2].	Marginal suitable habitat. Below elevation range.	Low potential to occur. Marginal suitable habitat. Below elevation range. Not recorded in the vicinity[2].
Stipa [=Achnatherum] diegoensis	*Poaceae*	San Diego County needlegrass	None/ None/ List D/ 4.2	Chaparral, coastal scrub; rocky, often mesic/ perennial herb/ Feb-June/ 10 - 800 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Within elevation range.	Moderate potential to occur. Suitable habitat and soils on site. Within elevation range. Not recorded in the vicinity[2].
Ipomopsis tenuifolia	*Polemoniaceae*	Slender-leaved ipomopsis	None/ None/ List B/ 2.3	Chaparral, pinyon and juniper woodland, Sonoran desert scrub; gravelly or rocky/ perennial herb/ March-May/ 100 - 1200 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Within elevation range.	Moderate potential to occur. Suitable habitat and soils on site. Within elevation range. Not recorded in the vicinity[2].
Leptosiphon (=Linanthus) floribundus ssp. *hallii*	*Polemoniaceae*	Santa Rosa Mountain leptosiphon (linanthus)	None/ None/ List A/ 1B.3	Pinyon and juniper woodland, Sonoran desert scrub/ perennial herb/ May-July/ 1000 - 2000 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Below elevation range.	Low potential to occur. No suitable habitat. Below elevation range. Not recorded in the vicinity[2].
Linanthus bellus	*Polemoniaceae*	Desert beauty	None/ None/ List B, MSCP/ 2.3	Chaparral; sandy/ annual herb/ April-May/ 1000 - 1400 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Below elevation range.	Low potential to occur. Suitable habitat and soils on site. Below elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Linanthus orcuttii	*Polemoniaceae*	Orcutt's linanthus	None/ None/ List A, MSCP/ 1B.3	Chaparral, lower montane coniferous forest, pinyon and juniper woodland; openings/ annual herb/ May-June/ 915 - 2145 meters	Not recorded in the vicinity[2].	Suitable habitat; preferred soils not identified for this species. Below elevation range.	Low potential to occur. Suitable habitat on site. Below elevation range. Not recorded in the vicinity[2].
Navarretia fossalis	*Polemoniaceae*	Spreading navarretia	FT/ None/ List A / 1B.1	Chenopod scrub, shallow freshwater marsh and swamps, playas, vernal pools/ annual herb/ April-June/ 30 – 655 meters	Not recorded in the vicinity[2].	Outside elevation range; no suitable habitat or soils on site.	Low potential to occur. Outside elevation range; no suitable habitat or soils on site. Not recorded in the vicinity[2].
Navarretia peninsularis	*Polemoniaceae*	Peninsular navarretia	None/ None/ List A, MSCP/ 1B.2	Chaparral (openings). lower montane coniferous forest, meadows and seeps, pinyon and juniper woodland; mesic/ annual herb/ June-August/ 1500 - 2300 meters	Not recorded in the vicinity[2].	Suitable habitat; preferred soils not identified for this species. Below elevation range.	Low potential to occur. Suitable habitat. Below elevation range. Not recorded in the vicinity[2].
Navarretia prostrata	*Polemoniaceae*	Prostrate navarretia	None/ None/ List A/ 1B.1	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools; mesic/ annual herb/ April-July/ 15 - 1210 meters	Not recorded in the vicinity[2].	No vernal pools on site. Within elevation range.	Low potential to occur. No vernal pools on site. Within elevation range. Not recorded in the vicinity[2].
Saltugilia [=Gilia] caruifolia	*Polemoniaceae*	Caraway-leaved gilia	None/ None/ List D/ 4.3	Chaparral, lower montane coniferous forest; sandy, openings/ annual herb/ May-August/ 840 - 2300 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Within elevation range.	Moderate potential to occur. Suitable habitat and soils on site. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Polygala cornuta var. *fishiae*	*Polygalaceae*	Fish's milkwort	None/ None/ List D/ 4.3	Chaparral, cismontane woodland, riparian woodland/ deciduous shrub/ May – August/ 100 - 1000 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Low potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys.
Chorizanthe leptotheca	*Polygonaceae*	Peninsular spineflower	None/ None/ List D/ 4.2	Chaparral, coastal scrub, lower montane conifer forest; alluvial fan, granitic/ annual herb/ May-August/ 300 - 1900 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils on site. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils on site. Within elevation range. Not recorded in the vicinity[2].
Chorizanthe orcuttiana	*Polygonaceae*	Orcutt's spineflower	FE/ SE/ List A/ 1B.1	Maritime chaparral, closed-cone coniferous forest, coastal scrub; sandy openings/ annual herb/ March-May/ 3 - 125 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Outside elevation range.	Not expected to occur. No suitable habitat. Outside elevation range. Not recorded in the vicinity[2].
Chorizanthe parryi var. *fernandina*	*Polygonaceae*	San Fernando Valley spineflower	FC/ SE/ List A/ 1B.1	Coastal scrub; sandy; valley and foothill grassland/ annual herb/ April-June/ 150 - 1220 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Not expected to occur. Not recorded in the vicinity[2]. No records from San Diego County (CNPS 2012).

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Chorizanthe polygonoides var. *longispina*	*Polygonaceae*	Long-spined spineflower	None/ None/ List A, MSCP/ 1B.2	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools; often clay/ annual herb/ April-July/ 30 - 1530 meters	Recorded within surrounding Barrett Lake quadrangle.	Suitable habitat but no suitable soils on site. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils on site. Within elevation range. Recorded in the vicinity[2].
Mucronea californica	*Polygonaceae*	California spineflower	None/ None/ List D/ 4.2	Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy/ annual herb/ March-July/ 0 - 1400 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Within elevation range.	Moderate potential to occur. Suitable habitat and soils on site. Within elevation range. Not recorded in the vicinity[2].
Nemacaulis denudata var. *denudata*	*Polygonaceae*	Coast woolly-heads	None/ None/ List A/ 1B.2	Coastal dunes / annual herb/ April-September/ 0 - 100 meters	Not recorded in the vicinity[2].	No suitable habitat. Outside elevation range.	Not expected to occur. No suitable habitat. Coastal species. Outside elevation range. Not recorded in the vicinity[2].
Nemacaulis denudata var. *gracilis*	*Polygonaceae*	Slender woolly-heads	None/ None/ List B/ 2.2	Coastal dunes, desert dunes, Sonoran desert scrub/ annual herb/ April-May/ -50 - 400 meters	Not recorded in the vicinity[2].	No suitable habitat on site; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. No suitable habitat on site. Outside elevation range. Not recorded in the vicinity[2].
Androsace elongata ssp. *acuta*	*Primulaceae*	California androsace	None/ None/ List D/ 4.2	Chaparral, coastal scrub, cismontane woodland, valley and foothill grassland, meadows and seeps, pinyon and juniper woodland/ annual herb/ March-June/ 150 - 1200 meters	Not recorded in the vicinity[2].	Suitable chaparral habitat on site; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Pentagramma triangularis ssp. *nova*	*Pteridaceae*	Goldback fern	None/ None/ MSCP/ NR	Coastal sage scrub, creosote bush scrub, yellow pine forest, foothill woodland, chaparral, valley grassland, pinyon-juniper woodland/ fern/ N/A/ 0 – 2300 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Within elevation range.	Low potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2]. Little known about distribution of species. Not recorded in the vicinity[2].
Delphinium hesperium ssp. *cuyamacae*	*Ranunculaceae*	Cuyamaca larkspur	None/ SR/ List A, MSCP/ 1B.2	Lower montane coniferous forest, meadows and seeps, vernal pools; mesic areas/perennial herb/May-July/ 1220 - 1631 meters	Not recorded in the vicinity[2].	No suitable habitat or soils. Below elevation range.	Low potential to occur. No suitable habitat or soils. Below elevation range. Not recorded in the vicinity[2].
Delphinium parishii ssp. *subglobosum*	*Ranunculaceae*	Colorado Desert larkspur	None/ None/ List D/ 4.3	Chaparral, cismontane woodland, pinyon and juniper woodland, Sonoran desert scrub/ perennial herb/ March-June/ 600 - 1800 meters	Not recorded in the vicinity[2].	Suitable habitat; no preferred soils identified for this species. Within elevation range.	Moderate potential to occur. Suitable habitat on site. Within elevation range. Not recorded in the vicinity[2].
Myosurus minimus ssp. *apus*	*Ranunculaceae*	Little mousetail	None/ None/ List C/ 3.1	Valley and foothill grassland, vernal pools (alkaline)/ annual herb/ March-June/ 20 - 640 meters	Not recorded in the vicinity[2].	No vernal pools or alkaline soils. Outside elevation range.	Not expected to occur. No vernal pools. Outside elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Adolphia californica	*Rhamnaceae*	California adolphia	None/ None/ List B/ 2.1	Chaparral, coastal scrub, valley and foothill grassland; clay/ deciduous shrub/ December-May/ 45 - 740 meters	Not recorded in the vicinity[2].	Suitable chaparral habitat but no clay soils. Slightly within elevation range.	Low potential to occur. Suitable habitat on site but no suitable soils. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Ceanothus cyaneus	*Rhamnaceae*	Lakeside ceanothus	None/ None/ List A, MSCP/ 1B.2	Closed-cone coniferous forest, chaparral/ evergreen shrub/ April-June/ 235 - 755 meters	Not recorded in the vicinity[2].	Suitable chaparral habitat; preferred soils not identified for this species. Within elevation range.	Moderate potential to occur. Within elevation range; suitable habitat and soils on site. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Ceanothus verrucosus	*Rhamnaceae*	Wart-stemmed ceanothus	None/ None/ List B/ 2.2	Chaparral/ evergreen shrub/ December-May / 1 - 380 meters	Recorded within surrounding Cameron Corners quadrangle.	Suitable chaparral habitat; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. Suitable habitat on site. Outside elevation range. Recorded in the vicinity[2]. Would likely have been detected during surveys if present.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Colubrina californica	*Rhamnaceae*	Las Animas colubrina	None/ None/ List B/ 2.3	Mojavean desert scrub, Sonoran desert scrub/ deciduous shrub/ April-June/ 10 - 1000 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Chamaebatia australis	*Rosaceae*	Southern mountain misery	None/ None/ List D, MSCP/ 4.2.	Chaparral; gabbroic or metavolcanic/ evergreen shrub/ November-May/ 300 - 1020 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Horkelia cuneata ssp. *puberula*	*Rosaceae*	Mesa horkelia	None/ None/ List A/ 1B.1	Maritime chaparral, cismontane woodland, coastal scrub; sandy or gravelly/ perennial herb/ February – July / 70 - 810 meters	Not recorded in the vicinity[2].	Suitable habitat and soils. Within elevation range.	Moderate potential to occur. Suitable habitat and soils. Within elevation range. Not recorded in the vicinity[2].
Horkelia truncata	*Rosaceae*	Ramona horkelia	None/ None/ List A, MSCP/ 1B.3	Chaparral/ cismontane woodland; clay, gabbroic/ perennial herb/ May-June/ 400 - 1300 meters	Recorded within surrounding Barrett Lake quadrangle.	Suitable habitat but no suitable soils. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Within elevation range. Recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Rosa minutifolia	*Rosaceae*	Small-leaved rose	None/ SE/ List B / 2.1	Chaparral, coastal scrub/ deciduous shrub/ January-June/ 150 - 160 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. Suitable habitat on site. Outside elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys.
Rubus glaucifolius var. *ganderi*	*Rosaceae*	Cuyamaca raspberry	None/ None/ List A, MSCP/ 1B.3	Lower montane coniferous forest; gabbroic/ evergreen shrub/ May – June/ 1200 - 1675 meters	Not recorded in the vicinity[2].	No suitable habitat or soils. Below elevation range.	Low potential to occur. No suitable habitat or soils. Below elevation range. Not recorded in the vicinity[2].
Galium angustifolium ssp. *borregoense*	*Rubiaceae*	Borrego beadstraw	None/ SR/ List A, MSCP/ 1B.3	Sonoran desert scrub; rocky/ perennial herb/ March/ 350 - 1250 meters	Not recorded in the vicinity[2].	Suitable soils but no suitable habitat. Within elevation range.	Low potential to occur. Suitable soils but no suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Galium angustifolium ssp. *jacinticum*	*Rubiaceae*	San Jacinto Mountains bedstraw	None/ None/ List A/ 1B.3	Lower montane coniferous forest/ perennial herb/ June-August/ 1350 - 2100 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Below elevation range.	Not expected to occur. No suitable habitat. Below elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Galium californicum ssp. *flaccidum*	*Rubiaceae*	California bedstraw	None/ None/ MSCP/ None	Open or dense non-coastal woodlands/ perennial herb/ March-September/ 30 -1500 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2].
Galium johnstonii	*Rubiaceae*	Johnston's bedstraw	None/ None/ List D/ 4.3	Chaparral, lower montane coniferous forest, pinyon-juniper woodland, riparian woodland / perennial herb/ June-July/ 1220 - 2300 meters	Not recorded in the vicinity[2].	Suitable habitat; preferred soils not identified for this species. Below elevation range.	Low potential to occur. Suitable habitat, but below elevation range. Not recorded in the vicinity[2].
Nolina cismontana	*Ruscaceae*	Chaparral beargrass	None/ None/ List A, MSCP/ 1B.2	Chaparral, coastal scrub/; sandstone or gabbro/ evergreen shrub/ May-July/ 140 - 1275 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Within elevation range. Not recorded in the vicinity[2].
Nolina interrata	*Ruscaceae*	Dehesa nolina	None/ SE/ List A, MSCP/ 1B.1	Chaparral, gabbroic or serpentinite soils/ perennial herb/ June-July/ 185 - 855 meters	Recorded within surrounding Barrett Lake quadrangle.	Within elevation range; suitable habitat but no suitable soils on site.	Moderate potential to occur. Within elevation range; suitable habitat but no suitable soils on site. Recorded in the vicinity[2]. Would likely have been detected during surveys if present.

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Heuchera brevistaminea	*Saxifragaceae*	Mt. Laguna alumroot	None/ None/ List A, MSCP/ 1B.3	Broadleafed upland forest, chaparral, cismontane woodland, riparian forest; rocky/ rhizomatous herb/ April-July/ 1370 - 2000 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Below elevation range.	Low potential to occur. Suitable habitat and soils on site. Below elevation range. Not recorded in the vicinity[2].
Heuchera rubescens var. *versicolor*	*Saxifragaceae*	San Diego County alumroot	None/ None/ List B/ 2.3	Chaparral, lower montane coniferous forest; rocky/ rhizomatous herb/ May-June/ 1500 - 4000 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Below elevation range.	Low potential to occur. Suitable habitat and soils on site. Below elevation range. Not recorded in the vicinity[2].
Selaginella asprella	*Selaginellaceae*	Bluish spike-moss	None/ None/ List D/ 4.3	Cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland, subalpine coniferous forest, upper montane coniferous forest; granitic, rocky/ rhizomatous herb/ July/ 1600 - 2700 meters	Not recorded in the vicinity[2].	No suitable habitat but suitable soils on site. Below elevation range.	Low potential to occur. No suitable habitat. Below elevation range. Not recorded in the vicinity[2].
Selaginella cinerascens	*Selaginellaceae*	Ashy spike-moss	None/ None/ List D/ 4.1	Chaparral, coastal scrub/ rhizomatous herb/ Not listed/ 20 - 640 meters	Not recorded in the vicinity[2].	Suitable habitat on site; preferred soils not identified for this species. Outside elevation range.	Low potential to occur. Suitable habitat on site. Outside elevation range. Not recorded in the vicinity[2].
Selaginella eremophila	*Selaginellaceae*	Desert spike-moss	None/ None/ List B/ 2.2	Chaparral, Sonoran desert scrub; gravelly or rocky/ rhizomatous herb/ June/ 200 - 900 meters	Not recorded in the vicinity[2].	Suitable habitat and soils on site. Within elevation range.	Low potential to occur. Suitable habitat and soils on site. Within elevation range. Not recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Lycium californicum	*Solanaceae*	California box-thorn	None/ None/ List D/ 4.2	Coastal bluff scrub, coastal scrub/ shrub/ (Dec) March-August/ 5-150 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Outside elevation range.	Not expected to occur. No suitable habitat. Outside elevation range. Coastal species. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Lycium parishii	*Solanaceae*	Parish's desert-thorn	None/ None/ List B, MSCP/ 2.3	Coastal scrub, Sonoran desert scrub/ shrub/ March-April/ 305 - 1000 meters	Not recorded in the vicinity[2].	No suitable habitat; preferred soils not identified for this species. Within elevation range.	Low potential to occur. No suitable habitat. Within elevation range. Not recorded in the vicinity[2]. Would likely have been detected during surveys if present.
Geothallus tuberosus	*Sphaerocarpaceae*	Campbell's liverwort	None/ None/ None/ 1B.1	Coastal scrub(mesic), Vernal pools/soil/ ephemeral liverwort/ 10 - 600 meters	Not recorded in the vicinity[2].	No suitable habitat or mesic soils. Outside elevation range.	Low potential to occur. No suitable habitat or soils. Outside elevation range. Not recorded in the vicinity[2]. Most likely locally extirpated.
Bloomeria [=Muilla] clevelandii	*Themidaceae*	San Diego goldenstar	None/ None/ List A / 1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/ bulbiferous herb/ April - May/ 50 - 465 meters	Recorded within surrounding Tecate quadrangle.	Suitable habitat but no suitable clay soils. Outside elevation range.	Low potential to occur. Suitable habitat but no suitable soils. Outside elevation range. Recorded in the vicinity[2].

Scientific Name	Family	Common Name	Sensitivity Code and Status (Federal/ State/ County/ CRPR)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range	Known Occurrences (CNDDB/CNPS)	Suitable Habitat/Soils/Elevation	Status On Site or Potential to Occur
Brodiaea filifolia	*Themidaceae*	Thread-leaved brodiaea	FT/ SE/ List A/ 1B.1	Chaparral (openings) coastal scrub, cismontane woodland, playas, valley and foothill grassland, vernal pools; often clay/ bulbiferous herb/ March-June/ 25 – 1120 meters	Not recorded in the vicinity[2].	Suitable habitat but no suitable soils on site. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils on site. Within elevation range. Not recorded in the vicinity[2].
Brodiaea orcuttii	*Themidaceae*	Orcutt's brodiaea	None/ None/ List A, MSCP/ 1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools; mesic, clay, sometimes serpentine/ bulbiferous herb/ May-July/ 30 - 1692 meters	Recorded within surrounding Morena Reservoir, Barrett Lake, and Tecate quadrangles.	Suitable habitat but no suitable soils on site. Within elevation range.	Low potential to occur. Suitable habitat but no suitable soils on site. Within elevation range. Recorded in the vicinity[2].
Viola purpurea ssp. *aurea*	*Violaceae*	Golden violet	None/ None/ List B/ 2.2	Great Basin scrub, pinyon and juniper woodland; sandy/ perennial herb/ April – June/ 1000 - 2040 meters	Not recorded in the vicinity[2].	No suitable habitat on site; preferred soils not identified for this species. Below elevation range.	Low potential to occur. No suitable habitat on site. Below elevation range. Not recorded in the vicinity[2].

[1]Status

Federal Designations:
FE: Federally-listed as endangered
FT: Federally-listed as threatened
FC: Federal Candidate

State Designations:
SE: State-listed as endangered
ST: State-listed as threatened
SR: State-listed as rare

CRPR (California Rare Plant Rank):

1A	Plants Presumed Extinct in California
1B	Plants Rare, Threatened, or Endangered in California and Elsewhere
2	Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3	Plants About Which We Need More Information - A Review List
4	Plants of Limited Distribution - A Watch List

Threat Ranks

0.1	Seriously threatened in California
0.2	Fairly threatened in California
0.3	Not very threatened in California

County Designations:

County List A	Plants rare, threatened or endangered in California and elsewhere
County List B	Plants rare, threatened or endangered in California but common elsewhere
County List C	Plants which may be rare, but need more information to determine their true rarity status
County List D	Plants of limited distribution and are uncommon, but not presently rare or endangered
MSCP	Proposed for Coverage under Draft East County MSCP

[2]**Vicinity**: The Potrero USGS quadrangle and surrounding quadrangles: Cameron Corners, Campo, Morena Reservoir, Barrett Lake, and Tecate.

APPENDIX E

Sensitive Wildlife Species Detected or Potentially Occurring at Potrero Mason Property

APPENDIX E
Sensitive Wildlife Species Detected or Potentially Occurring at Potrero Mason Property

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Amphibians					
Frogs					
Rana draytoni California red-legged frog	FT/ CSC/ Group 1, MSCP	Lowland or foothill streams, wetlands, riparian woodlands; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water from Coast Ranges south of Mendocino Co., and in portions of Sierra Nevada and Cascades ranges, sea level to 1,525 meters (1, 2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Thought to be extirpated within County. No suitable habitat.
Rana muscosa Southern mountain yellow-legged frog	FE/ CE, CSC/ Group 1, MSCP	Meadow streams, isolated pools, lake borders, rocky stream courses within ponderosa pine, montane hardwood-conifer and montane riparian habitat types in southern Sierra Nevada; and rocky streams in narrow canyons and in chaparral in Southern California. Elevations 370–3,660 meters (1, 2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Thought to be extirpated within County. No suitable habitat.
Salamanders/Newts					
Batrachoseps major aridus Desert slender salamander	FE/ SE/ Group 1, MSCP	Known only from Hidden Palm Canyon and Guadalupe Canyon in Santa Rosa Mountains., Riverside Co., approximately 850 meters, in barren, palm oasis, desert wash, and desert scrub. Occurs under limestone sheets, rocks, and talus, usually at the base of damp, shaded, north and west-facing walls (1).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of known range. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Ensatina eschscholtzii klauberi Large-blotched salamander	None/ CSC/ Group 1, MSCP	Moist shaded evergreen and deciduous forests, oak woodlands, under rocks, logs, debris, especially peeled off bark. Found in peninsular ranges of southern California and eastern San Bernardino Mountains, approx. 1,525 meters (1).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of known range. No suitable habitat.
Taricha torosa torosa Coast Range newt (Monterey Co. south only)	None/ CSC/ Group 2, MSCP	Valley-foothill hardwood, valley-foothill hardwood-conifer, coastal scrub, mixed chaparral, annual grassland, mixed conifer; in Southern California inhabits drier chaparral, oak woodland, and grasslands. Found along Coast Ranges south of Monterey Co. to northern San Diego Co., Peninsular Ranges south to Boulder Creek, Sierra Nevada foothills, Shasta Reservoir, Central Valley floor, 0–1,830 meters (1, 2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of known range. No suitable habitat.
Toads					
Anaxyrus [=Bufo microscaphus] californicus Arroyo toad	FE/ CSC/ Group 1, MSCP	Washes, arroyos, sandy riverbanks, riparian areas with willows, sycamores, oaks cottonwoods. Requires exposed sandy streamsides with stable terraces to burrow with scattered vegetation and calm pools with sandy/gravel bottoms for breeding. Found west of desert in coastal areas from upper Salinas River in San Luis Obispo Co. to northwestern Baja California, sea level to 900 meters (1).	No	Low potential to occur.	Moderately suitable washes found on site, but no water observed. Recorded in the vicinity[2].
Bufo puncatus Red-spotted toad	None/ None/ MSCP	Rocky desert streams, oases, pools in rocky arroyos, grassland, oak woodland, scrubland in southeastern deserts north to Death Valley. From below sea level (Death Valley) to 2,200m (1).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of known range. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Spea [=Scaphiopus] hammondi Western spadefoot	None/ CSC/ Group 2, MSCP	Sandy/gravelly soils within mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, foothills, mountains, and other habitats. Breed in rainpools that do not have bullfrogs, fish, or crayfish. Found throughout Great Valley and foothills south of Redding, throughout South Coast Ranges in Southern California south of Transverse Mountains. and west of Peninsular Mountains., 0–1,365 meters (1).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable pools within the Property.
Reptiles					
Geckos					
Coleonyx switaki Barefoot gecko	None/ ST/ Group 2, MSCP	Arid rocky areas at the heads of canyons with large boulders and rock outcrops, sparse vegetation. Found on arid desert slopes of eastern side of Peninsular Ranges near Borrego Springs south to Baja California. Isolated population found in Coyote Mountains of Imperial Co. Elevations 0–700 meters (1, 2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Suitable habitat onsite. Outside of known range.
Coleonyx variegatus abbotti San Diego banded gecko	None/ None/ Group 1	Rocky areas in coastal sage and chaparral, and occurs most often in granite or rocky outcrops in coastal and cismontane Southern California from interior Ventura Co. south, and is absent from extreme outer coast (1, 2).	No	Moderate potential to occur.	Not recorded in the vicinity[2]. Suitable habitat onsite. Outside of known range.
Lizards					
Anniella pulchra pulchra Silvery legless lizard	None/ CSC/ Group 2, MSCP	Loose soils (sand, loam, humus) in coastal dune, coastal sage scrub, woodlands, and riparian habitats (1).	No	Low potential to occur.	Not recorded in the vicinity[2]. No loose soils or suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Aspidoscelis hyperythra beldingi Orange-throated whiptail	None/ CSC/ Group 2, MSCP	Coastal sage scrub, chamise-redshank chaparral, mixed chaparral, valley-foothill hardwood especially in areas with summer fog. Found from Santa Ana River and near Colton in San Bernardino Co., west of Peninsular ranges, south throughout Baja California, 0–610 meters (1, 2).	No	Moderate potential to occur.	Suitable coastal sage scrub habitat found on site. Recorded in the vicinity[2].
Aspidoscelis tigris stejnegeri Coastal western whiptail	None/ None/ Group 2	Hot and dry open areas with sparse foliage, chaparral, woodland, riparian areas. Found in coastal Southern California, west of Peninsular Ranges and south of Transverse Ranges, north to Ventura Co., 0–2,130 meters (1, 2).	Yes	Recorded onsite.	Suitable chaparral habitat on site. Recorded in the vicinity[2]. Observed during herpetological array surveys and additional biological surveys.
Eumeces skiltonianus interparietalis Coronado Island skink	None/ CSC/ Group 2, MSCP	Grassland, woodlands, pine forests, chaparral, especially open sunny areas such as clearings and edges of creeks, and rocky areas near streams with lots of vegetation; in litter, rotting logs, under flat stones. Found in coastal ranges and Sierra Nevada and foothills, 0–2,530 meters (1, 2).	No	Low potential to occur.	No suitable streams or vegetated regions on site. No litter or other suitable burrowing substrates observed. Recorded in the vicinity[2].
Gambelia copeii Cope's leopard lizard	None/ None/ MSCP	Coastal sage scrub, chaparral, oak woodland; flat areas with open space for running. Avoids densely vegetated areas. Only found in California near Cameron Corners, Campo, Potrero (1).	No	Moderate potential to occur.	Suitable habitat onsite and open areas (e.g. roads) for running. Within range. Not recorded in the vicinity[2].
Phrynosoma blainvillei ssp. *coronatum* Coast horned lizard	None/ CSC/ Group 2, MSCP	Areas of sandy soil and low vegetation in valleys, foothills, and semiarid mountains. Annual grassland, chaparral, woodland, coniferous forest, sandy areas, frequently near ant hills. Foothills and coastal plains from Los Angeles to northern Baja California (1, 3).	Yes.	Recorded onsite.	Several individuals observed on site during general biological surveys. Recorded in the vicinity[2].

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Phrynosoma mcallii Flat-tailed horned lizard	None/ CSC/ Group 1, MSCP	Fine sand and sparse vegetation in desert washes and desert flats. It is probably most abundant in areas of creosote bush and is found in desert scrub, wash, succulent shrub, and alkali scrub habitats. Common in areas with high density of harvester ants and fine windblown sand, rarely occurs on dunes. Found in central Riverside, eastern San Diego and Imperial Cos., 0–180 meters (1, 2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside known range. No suitable habitat.
Sauromalus ater Chuckwalla	None/ None/ Group 2, MSCP	Rocky flats and hillsides, lava flows, large outcrops, creosote bush habitats. Also inhabit man-made habitats such as piles of railroad ties and rip-rap. Found in Mojave and Colorado deserts from desert slopes of mountains, north through Owens Valley and east to Colorado River, 0–1,800 meters (1).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of known range. No suitable habitat.
Sceloporus graciosus vanderburgianus Southern sagebrush lizard	None/ None/ Group 2	Montane chaparral, manzanita, ceanothus; open pine and Douglas fir forests in mountains; found in areas with scattered low bushes, abundant sun. Transverse and Peninsular ranges of Southern California, Sierra San Pedro Martir of northern Baja California, 1,371–2,926 meters (1).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of known range. No suitable habitat.
Uma notata notata Colorado Desert fringe-toed lizard	None/ CSC/ Group 1, MSCP	Fine, loose, wind-blown sand dunes, dry lakebeds, sandy beaches or riverbanks, desert washes, and sparse desert scrub in Colorado and Sonoran deserts, 0–180 meters (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside known range. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Snakes					
Crotalus ruber ruber Northern red-diamond rattlesnake	None/ CSC/ Group 2, MSCP	Chaparral, oak and pine woodland, arid desert, rocky grassland habitats in rocky areas and dense vegetation; rocky desert flats on desert slopes of mountains. Morongo Valley (1).	No	High potential to occur.	Suitable chaparral and rocky habitats found on site. Recorded in the vicinity[2].
Diadophis punctatus similis San Diego ringneck snake	None/ None/ Group 2	Moist habitats, wet meadows; rocky hillsides; open habitats such as farmland, grassland, chaparral; and mixed coniferous forests and woodlands. San Diego Co. along coast and Peninsular range, southwestern San Bernardino Co. (1).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable moist habitats.
Lampropeltis zonata pulchra (San Diego population) San Diego mountain kingsnake	None/ CSC/ Group 2, MSCP	Valley-foothill hardwood, hardwood-conifer, mixed and montane chaparral, valley-foothill riparian, coniferous forests, wet meadows in central San Diego Co. peninsular ranges- Laguna, Palomar, Volcan, and Hot Springs Mountains., Santa Ana Mountains., and in Hollywood Hills, Santa Monica Mountains., 0–1,981 meters (1).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of known range. No suitable habitat.
Lichanura trivirgata roseofusca Coastal rosy boa	None/ None/ Group 2	Rocky chaparral hillsides and canyons, scrub flats with good cover, common in riparian areas but does not require permanent water. Found in extreme Southern California within Tijuana River and Otay watersheds (1, 2).	No	Moderate potential to occur.	Suitable rocky chaparral habitat found on site, but few suitable riparian areas. Recorded in the vicinity[2].
Salvadora hexalepis virgultea Coast patch-nosed snake	None/ CSC/ Group 2, MSCP	Semi-arid brushy areas and chaparral in canyons, rocky hillsides, plains from northern Carrizo Plains south through coastal zone, south and west of the deserts into coastal northern Baja California, at elevations below sea level to 2,130 meters (1).	No	Moderate potential to occur.	Not recorded in the vicinity[2]. Suitable chaparral habitat onsite and rocky habitats.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Thamnophis hammondii Two-striped garter snake	None/ CSC/ Group 1, MSCP	Permanent or semi-permanent bodies of water bordered by dense vegetation in rocky areas, oak woodland, chaparral, brushland, coniferous forest. Found on Diablo Range, South Coast and Transverse ranges, and Santa Catalina Island (1, 2).	No	Low potential to occur.	No suitable water bodies found on site for this species. Recorded in the vicinity[2].
Thamnophis sirtalis ssp. South Coast garter snake	None/ CSC/ Group 2	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools. Coastal plain from Ventura to San Diego Co., 0–850 meters (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Only known from San Luis Rey River in San Diego County.
Turtles					
Emys [=Actinemmys] marmorata pallida Western pond turtle	None/ CSC/ Group 1, MSCP	Slow-moving permanent or intermittent streams, ponds, small lakes, reservoirs with emergent basking sites; adjacent uplands used during winter. Found in coast ranges, central valley, 0–1,800 meters (1, 2).	No	Low potential to occur.	No suitable streams or ponds found on site. Recorded in the vicinity[2].
Birds					
Loons					
Gavia immer Common loon (nesting)	None/ CSC/ Group 2	Estuarine and subtidal marine habitats along entire coast (September to May). Uncommon on large, deep lakes in valleys and foothills; common migrant along coast, including offshore, in November and May (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Oceanodroma furcata plumbea Fork-tailed storm petrel	None/ CSC/ Group 2	Visitor on open ocean along the entire coast; found in bays and harbors particularly after storms. Breeds on islets in Del Norte and Humboldt Cos. (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Oceanodroma homochroa Ashy storm petrel	None/ CSC/ Group 2	Open sea. Nests in natural cavities and sea caves, mainly talus but also larger rock. Resident of offshore waters from Cape Mendocino to northern Baja California, Mexico. Breeds on offshore islands from Southeast Farallon Island to Los Coronados (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Oceanodroma melania Black storm petrel	None/ CSC/ Group 2	Open sea from Monterey Bay south during April to October. Nests in burrows and rock cavities on Santa Barbara Island and Sutil Island (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Auks					
Cerorhinca monocerata Rhinoceros auklet (nesting colony)	None/ WL/ Group 2	Marine pelagic waters. Nests in a burrow on undisturbed, forested or unforested islands, and probably in cliff caves. Found off northern and central California, and south of northern Channel Islands. Breeds off Del Norte and Humboldt Cos., and Farallon Islands (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Fratercula cirrhata Tufted puffin (nesting colony)	None/ CSC/ Group 2	Rocky outcroppings on islands, not necessarily near the nest, and on the ocean. Common at nesting colonies, and on nearby marine pelagic and subtidal waters. Nests on islands and, less commonly, on coastal cliffs. Found along coast from Prince Island in Del Norte Co. to Point Conception (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Synthliboramphus [=Endomychura] hypoleucus Xantus murrelet (nesting colony)	FC/ ST/ Group 2	Offshore waters. Rare visitor to southern offshore waters in late summer and fall (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Grebes					
Aechmophorus occidentalis Western grebe	None/ None/ Group 1	Along coast in marine subtidal and estuarine waters. Uncommon to fairly common on large lakes near coast and inland at low elevations. Breed on large, marshy lakes, normally deeper than required by eared grebe. Nest on Modoc Plateau and south locally to Inyo Co.; also Sacramento National Wildlife Refuge, Salton Sea, Colorado River, and Sweetwater Reservoir (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Pelicans					
Pelecanus erythrorhynchos American white pelican (nesting colony)	None/ CSC/ Group 2	Open water, coastal bays, large inland lakes. Nests at large lakes in Klamath Basin. Common migrant at Salton Sea, Colorado River and rare during winter at Salton Sea, Morro Bay, San Diego Bay (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Pelecanus occidentalis californicus California brown pelican (nesting colony and communal roosts)	FD/ SD, FP/ Group 2, MSCP	Open sea, large water bodies, coastal bays and harbors, estuarine, marine subtidal, and marine pelagic waters along coast and breeds on Channel Islands (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Cormorants					
Phalacrocorax auritus Double-crested cormorant (nesting colony)	None/ WL/ Group 2	Lakes, rivers, reservoirs, estuaries, ocean; nests in tall trees, rock ledges on cliffs, rugged slopes. Resident along coast and inland waters. Common August to May at Salton Sea and Colorado River reservoirs, also found south of San Luis Obispo Co. and Central Valley (2).	No	Low potential to occur.	No suitable habitat for this species onsite. Recorded in the vicinity[2].

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Herons, Bitterns, and Allies					
Ardea herodias Great blue heron (nesting colony)	None/None/ Group 2	Variety of habitats, but primarily shallow estuaries and fresh and saline emergent wetlands; lakes, rivers, marshes, mudflats, estuaries, saltmarsh, riparian habitats. Found throughout most of California. Few rookeries in Southern California; more numerous in northern California (2).	No	Low potential to colonially nest.	Not recorded in the vicinity[2]. No suitable nesting habitat. May forage onsite occasionally.
Butorides virescens Green heron	None/ None/ Group 2	Nests and roosts in valley foothill and desert riparian habitats; feeds in fresh emergent wetland, lacustrine, slow-moving riverine habitats. Resident in foothills and lowlands throughout California; common August to March in southern coastal ranges, in summer along Colorado River, and found all year at Salton Sea (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable riparian or wetland habitats.
Egretta rufescens Reddish egret	None/ None/ Group 2, MSCP	Forages in saltmarsh, mudflats, coastal lagoons; nests on natural islands or man-made dredge spoil canals, occasionally on coastal mainland. Found in southwestern and central coastal California (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Ixobrychius exilis Least bittern (nesting)	None/ CSC/ Group 2, MSCP	Dense emergent wetland vegetation, sometimes interspersed with woody vegetation and open water. Nests in emergent wetlands. Common summer resident at Salton Sea and Colorado River. Breeds locally in Owens Valley and Mojave Desert and uncommon in emergent wetlands of cattails and tules in San Diego Co., and Sacramento and San Joaquin Valleys (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Ibises and Spoonbills					
Plegadis chihi White-faced ibis (nesting colony)	None/ WL/ Group 1	Nests in marsh; winter foraging in shallow lacustrine waters, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields and estuaries. Uncommon summer resident in areas of Southern California (esp. Salton Sea area), rare visitor to Central Valley (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Ducks, Geese, and Swans					
Anas strepera Gadwall	None/ None/ Group 2	Interior valleys, wetlands, ponds, and streams. Feeds and rests in freshwater lacustrine and emergent habitats, and to a lesser extent, estuarine and saline emergent habitats, and nests in nearby herbaceous and cropland habitats. Common in Central Valley and less common in Coast Range foothills of central and Southern California. Locally common in Imperial Valley and along Colorado River, October to March. Breeds on northeastern plateau and east of Sierra Nevada (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Aythya americana Redhead	None/ CSC/ Group 2	Lacustrine waters, foothills and coastal lowlands, and along the coast and Colorado River. Nests in fresh emergent wetland bordering open water. Found south of Modoc Co. to Mono Co., Central Valley, Monterey Co. south to Ventura Co.; breeds in Central Valley, eastern Kern Co., coastal Southern California, and Salton Sea (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Branta canadensis Canada goose	None/ None/ Group 2	Lakes, fresh emergent wetlands, moist grasslands, croplands, pastures, and meadows. Winter migrant throughout Central Valley, Salton Sea, northeastern California, also along Colorado River (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Bucephala islandica Barrow's goldeneye	None/ CSC/ Group 2	Estuarine (lagoons and bays) and brackish lacustrine waters. Found along central California coast, San Francisco Bay, Marin and Sonoma Cos., Colorado River (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Anser caerulescens Snow goose	None/ None/ Group 2	Fresh emergent wetlands, adjacent lacustrine waters, and nearby wet croplands, pastures, meadows, and grasslands. Occasionally found in saline (brackish) emergent wetlands and adjacent estuarine waters. Found primarily in Central Valley; less common southward in the interior but abundant in Imperial Valley and locally common along Colorado River. Found regularly only in Southern California along Coast Ranges and immediate coast from mid-November to February (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Dendrocygne bicolor Fulvous whistling-duck (nesting)	None/ CSC/ Group 2	Fresh emergent wetlands, shallow lacustrine and quiet riverine waters; feeds in wet croplands and pastures. Nests in dense wetlands of cattails in Imperial Valley along south end of Salton Sea (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
New World Vultures					
Cathartes aura Turkey vulture	None/ None/ Group 1, MSCP	Rangeland, agriculture, grassland; uses cliffs and large trees for roosting, nesting and resting throughout most of California during breeding season (2).	Yes.	Recorded onsite.	Suitable foraging habitat and roosting areas. Not recorded in the vicinity[2]. Frequently over 10-15 individuals were observed foraging or roosting as a group within the Park.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Ospreys					
Pandion haliaetus Osprey	None/ WL/ Group 1	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats (primarily ponderosa pine through mixed conifer), but widely observed along the coast. Breeds from Cascade Ranges south to Lake Tahoe and along northwest coast. Uncommon breeder along southern Colorado River. Uncommon along coast of Southern California (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Hawks, Kites, Eagles, and Allies					
Accipiter cooperii Cooper's hawk (nesting)	None/WL/ Group 1	Dense stands of live oak, riparian deciduous, forest habitats near water. Breeds in southern Sierra Nevada foothills, New York mountains, Owens Valley, other local areas in Southern California, 0–2,700 meters (2).	No	High potential to nest.	Breeding has been confirmed in the vicinity of the Property (Unitt 2004). Suitable oak woodland for forage and nesting within the Property.
Accipiter striatus Sharp-shinned hawk (nesting)	None/WL/ Group 1	Nests in coniferous forests, ponderosa pine, black oak, riparian deciduous, mixed conifer, Jeffrey pine; winters in lowland woodlands and other habitats. Common migrant and winter resident throughout California. Probably breeds south in Coast Ranges and at scattered locations in Transverse and Peninsular Ranges (2).	No	Low potential to nest.	Not recorded in the vicinity[2]. High potential to forage during winter, but does not nest in the vicinity of the Property.
Aquila chrysaetos Golden eagle (nesting and wintering)	None/ FP, WL/ Group 1, MSCP	Rolling foothills, mountain areas, sage-juniper flats, desert throughout California (2).	No	High potential to occur. Low potential to nest.	Suitable foraging habitat within the study areas for this species. No nesting habitat. Recorded in the vicinity[2].
Buteo lineatus Red-shouldered hawk	None/ None/ Group 1	Riparian and woodland habitats interspersed with swamps and wetlands found along coast, southern deserts, and in Central Valley, 0-1500m (2).	Yes	Recorded onsite.	Suitable oak woodland habitats found on site. Recorded in the vicinity[2].

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Buteo regalis Ferruginous hawk (wintering)	None/ WL/ Group 1, MSCP	Open, grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, fringes of pinyon-juniper habitats. Uncommon winter resident at low elevations and open grasslands of Modoc Plateau, Central Valley, Coast Ranges. Common winter resident in southwestern California (2).	No	Moderate potential to occur.	Not recorded in the vicinity[2]. Suitable habitat onsite. Would most likely only occur during migration and would not overwinter.
Buteo swainsoni Swainson's hawk	None/ ST/ Group 1, MSCP	Forages in grasslands or suitable grain or alfalfa fields or livestock pastures; breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in Central Valley (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Generally unsuitable habitat.
Circus cyaneus Northern harrier (nesting)	None/ CSC/ Group 1, MSCP	Open wetlands (nesting), pasture, old fields, dry uplands, grasslands, rangelands, coastal sage scrub. Resident of northeastern plateau and coastal areas; less common resident in Central Valley. Breeds at marsh edge in shrubby vegetation in Central Valley and Sierra Nevada (0–1,700 meters), and northeastern California (up to 800 meters) (2).	No	Low potential to nest.	Not recorded in the vicinity[2]. Poor nesting potential, although they may forage over the site.
Elanus leucurus White-tailed kite (nesting)	None/ FP/ Group 1, MSCP	Open grasslands, savanna-like habitats, agriculture, wetlands, oak woodlands, riparian, herbaceous and open stages of most habitats in cismontane California, near agricultural areas. Found in coastal and valley lowlands of California (2).	Yes.	Recorded onsite.	Suitable shrubland habitats found on site. Approximately 15-20 individuals observed during August 2012 roosting in open oak trees. Potential nesting opportunities. Not recorded in the vicinity[2].
Haliaeetus leucocephalus Bald eagle (nesting and wintering)	FD/ SE, FP/ Group 1	Large bodies of water and flowing rivers with abundant fish, with adjacent snags or other perches; breeds in northern California and is found during winter at few locations throughout Southern California (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Caracaras and Falcons					
Falco columbarius Merlin (wintering)	None/ WL/ Group 2	Coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, montane hardwood-conifer habitats, ponderosa pine. Found throughout western half of state below 1500m (1).	No	Moderate potential to occur.	Not recorded in the vicinity[2]. No suitable habitat; may occasionally forage over the Property but would not be a winter resident.
Falco mexicanus Prairie falcon (nesting)	None/ WL/ Group 1	Grassland, savannas, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs. Southeastern deserts northwest through Central Valley and along inner Coast Ranges and Sierra Nevada (2).	Yes.	Recorded onsite. Low potential to nest.	Observed prior to evening avian bird surveys. Recorded in the vicinity[2]. No suitable nesting habitat; this species does not typically nest in San Diego County.
Falco peregrinus anatum American peregrine falcon (nesting)	FD/ SD, FP/ Group 1	Nests in woodland, forest, coastal habitats along coast north of Santa Barbara and in Sierra Nevada, and other mountains of northern California. Winters in Central Valley, and is found in other riparian areas and coastal/inland wetlands (2).	No	Low potential to nest.	Not recorded in the vicinity[2]. No suitable nesting habitat; this species does not typically nest in San Diego County.
New World Quail					
Oreotyx pictus eremophila Mountain quail	None/ None/ Group 2	Dense montane chaparral and brushy areas within coniferous forest, pinyon-juniper-yucca associations; uses shrubs, brush stands and trees on steep slopes for cover in most major montane habitats of the state (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside normal range.
Rails, Gallinules, and Coots					
Laterallus jamaicensis coturniculus California black rail	None/ ST, FP/ Group 2	Saline, brackish, and fresh emergent wetlands mostly in central coastal California (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside of normal range.
Rallus longirostris levipes Light-footed clapper rail	FE/ SE, FP/ Group 1	Coastal saline emergent wetlands along Southern California from Santa Barbara Co. to San Diego Co. (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Cranes					
Grus canadensis tabida Greater sandhill crane	None/ ST, FP/ Group 2	Wet meadow, shallow lacustrine, and fresh emergent wetland habitats during summer; annual and perennial grassland habitats, moist croplands, and open, emergent wetlands during winter. Breeds in Siskiyou, Modoc, Lassen Cos., and Sierra Valley. Winters in Sacramento and San Joaquin valleys. Was more common in Southern California (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Grus canadensis canadensis Lesser sandhill crane	None/ CSC/ Group 2	Wet meadow, shallow lacustrine, and fresh emergent wetland habitats during summer; annual and perennial grassland habitats, moist croplands, and open, emergent wetlands during winter. Winters in San Joaquin, Imperial valleys; Carrizo Plain, Brawley, and Blythe (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Mycteria americana Wood stork (Non-breeding, very rare)	None/ CSC/ Group 2	Shallow, relatively warm waters with fish for prey. Nests colonially. Found at south end of Salton Sea, San Diego Wild Animal Park (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Lapwings and Plovers					
Charadrius alexandrinus nivosus Western snowy plover (nesting)	FT/ CSC/ Group 1	Sandy marine and estuarine shores. Nests on these habitats and salt pond levees. Nesting areas in Salton Sea, Mono Lake, shores of alkali lakes of northeastern California, Central Valley, and southeastern deserts (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Charadrius montanus Mountain plover (wintering)	FC/ CSC/ Group 2	Nests in open, shortgrass prairies or grasslands; winters in shortgrass plains, plowed fields, open sagebrush, and sandy deserts. Winters in short grasslands and plowed fields of Central Valley below 1,000 meters (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Sandpipers, Phalaropes, and Allies					
Numenius americanus Long-billed curlew (nesting)	None/ WL/ Group 2	Nests in upland shortgrass prairies and wet meadows in northeast California; winters in coastal estuaries, open grasslands and croplands along California coast, and in Central and Imperial valleys (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Gulls, Terns, and Skimmers					
Chlidonias niger Black tern (nesting colony)	None/ CSC/ Group 2	Freshwater lakes, marshes, ponds, coastal lagoons. Breeds in freshwater habitats but common on bays, salt ponds, river mouths, pelagic waters during spring and fall migration. Found throughout fresh emergent wetlands of California (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Leucophaeus [=Larus] atricilla Laughing gull (nesting colony)	None/ WL/ Group 2	Once a regular nester at the south end of the Salton Sea. Possibly extirpated from California (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Larus californicus California gull (nesting colony)	None/ WL/ Group 2	Along the coast: sandy beaches, mudflats, rocky intertidal and pelagic areas of marine and estuarine habitats, fresh and saline emergent wetlands. Inland: lacustrine, riverine, and cropland habitats, landfill dumps, and open lawns in cities. Nests in alkali and freshwater lacustrine habitats; adults roost along shorelines, landfills, pastures, and on islands. Nest along northeastern plateau region and at Mono Lake (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Rynchops niger Black skimmer (nesting)	None/ CSC/ Group 1	Roosting takes place on sandy beaches or gravel bars. Rarely alights on water. Visitor to coastal estuaries and river mouths. Summer resident at Salton Sea. Yearlong resident at San Diego Bay. Known infrequently from additional interior locations on Colorado River and Lakeview, Riverside Co. (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Sterna antillarum browni California least tern (nesting colony)	FE/ SE, FP/ Group 1	Breeding colonies located in marine and estuarine shores in Southern California, and in San Francisco Bay in abandoned salt ponds and estuarine shores. Feeds in nearby waters. Are migratory to California (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Thalasseus [=Sterna] elegans Elegant tern (nesting colony)	None /WL/ Group 1	Coastal waters, estuaries, large bays and harbors, mudflats; rarely occur offshore and never found inland. Found along coastal California, most common in Southern California, not found north of Marin Co. (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Cuckoos, Roadrunners, and Anis					
Coccyzus americanus occidentalis Western yellow-billed cuckoo (nesting)	FC/ SE/ Group 1	Dense, wide riparian woodlands and forest with well-developed understories. Valley foothill and desert riparian habitats scattered throughout California – Colorado River, Sacramento and Owens Valleys, South Fork of the Kern River, Santa Ana River, and Amargosa River (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Presumed extirpated from the County.
Barn Owls					
Tyto alba Barn owl	None/ None/ Group 2	Open habitats including grassland, chaparral, riparian, and other wetlands throughout the state, 0–1,680 meters (2).	Yes	Recorded onsite.	Suitable open chaparral and oak woodland habitat on site. Recorded during morning and evening avian surveys. Not recorded in the vicinity[2].

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Typical Owls					
Asio flammeus Short-eared owl (nesting)	None/ CSC/ Group 2	Open areas with few trees, such as grasslands, prairies, dunes, meadows, irrigated lands, saline and fresh emergent wetlands. Breeds in coastal areas in Del Norte and Humboldt Cos., San Francisco Bay Delta, northeastern Modoc plateau, east side of Sierra from Lake Tahoe south to Inyo Co., and San Joaquin Valley. Uncommon winter migrant in Southern California, and widespread during winter in Central Valley and coastline (2).	No	Low potential to nest.	Not recorded in the vicinity[2]. No suitable habitat. Does not nest in Southern California.
Asio otus Long-eared owl (nesting)	None/ CSC/ Group 1, MSCP	Riparian, live oak thickets, other dense stands of tree. Uncommon winter visitor in Southern California deserts and Central Valley; uncommon resident throughout the rest of the state (2).	No	Low potential to nest.	Not recorded in the vicinity[2]. No suitable nesting habitat.
Athene cunicularia Burrowing owl	None/ CSC/ Group 1, MSCP	Open, dry grassland and desert habitats; grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats throughout the state, 0–1,600 meters (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable grassland habitat for this species. Too few flat and open habitats present.
Strix occidentalis occidentalis California spotted owl	None/ CSC/ Group 1, MSCP	Dense, old-growth, multi-layered mixed conifer, redwood and Douglas-fir habitats in northern California; oak and oak-conifer habitats in Southern California; 0–2,300 meters (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside of known range.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Swifts					
Cypseloides niger Black swift (nesting)	None/ CSC/ Group 2	Nests in moist crevices or caves on sea cliffs or near waterfalls in deep canyons; forages over many habitats. Nests in Sierra Nevada, Cascade Range, San Gabriel, San Bernardino, San Jacinto Mountains., coastal bluffs and mountains from San Mateo Co. south to San Luis Obispo Co. (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Woodpeckers and Allies					
Melanerpes lewis Lewis' woodpecker	None/ None/ Group 1	Open oak savannahs, broken deciduous and coniferous habitats. Eastern slopes of coast ranges south to San Luis Obispo Co., winters in Central Valley, Modoc Plateau, and Transverse and other ranges in Southern California. Breeds eastern slopes of coast ranges, Sierra Nevada, Cascade Range (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Poor habitat quality. Outside of normal range.
Tyrant Flycatchers					
Contopus cooperi [borealis] Olive-sided flycatcher (nesting)	None / CSC/ Group 2	Summer resident in a wide variety of forest and woodland habitats. Preferred nesting habitats include mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine. Found throughout California excluding deserts, Central Valley and other lowland valleys and basins, below 2800m (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable forest or woodland habitats.
Empidonax traillii extimus Southwestern willow flycatcher	FE/ SE/ Group 1, MSCP	Riparian woodlands along streams and rivers with mature, dense stands of willows or alders; may nest in thickets dominated by tamarisk. Broad, open river valleys or large mountain meadows with lush growth of shrubby willows. Found in riparian habitats in northern San Diego Co. (1).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable riparian woodland habitat within Property.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Pyrocephalus rubinus Vermillion flycatcher	None/ CSC/ Group 1, MSCP	Nesters inhabit cottonwood, willow, mesquite, and other vegetation in desert riparian habitat adjacent to irrigated fields, irrigation ditches, pastures and other open, mesic areas in isolated patches. Found along Colorado River, especially near Blythe, Riverside Co. (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of normal range. No desert riparian habitat.
Larks					
Eremophila alpestris actia California horned lark	None/ WL/ Group 2, MSCP	Open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, fallow grain fields south of Humboldt Co. in coast ranges, in San Joaquin Valley except extreme southern end (2, 4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable grassland habitat within the Property.
Swallows					
Progne subis Purple martin (nesting)	None/ CSC/ Group 1, MSCP	Nests in tall sycamores, pines, oak woodlands, coniferous forest; forages over riparian, forest and woodland. Found throughout the state in wooded, low-elevation habitats. Rare and local breeder in the south in mountain ranges and along coast (2).	No	Low potential to nest.	Not recorded in the vicinity[2]. Habitat is generally suitable, although may be too high of elevation for nesting.
Riparia riparia Bank swallow (nesting)	None/ ST/ Group 1	Riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes; most breeding occurs along banks of Sacramento and Feather Rivers (2).	No	Low potential to nest.	Not recorded in the vicinity[2]. No suitable nesting habitat.
Wrens					
Campylorhynchus brunneicapillus sandiegensis Coastal (San Diego) cactus wren	None/ CSC/ Group 1, MSCP	Southern cactus scrub, maritime succulent scrub, cactus thickets in coastal sage scrub. In arid parts of westward-draining slopes of Southern California (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat or cactus patches.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Gnatcatchers and Gnatwrens					
Polioptila californica californica Coastal California gnatcatcher	FT/ CSC/ Group 1, MSCP	Coastal sage scrub, coastal sage scrub-chaparral mix, coastal sage scrub-grassland ecotone, riparian in late summer. Found from eastern Orange and southwestern Riverside Cos. south through coastal foothills of San Diego Co. (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside range and elevation for this species.
Thrushes					
Siala mexicana Western bluebird	None/ None/ Group 2	Open forests of deciduous, coniferous or mixed trees, savanna, edges of riparian woodland. Common throughout California excluding higher mountains and eastern deserts (2).	Yes	Recorded onsite.	Suitable open oak woodlands found on site. Observed during avian surveys. Not recorded in the vicinity[2].
Mockingbirds and Thrashers					
Toxostoma bendirei Bendire's thrasher	None/ CSC/ Group 2	Flat areas of desert succulent shrub and Joshua tree habitats in Mojave desert area of San Bernardino and western Kern Cos. (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside of known range.
Toxostoma crissale Crissal thrasher	None/ CSC/ Group 1, MSCP	Dense thickets of shrubs or low trees in desert riparian and desert wash habitats. Also, dense sagebrush and other shrubs in washes within juniper and pinyon-juniper habitats up to 1,800 meters. Common in Colorado River Valley; less common in eastern Mojave Desert, Imperial, Coachella and Borrego valleys (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of known range. No suitable habitat.
Toxostoma lecontei lecontei LeConte's thrasher	None/ CSC/ MSCP	Open desert wash, desert scrub, alkali desert scrub, desert succulent shrub, Joshua tree habitat with scattered shrubs. California deserts south of Mono Co., and in San Joaquin Valley (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Desert species. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Shrikes					
Lanius ludovicianus Loggerhead shrike (nesting)	None/ CSC/ Group 1, MSCP	Open habitats with scattered shrubs, trees or other perches; highest density in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. Found in foothills and lowlands throughout California (2).	Yes.	Recorded onsite.	Suitable open habitats for this species on site. Recorded within chaparral during general biological surveys. Not recorded in the vicinity[2].
Vireos					
Vireo bellii pusillus Least Bell's vireo (nesting)	FE/ SE/ Group 1, MSCP	Willows and low, dense valley foothill riparian habitat and lower portions of canyons; along western edge of deserts in desert riparian habitat, 0–600 meters. Found in San Benito and Monterey Cos., and coastal Southern California from Santa Barbara Co. south (2).	No	Low potential to occur.	No suitable dense willow or riparian areas found on site. Recorded in the vicinity[2].
Vireo vicinior Gray vireo (nesting)	None/ CSC/ Group 1, MSCP	Summer resident in arid pinyon-juniper, juniper, and chamise-redshank chaparral habitats in mountains of Southern California, 600–2,000 meters (2).	No	Moderate potential to nest.	Not recorded in the vicinity[2]. Suitable habitat onsite.
Wood-warblers					
Icteria virens Yellow-breasted chat (nesting)	None/ CSC/ Group 1	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles and dense brush. Coastal California, foothills of Sierra Nevada. Breeds locally on coast in Southern California and very locally inland, at elevations up to 1,450 meters in valley foothill riparian, and up to 2,050 meters east of Sierra Nevada in desert riparian habitats (2).	No	Low potential to nest.	Not recorded in the vicinity[2]. No suitable habitat. Outside of range.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Dendroica petechia brewsteri Yellow warbler	None/ CSC/ Group 2, MSCP	Nests in lowland and foothill riparian woodlands; montane chaparral, open ponderosa pine, mixed conifer habitats up to 2,500 meters; winters in a variety of habitats. Breeds from coast range in Del Norte Co., east to Modoc plateau, south to Santa Barbara and Ventura Cos., western slope of Sierra Nevada south to Kern Co.; also breeds in ranges in San Diego Co. (2).	No	Moderate potential to occur.	Not recorded in the vicinity[2]. Riparian habitat onsite is generally unsuitable for this species.
Vermivora luciae (nesting) Lucy's warbler	None/ CSC/ MSCP	Desert wash and desert riparian, mesquite-dominated habitats. Summer resident along Colorado River, locally common in a few other desert areas, rare near Salton Sea (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside known range.
Emberizids					
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	None/ WL/ Group 1, MSCP	Sparse mixed chaparral and coastal scrub habitats (especially coastal sage) in Southern California on slopes of Transverse and Coastal ranges, north to Los Angeles County, and northwestern Baja California. Found on steep, rocky hillsides with grass and forb patches, and grassy slopes without shrubs, if rock outcrops are present (2, 4).	Yes	Recorded onsite.	Not recorded in the vicinity[2]. Outside known range. Suitable habitat onsite.
Amphispiza belli belli Bell's sage sparrow	None/ WL/ Group 1, MSCP	Low, dense stands of shrubs; chaparral dominated by chamise, coastal scrub dominated by sage. Coast Ranges from Northern California to northwestern Baja California, western slope of Sierra Nevada (2, 4).	No	Moderate potential to occur.	Not recorded in the vicinity[2]. Suitable chaparral habitat on site, especially chamise chaparral.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Ammodramus savannarum Grasshopper sparrow	None/ CSC/ Group 1, MSCP	Dry, dense grasslands, especially with a variety of grasses and tall forbs, scattered shrubs for singing perches. Summer resident and breeder in foothills and lowlands west of Cascade–Sierra Nevada crest from Mendocino and Trinity Cos. south to San Diego Co. In Southern California, occurs on hillsides and mesas in coastal areas, breeds up to 1,500 meters (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable grassland habitat onsite.
Junco hyemalis caniceps Gray-headed junco (nesting)	None/ WL/ Group 2	Found in forests and woodlands from montane hardwood-conifer forests up through alpine dwarf-shrub habitats. Breeds locally in White and Grapevine mountains, and on Clark Mt. in southeastern California. Is more common east of Sierra Nevada during winter (2).	No	Low potential to occur. No nesting potential.	Not recorded in the vicinity[2]. No suitable habitat. Outside of range.
Passerculus sandwichensis beldingi Belding's savannah sparrow	None/ SE/ Group 1	Scattered southern coastal wetlands in southwestern California (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Passerculus sandwichensis rostratus Large-billed savannah sparrow (wintering)	None/ CSC/ Group 2	Grassland, saline emergent wetlands from central coastal and Southern California; Santa Cruz, Morro Bay, San Miguel Island, San Clemente Island, San Diego (2, 4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Cardinals and Allies					
Piranga rubra Summer tanager (nesting)	None/ CSC/ Group 2	Nests in desert riparian woodland dominated by cottonwoods and willows; winter habitats include parks and residential areas. Found along lower Colorado River and locally in Southern California deserts (2).	No	Low potential to nest.	Not recorded in the vicinity[2]. No suitable habitat although may occur in the Park during migration.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Blackbirds					
Agelaius tricolor Tricolored blackbird	None/ CSC/ Group 1, MSCP	Breeds in emergent wetland with tall, dense cattails or tules; willow, blackberry, tall herb thickets. Feeds in grassland and cropland habitats. Found throughout Central Valley and coastal areas south of Sonoma Co. (2).	No	Low potential to occur.	No suitable wetland habitat found on site. Recorded in the vicinity[2].
Xanthocephalus xanthocephalus Yellow-headed blackbird (nesting)	None/ CSC/ MSCP	Fresh emergent wetland, dense vegetation, deep water, along borders of lakes or ponds; also found in croplands or muddy shores of lacustrine habitat. Found east of Cascade Range and Sierra Nevada, in Imperial and Colorado River valleys, Central Valley (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Mammals					
Small Mammals					
Chaetodipus californicus femoralis Dulzura pocket mouse	None/CSC/ Group 2	Open habitat, coastal sage scrub, chaparral, oak woodland, chamise chaparral, mixed conifer habitats; disturbance specialist; 0–3,000 feet (7, 8).	Yes	Recorded onsite.	Suitable sage scrub and chaparral habitats found on site. Recorded in the vicinity[2].
Chaetodipus fallax fallax Northwestern San Diego pocket mouse	None/ CSC/ Group 2	Coastal sage scrub, grassland, sage scrub-grassland ecotones, sparse mixed and chamise chaparral; rocky and gravelly areas with yucca overstory, 500–3,000 feet (8).	Yes	Recorded onsite.	Suitable sage scrub and chaparral habitats found on site. Recorded in the vicinity[2].
Chaetodipus fallax pallidus Pallid San Diego pocket mouse	None/ CSC/ Group 2	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland. Along southern margins of Mojave Desert, along northern slopes of San Bernardino Mountains., western edge of Colorado Desert south to Baja California (5).	No	High potential to occur.	Not recorded in the vicinity[2]. Suitable habitat onsite.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Dipodomys merriami collinus Aguanga kangaroo rat	None/ None/ MSCP	Low desert and washes in low desert of Anza-Borrego State Park.	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of known range.
Dipodomys merriami trinidadensis Merriam's kangaroo rat	None/ None/ MSCP	Low desert and washes in Jacumba and Mountain Springs area.	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of known range.
Dipodomys stephensi Stephens' kangaroo rat	FE/ ST/ Group 1, MSCP	Open habitat, grassland, sparse coastal sage scrub, sandy loam and loamy soils with low clay content; gentle slopes (<30%) and sparse vegetative cover. Found around San Jacinto Valley (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside of known range.
Neotoma lepida intermedia San Diego desert woodrat	None/ CSC/ Group 2	Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats. Found south of San Luis Obispo Co. to San Diego Co. and San Bernardino and Riverside Cos., 0–2,600 meters (2, 4).	Yes	Recorded onsite.	Not recorded in the vicinity[2]. Suitable habitat onsite.
Onychomys torridus ramona Southern grasshopper mouse	None/ CSC/ Group 2, MSCP	Alkali desert scrub and other desert scrub habitats, sparse coastal scrub, especially with friable soils for digging in Mojave Desert and southern Central Valley (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Poor habitat quality.
Perognathus longimembris bangsi Palm Springs pocket mouse	None/ CSC/ MSCP	Creosote scrub, desert scrub, grasslands, loosely packed or sandy soils; sparse to moderately dense vegetative cover. Found in Coachella Valley, Anza Borrego, Deep Canyon (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of range.
Perognathus longimembris brevinasus Los Angeles pocket mouse	None/ CSC/ Group 2, MSCP	Grassland, coastal sage scrub, disturbed habitats; fine, sandy soils with sparse vegetation from San Fernando Valley to San Bernardino, and to Hemet and Aguanga (6).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of range.
Perognathus longimembris internationalis Jacumba pocket mouse	None/ CSC/ Group 2, MSCP	Desert riparian, desert scrub, desert wash, coastal scrub, and sagebrush in San Diego and Riverside Cos. (2, 5).	No	Moderate potential to occur.	Not recorded in the vicinity[2]. Moderately suitable habitat onsite.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Perognathus longimembris pacificus Pacific pocket mouse	FE/ CSC/ Group 1	Coastal dunes, river alluvium, coastal sage scrub with firm sandy soils; along immediate coast in San Diego, Orange, and Los Angeles Cos. (4, 5).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of range.
Xerospermophilus [=Spermophilus] tereticaudus chlorus Palm Springs round tailed ground squirrel	None/ CSC/ MSCP	Sandy arid regions of lower Sonoran Life Zone; mesquite- and creosote-dominated sand dunes, creosote bush scrub, creosote-palo verde, saltbush/alkali scrub in Coachella Valley (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside known range.
Bats					
Antrozous pallidus Pallid bat	None/ CSC/ Group 2, MSCP	Grasslands, shrublands, woodlands, forests; most common in open dry habitats with rocky outcrops for roosting. Found throughout low elevations of California, except for high Sierra Nevada and northwestern corner of the state south to Mendocino Co. (2).	Yes	Recorded onsite.	Suitable shrubland and open habitats found on site. Recorded in the vicinity[2].
Choeronycteris mexicana Mexican long-tongued bat	None/ CSC/ Group 2	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland. Roosts in caves, mines, and buildings. Summer resident in San Diego Co. (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Suitable habitat for foraging. Old building within Property may provide roosting habitat.
Coryorhinus townsendii Townsend's big-eared bat	None/ CSC/ Group 2, MSCP	Mesic habitats, gleans from brush or trees or feeds along habitat edges. Found in all habitats but subalpine and alpine throughout California (2).	Yes	Recorded onsite.	Suitable mesic habitats on site. Recorded in the vicinity[2]. Old building within Property may provide roosting habitat.
Euderma maculatum Spotted bat	None/ CSC/ Group 2	Foothills, mountains, desert regions of Southern California including arid deserts, grasslands, mixed conifer forests. Roosts in rock crevices, cliffs. Feeds over water and along washes (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Suitable habitat for foraging. Old building within Property may provide roosting habitat.
Eumops perotis californicus Western mastiff bat	None/ CSC/ Group 2	Roosts in small colonies in cracks and small holes, seeming to prefer man-made	Yes	Recorded onsite.	Suitable roosting areas in man-made structures on site. Recorded

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
		structures. All subalpine and alpine habitats; 50–10,000 feet (8).			in the vicinity[2].
Lasiurus blossevillii Western red bat	None/ CSC/ Group 2	Prefers edges with trees for roosting and open areas for foraging. Roosts in woodlands and forests. Forages over grasslands, shrublands, woodlands, forests, and croplands. Found south of Shasta Co. to Mexican border, and west of the Sierra Nevada/Cascade crest. In winter, occupies coastal regions and lowlands south of San Francisco Bay (2).	Yes	Recorded onsite.	Suitable shrublands for foraging and trees for roosting found on site. Recorded in the vicinity[2].
Lasiurus xanthinus Western yellow bat	None/ CSC/ None	Desert wash.	Yes	Recorded onsite.	Suitable habitat for foraging.
Macrotus californicus California leaf-nosed bat	None/ CSC/ Group 2	Desert riparian, desert wash, desert scrub, desert succulent shrub, alkali desert scrub, and palm oasis. Found from Riverside, Imperial, San Diego, and San Bernardino Cos. south to Mexican border; fairly common along parts of Colorado River, elevation approximately 600 meters (2).	No	Moderate potential to occur.	Moderately suitable habitat found on site. Recorded in the vicinity[2].
Myotis ciliolabrum Western small-footed myotis	None/ None/ Group 2	Deserts, chaparral, riparian zones, western coniferous forest; most common above pinyon-juniper forest. Roost in caves, old mines, abandoned buildings (9).	Yes	Recorded onsite.	Suitable chaparral habitat found on site. Roosting areas found on site. Recorded in the vicinity[2].
Myotis evotis Long-eared myotis	None/ None/ Group 2	Roosts in buildings, crevices, under bark, and snags. Caves used as night roosts. Feeds along habitat edges, in open habitats, and over water. Occurs primarily along entire coast and in Sierra Nevada, Cascades, Great Basin, and 0–2,700 meters (2).	No	Moderate potential to occur.	Suitable roosting areas (buildings within the Property) and open areas for foraging. Recorded in the vicinity[2].
Myotis thysanodes Fringed myotis	None/ None/	Pinyon-juniper, valley foothill hardwood, hardwood-conifer habitats. Roosts in	No	Low potential to	Not recorded in the vicinity[2]. Moderately suitable habitat for

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
	Group 2	caves, mines, buildings, or crevices. Forges over open habitats, early successional stages, streams, lakes, and ponds. Found throughout California except Central Valley and Colorado and Mojave Deserts (2).		occur.	foraging. Roosting areas found within Park.
Myotis volans Long-legged myotis	None/ None/ Group 2	Occupies woodland and forest habitats over 1,200 meters. Feeds over open water and over open habitats such as chaparral and coastal scrub, using denser woodlands and forests for cover and reproduction. Roosts in rock crevices, buildings, under tree bark, in snags, mines, caves. Found in coastal ranges, Cascade/Sierra Nevada ranges, Great Basin, and ranges in Mojave Desert (2).	Yes	Recorded onsite.	Suitable open chaparral habitat for this species.
Myotis yumanensis Yuma myotis	None/ None/ Group 2	Closely tied to open water which is used for foraging; open forests and woodlands are optimal habitat throughout California, 0–3,300 meters (2).	Yes	Recorded onsite.	No water found on site for foraging but suitable coast live oak woodlands on site. Recorded in the vicinity[2].
Nyctinomops femorosaccus Pocketed free-tailed bat	None/ CSC/ Group 2	Rocky desert areas with high cliffs or rock outcrops. Pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, palm oasis in Riverside, San Diego, Imperial Cos. (2).	Yes	Recorded onsite.	No suitable desert areas on site but rock outcrops and other moderately suitable chaparral habitats within Property. Recorded in the vicinity[2].
Nyctinomops macrotis Big free-tailed bat	None/ CSC/ Group 2	Rugged, rocky canyons in Riverside, Los Angeles, and San Diego Cos., but scattered records across California to Oakland (2, 5).	No	Moderate potential to occur.	No suitable rocky canyons within the Property but suitable habitat in the vicinity. Not recorded in the vicinity[2].
Medium Mammals					
Bassariscus astutus Ringtail	None/ None/ Group 2, MSCP	Mixed forests and shrublands near rocky areas or riparian habitats. Forages near water and is seldom found more than 1	No	Low potential to occur.	Not recorded in the vicinity[2]. Low habitat quality due to lack of

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
		kilometer from a water source. Is widely distributed throughout California (2).			perennial water source.
Lepus californicus bennettii San Diego black-tailed jackrabbit	None/ CSC/ Group 2, MSCP	Arid habitats with open ground; grasslands, coastal sage scrub, agriculture, disturbed areas, rangelands in Southern California (2, 4).	No	High potential to occur.	Not recorded in the vicinity[2] (CNDDB) but observed in the vicinity (e.g. Live Oak Springs quadrangle) (Wier, pers. obs. 2011). Suitable arid open habitats.
Taxidea taxus American badger	None/ CSC/ Group 2, MSCP	Dry, open treeless areas, grasslands, coastal sage scrub, especially with friable soils throughout California (2).	No	Low potential to occur.	No suitable open areas for this species. Recorded in the vicinity[2].
Large Mammals					
Odocoileus hemionus Mule deer	None/ None/ Group 2, MSCP	Coastal sage scrub, chaparral, riparian, woodlands, forest; often browses in open areas adjacent to cover throughout California, except deserts and intensely farmed areas (2).	No	High potential to occur.	Suitable chaparral habitat on site for this species, and open space areas in the vicinity. No CNDDB records exist for this species.
Ovis canadensis nelsoni DPS Peninsular bighorn sheep	FE/ ST, FP/ Group 1, MSCP	Alpine dwarf-shrub, low sage, sagebrush, bitterbrush, pinyon-juniper, palm oasis, desert riparian, desert succulent shrub, desert scrub, subalpine conifer, perennial grassland, montane chaparral, and montane riparian from San Jacinto and Santa Rosa ranges south to Mexico (2).	No	Low potential to occur.	Not recorded in the vicinity[2]. Outside of range.
Puma [=Felis] concolor Mountain lion	None/ None/ Group 2	Coastal sage scrub, chaparral, riparian, woodlands, forest; rests in rocky areas, and on cliffs and ledges that provide cover. Most abundant in riparian areas and brushy stages of most habitats throughout California except deserts (2).	No	High potential to occur.	Suitable coastal sage scrub and chaparral habitats found on site. No CNDDB records exist for this species.
Invertebrates					
Butterflies					
Apodemia mormo peninsularis Peninsular metalmark	None/ None/ Group 1	Meadows. Larval hostplant *Eriogonum wrightii* ssp. *membranaceum.* Specimen	No	Absent.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
		from meadows in Laguna Mountains., 5500 feet (10)			
Callophyrs (=Mitoura) thornei Thorne's hairstreak butterfly	None/ None/ Group 1	Tecate cypress on chaparral-covered dry rocky slopes, Otay Mtn. (4).	No	Absent.	Not recorded in the vicinity[2]. No suitable Tecate cypress found on site for this species.
Danaus plexippus Monarch butterfly (wintering sites)	None/ None/ Group 2	Overwinters in eucalyptus groves from San Francisco south to northern Baja California (4).	No	High potential to occur.	Potentially suitable wintering habitat – coast live oak, pines, eucalyptus – within the Property. Most CNDDB records are along the coast; not recorded in the vicinity[2].
Euphydryas editha quino Quino checkerspot butterfly	FE/ None/ Group 1, MSCP	Sparsely vegetated hilltops, ridgelines, occasionally rocky outcrops; host plant *Plantago erecta* and nectar plants must be present, San Diego and Riverside Cos. (4).	No	Moderate potential to occur.	No observations of host plants recorded on site. Suitable vegetation structure although species commonly found on ridges or hilltops. Recorded in the vicinity[2].
Euphyes vestris harbisoni Harbison's dun skipper	None/ None/ Group 1, MSCP	Canyon bottoms, creeks, seeps beneath shade of oak trees in riparian habitats supporting host plant *Carex spissa* growing near *Toxicodendron diversilobum*. Found throughout western San Diego Co. to Santa Ana Mountains. Of Orange Co., with largest population in Ramona–Escondido area (11).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Lycaena hermes Hermes copper butterfly	None/ None/ Group 1, MSCP	Coastal sage scrub, southern mixed chaparral supporting at least 5% cover of host plant *Rhamnus crocea*. Adults visit *Eriogonum fasciculatum* and *Helianthus gracilentus*. On well-drained hillsides and canyon bottoms, coastal San Diego Co. south to Santo Tomas, Baja California (4).	No	Moderate potential to occur.	Larval host plant *Rhamnus crocea* and adult host plant *Eriogonum fasciculatum* recorded on site. Recorded in the vicinity[2]. Species is currently known from less than 10 populations.
Megathymus yuccae harbisoni Coastal giant skipper	None/ None/ Group 2	Coastal dunes, open yucca flats, desert canyons, open woodland, grassland, and old fields. Record from eastern San Diego	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
		Co. near Scissors Crossing (4, 10).			
Panoquina errans Wandering (= saltmarsh) skipper	None/None/ Group 1	Salt marsh from Los Angeles to Baja California, Mexico. Host plant *Distichlis spicata* in salt marshes or near beaches, mouths of rivers (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Papilio multicaudata Two-tailed swallowtail	None/ None/ Group 1	Semi-arid canyonland, mid-level mountains, canyon bottoms; groves, parks, roadsides (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. Moderately suitable open habitat.
Plebejus saepiolus hilda Hilda blue	None/ None/ Group 1	Grassy meadow, near small pond; oviposit on *Trifolium wormskioldii*. In San Bernardino mountains. (10).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Pseudocopaeodes eunus eunus Alkali skipper	None/ None/ Group 1, MSCP	Desert seeps, alkali flats of Kern River, Kern Co. Hostplant grass: *Distichils spicata* var. *spicata* (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside of known range.
Pyrgus ruralis lagunae Laguna Mountain skipper	FE/ None/ Group 1, MSCP	Only in a few open meadows in yellow pine forest between 5,000 and 6,000 feet in the vicinity of Mt. Laguna and Palomar Mtn. Eggs laid on leaves of *Horkelia clevelandi*. Larvae feed on leaves and overwinter on the host plant (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside of known range.
Other					
Ariolimax columbianus stramineus Palomar banana slug	None/ None/ Group 2	Humid coastal forests; Santa Cruz Island (13, 14).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside of range.
Branchinecta sandiegonensis San Diego fairy shrimp	FE/ None/ Group 1	Small, shallow vernal pools, occasionally ditches and road ruts in coastal mesa system of Southern California and Baja California (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside of known range.
Brennania belkini Belkin's dune fly	None/ None/ Group 2	Coastal sand dunes of Southern California. Only CNDDB records are from Venice, Los Angeles Co. (5).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Cicindela gabbii Gabb's tiger beetle	None/ None/ Group 2	Estuaries and mudflats; generally on dark-colored mud; occasional on dry saline flats of estuaries or mouth of river, Orange and San Diego Cos. (5).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Cicindela hirticollis gravida Sandy beach tiger beetle	None/ None/ Group 2	Clean, dry, light-colored sand in upper zone of the beach dunes, close to non-brackish water along coastal California (5).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Cicindela latesignata latesignata Sand dune tiger beetle	None/ None/ Group 2	Sand and alkali flats at the mouth of river, sandy areas, beaches in coastal Southern California (5).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Cicindela latesignata obliviosa Oblivious tiger beetle	None/ None/ Group 2	Inhabited the Southern California coastline, from La Jolla north to the Orange Co. line. Occupied saline mudflats and moist sandy spots in estuaries of small streams in the lower zone. Has not been observed in 20 years (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Cicindela senilis frosti Tiger beetle	None/ None/ Group 2	Coastal salt marshes; fresh/brackish lagoons, open patches of Salicornia, dried salt pans, muddy alkali area. Records in Riverside, San Diego, Los Angeles, Ventura Cos. (4, 5).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Cicindela trifasciata sigmoidea Mudflat tiger beetle	None/ None/ Group 2	Has been identified along the fringe of a mudflat and low marsh habitat (15).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Coelus globosus Globose dune beetle	None/ None/ Group 1	Fore dunes, sand hummocks, back dunes along immediate coast. Larvae, adults spend time under vegetation or debris from Santa Cruz south to Ventura Cos. Possibly extirpated in San Diego and other coastal counties (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Halictus harmonius Harmonius halictid bee	None/ None/ None	Foothills of San Bernardino and San Jacinto Mountains (16).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
Helminthoglypta coelata Mesa shoulderband snail	None/ None/ Group 2	Coastal San Diego County (5).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Helminthoglypta traskii cooelata Peninsular Range shoulderband snail	None/ None/ MSCP	No habitat information found.	No	Low potential to occur.	Not recorded in the vicinity[2]. Habitat characteristics not known for this species.
Linderiella occidentalis California lindellaria	None/ None/ Group 1	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity and TDS. Central Valley, Santa Rosa Plateau (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Phobetus robinsoni Robinson's rain beetle	None/ None/ Group 2	Chaparral, coastal sage scrub (12).	No	Low potential to occur.	Suitable chaparral habitat onsite. Not much is known about this species' range and life history. Not recorded in the vicinity[2].
Streptocephalus woottoni Riverside fairy shrimp	FE/ None/ Group 1	Deep, long-lived vernal pools, vernal pool-like seasonal ponds, stock ponds; warm water pools that have low to moderate dissolved solids; in patches of grassland or agriculture interspersed in coastal sage scrub vegetation in Southern California(4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Trigonoscuta blaisdelli Blaisdell trigonoscuta weevil	None/ None/ Group 2	*Trigonoscuta* sp.: Coastal, desert, or inland sand dunes; *Atriplex* and *Astragalus oxyphysus* are host plants for the genus (12).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
Tryonia imitator Mimic tryonia, California brackishwater snail	None/ None/ Group 2	Coastal lagoons, herbaceous wetlands, brackish salt marshes; distributed among semi-continuous estuarine habitats along coast (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat.
		Fish			
Cyprinodon macularius Desert pupfish	FE/ SE/ Group 2	Desert springs, outflow marshes, river-edge marshes, backwaters, saline pools, streams, water less than 1m depth. Tolerates low oxygen levels, high	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside species range.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
		temperatures, high salinity; can live in salinities from fresh water to 68 ppt., can withstand temperatures from 9°–45°C and DO levels down to 0.1 ppm. Found from San Felipe Creek, San Sebastian Marsh, Salt Creek, Salton Sea (4).			
Eucyclogobius newberryi Tidewater goby	FE/ CSC/ Group 1	Coastal lagoons, upper ends of lagoons created by small coastal streams, fresh to brackish water in lower sections of coastal streams; occurs in water 25–100 centimeters deep and prefers mud substrates and areas of high dissolved oxygen. Found with sparse distribution along coast of California south of Del Norte Co. to San Diego Co. (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside species range.
Gasterosteus aculeatus williamsoni Unarmored three-spine stickleback	FE / SE, FP/ Group 2	Clear, cool, slow-flowing streams with sand or mud substrate, weedy pools, backwaters, among emergent vegetation at stream edge, in abundant aquatic vegetation in Santa Clara River drainage (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside species range.
Gila orcutti Arroyo chub	None/ CSC/ Group 1	Permanent, small to moderate sized, moderate to high gradient streams with flow; headwaters, creeks, small to medium rivers, intermittent streams. Prefer slow moving sections with sand or mud substrate. Found in Southern California watersheds (4).	No	Low potential to occur.	Not recorded in the vicinity[2]. Streams located within Preserve are ephemeral and would not support this species.
Oncorhynchus mykiss Rainbow trout — Steelhead form (Southern California)	FE/ CSC/ Group 1	Oncorhynchus mykiss ssp. irideus: Santa Maria River south to southern extent of range (San Mateo Creek in San Diego Co.); Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions. Ocean, rivers, creeks, large inland lakes,	No	Low potential to occur.	Not recorded in the vicinity[2]. No suitable habitat. Outside species range.

Scientific Name/ Common Name	Status (Federal/ State/ County)[1]	Habitat Preferences /Requirements	Verified on Site (Direct/ Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determination
		juveniles spend time in ocean before returning to natal stream to spawn; prefer summer temperatures 10°–15°C. Migration requires deep (3 meters) pools with cover along river course (4).			

[1] Status Designations:

Federal Designations:

FE	Federally listed Endangered
FT	Federally listed as Threatened
FC	Candidate for federal listing as Threatened or Endangered
FD	Federally-delisted; monitored for five years

State Designations:

SE	State-listed as Endangered
ST	State-listed as Threatened
CSC	California Special Concern Species
FP	California Department of Fish and Game Fully Protected Species
WL	California Department of Fish and Game Watch List Species
SD	State-delisted

County Designations:

Group 1	Animals of high sensitivity (listed or specific natural history requirements)
Group 2	Animals declining, but not in immediate threat of extinction or extirpation
MSCP	Proposed Covered – Draft East County MSCP

[2] Vicinity: Based on CNDDB 6 Quadrangle search of the surrounding quadrangles, including Potrero, Cameron Corners, Campo, Morena Reservoir, Barrett Lake, and Tecate

INTENTIONALLY LEFT BLANK

APPENDIX F

Site Photographs

Photo 1: Site Photo - Potrero Mason Property

Photo 2: Site Photo - Potrero Mason Property

Photo 3: Site Photo - Potrero Mason Property

Photo 4: Bat Survey Location - east

Photo 5: Bat Survey Location - west

Photo 6: Wildlife Camera Location

Photo 7: Wildlife Camera Location

Photo 8: Bobcat (*Lynx rufus*)

Photo 9: Common Raven *(Corvus corax)*

Photo 10: Coyote *(Canis latrans)*

Photo 11: Coast horned lizard *(Phrynosoma blainvillii)*

Photo 12: Common side-blotch lizard *(Uta stansburianus)*

Photo 13: Glossy snake *(Arizona elegans)*

Photo 14: Coverboard (P-C-5)

Photo 15: Botta's pocket gopher *(Thomomys bottae)*

Photo 16: California mouse *(Peromyscus californicus)*

Photo 17: Dulzura kangaroo rat *(Dipodomys simulans)*

Photo 18: North American deer mouse *(Peromyscus maniculatus)*

Photo 19: Northwestern San Diego pocket mouse *(Chaetodipus fallax fallax)*

Photo 20: Desert woodrat *(Neotoma lepida intermedia)*