Appendix F

Biological Resources Reports

Biological Constraints Report

for

San Luis Ranch

San Luis Obispo, CA

Prepared for

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Synopsis

- This biological constraints report examines a 131-acre Study Area on a property located at 1035 Madonna Road, San Luis Obispo, California.
- The Applicant proposes a mixed-use development project consisting of residential housing, commercial and office space, a hotel, and open space, along with creek enhancement. Habitat types identified and mapped in the Study Area consist of cropland, riparian, ephemeral drainage, annual grassland, eucalyptus forest, ruderal and anthropogenic.
- Botanical surveys conducted in May 2014 identified 63 species, subspecies, and varieties of vascular plants in the Study Area (Table 7). Appropriate habitat and soil conditions are present on the property for two special status plants. No special status plant species were observed in the Study Area.
- Appropriate habitat conditions are present on the property for seventeen special status animals.
- A great blue heron rookery consisting of six nests is present in a stand of blue gum eucalyptus located between the Post Office and the farm buildings. At least three nests contained nestlings during biological surveys in 2014.
- Prefumo Creek, which forms the western boundary of the Study Area, will be enhanced and protected. An ephemeral drainage that carries storm water flow into Prefumo Creek will also be protected and enhanced, improving water quality and wildlife habitat.
- There are 110 acres of prime farmland in production in the Study Area. Approximately 35 acres of prime agricultural land would be the San Luis Ranch Organic Farm. This acreage is adjacent to the existing City Farm - San Luis Obispo, and will result in an agricultural area of approximately 55 acres.

1.0 Introduction

This report provides information regarding biological resources associated with an approximately 131-acre site (Study Area) in San Luis Obispo County. The Study Area consists of one Assessor's parcel (APN 067-121-022) located at 1035 Madonna Road, San Luis Obispo. The Study Area falls within the Laguna Land grant, and so does not have a Township, Range, or Section. Results are reported for botanical and wildlife surveys of the Study Area conducted in April, May, and June 2014. A habitat inventory and results of database and literature searches of special status species reports within a seven 7.5-minute quadrangle search area of the Study Area are also included. Special status species that could occur in the Study Area or be affected by the proposed project are discussed, and lists of plant and animal species that were identified or are expected in the Study Area are provided.

We provide agencies and stakeholders with information regarding biological resources in the Study Area, and assess potential impacts to biological resources that could occur from the proposed project. An evaluation of the potential effects of the proposed project on biological resources is included, and potential mitigation measures are provided.

1.1 Project Location

The Study Area is located at 1035 Madonna Road, in San Luis Obispo, San Luis Obispo County, California, near the intersection of Madonna Road and Dalidio Drive (Figure 1). The property is approximately 131 acres. The Madonna Road branch of the San Luis Obispo Post Office abuts the northern corner of the property. The property is bounded on the northeast by Dalidio Drive, on the northwest by Madonna Road, on the east by Highway 101, on the south by City Farm - San Luis Obispo and on the west by Lower Prefumo Creek. Approximate coordinates for the center of the Study Area (APN 067-121-022) are N35° 15' 23" / W120° 40' 46" (WGS84) in the San Luis Obispo United State Geological Survey (USGS) 7.5' topographic quad. Elevation ranges from approximately 120 to 140 feet above sea level.

1.2 Project Description

The applicant proposes a mixed-use development project consisting of over 46 acres of residential housing, 20 acres of commercial, hotel, and office space, over 8 acres of roadway, and over 56 acres of open space consisting of the San Luis Ranch Organic Farm, the Organic Farm Learning Center, and preserved habitat. A bridge is proposed across Prefumo Creek to connect the project site to Froom Ranch Way. Development in the agricultural floodplain would be compensated by widening of the east bank of Prefumo Creek to allow increased storm flow during flood events. The widening would remove a row of eucalyptus on the east bank of the creek. The City may be widening Madonna Road by 35 feet, which would result in the removal of eucalyptus and cypress trees along the road. The northern section (approximately 1150 feet) of ephemeral drainage running across the northwest part of the property would be widened and reformed to allow for improved water quality and flow. Riparian vegetation in the north end of the drainage may be removed and restored following channel improvements. A culvert crossing of the drainage is proposed to allow access to the west. The stand of eucalyptus trees south of the farm buildings would be enhanced, restored with native vegetation, and preserved for overwintering monarch butterflies and other wildlife. The Project also proposes to extend the

Bob Jones Trail from the Prefumo Creek crossing along the south side of the eucalyptus preserve to Madonna Road at Dalidio Drive.

1.3 Responsible Parties

TABLE 1. RESPONSIBLE PARTIES. Applicant, biological consultant, and lead agency are provided.

Applicant	Biological Consultant
Marshall Ochylski Agent for the Applicant 867 Pacific Street, Suite 210 San Luis Obispo, CA 93401	Althouse and Meade, Inc. 1602 Spring Street Paso Robles, CA 93446 Contact: LynneDee Althouse, M.S. LynneDee@alt-me.com (805) 237-9626
Lead Agency	
City of San Luis Obispo	

2.0 Methods

The Study Area was surveyed for biological resources on April 29, May 5, May 14, May 19, May 26, May 29, and June 20, 2014. Althouse and Meade, Inc. (A&M) Principal Biologists Dan Meade and LynneDee Althouse and A&M Biologists Jessica Griffiths and Natalie Rossington conducted the surveys. Biological surveys were conducted on foot in order to compile species lists, to search for special status plants and animals, to map habitats, and to photograph the Study Area. The entire Study Area was surveyed.

Each habitat type occurring in the Study Area was inspected, described, and catalogued (Section 5.0. All plant and animal species observed in the Study Area were identified and recorded (Sections 6 and 7). Vegetation surveys consisted of meandering transects with an emphasis on locating habitat appropriate for special status plants. Transects were utilized to map boundaries of different vegetation types, describe general conditions and dominant species, compile species lists, and evaluate potential habitat for special status species.

Identification of botanical resources included field observations and laboratory analysis of collected material (Table 2). Botanical surveys were conducted in May 2014. Botanical nomenclature used in this document follows the Jepson Manual, Second Edition (Baldwin et al. 2012).

Wildlife documentation included observations of animal presence, nests, tracks, and other wildlife sign. Observations of wildlife were recorded during the field survey in all areas of the Study Area (Table 8). Birds were identified by sight or by vocalizations. Mammals and herpetofauna were identified by sight and by sign.

Maps were created by using data from the California Natural Diversity Database (CNDDB) and overlaid on a 2012 NAIP aerial of San Luis Obispo County (USDA 2012).

We conducted a search of the CNDDB (February 20, 2014 data) and the California Native Plant Society (CNPS) On-line Inventory of Rare and Endangered Plants of California for special status species known to occur in nine USGS 7.5-minute quadrangles surrounding the Study Area: Morro Bay North, Atascadero, Santa Margarita, Morro Bay South, San Luis Obispo, Lopez Mountain, Port San Luis, Pismo Beach, and Arroyo Grande.

Special status species lists produced by database and literature searches were cross-referenced with described habitat types to identify all potential special status species that could occur on or near the Study Area. Each special status species that could occur on or near the Study Area is individually discussed (refer to Sections 4.5 and 4.7).

TABLE 2. BIOLOGICAL SURVEYS. Biological survey dates, times, weather observations, and biologist are provided.

Survey Date	Start Time Stop Time	Temp.	Wind	Weather Observations	Biologist
4/29/2014	7:58 – 11:04 AM	65-75 °F	10-15 mph	Warm, sunny, breezy	J. Griffiths
5/5/2014	7:24 – 10:32 AM	55-65 °F	0 mph	Cold, overcast	J. Griffiths
5/14/2014	10:00 AM – 1:00 PM	75-90 °F	0-5 mph	Hot, clear	L. Althouse D. Meade
5/19/2014	7:33 – 9:36 AM	65-70 °F	0-5 mph	Clear, sunny	J. Griffiths
5/26/2014	11: 00 AM – 12:00 PM	65 °F	0-5 mph	Clear, sunny	N. Rossington
5/29/2014	11: 00 AM – 1:00 PM	75-80 °F	0-5 mph	Clear, sunny	N. Rossington
6/20/2014	10:00 AM – 12:00 PM	70-75 °F	0-5 mph	Clear, sunny	D. Meade

3.0 Existing Conditions

3.1 Environmental Setting

The Study Area is located south of the intersection of Madonna Road and Dalidio Drive in San Luis Obispo. It is comprised of 131 acres, approximately 110 acres of which are continuously planted and plowed farmland (Figure 2). The 20-acre City Farm – San Luis Obispo is adjacent to the Study Area on the south, creating a contiguous 151 acre agricultural area.

Several dozen large blue gum eucalyptus (*Eucalyptus globulus*) and a handful of Monterey cypress (*Hesperocyparis macrocarpa*) border the northwest edge of the property along Madonna Road. The west portion of the property consists of three residences, barns, and outbuildings situated on approximately 6 acres of disturbed habitat. South of the farm buildings is an approximately 6-acre blue gum eucalyptus grove. Southwest of the post office is an approximately 2-acre non-native annual grassland dominated by slender wild oat (*Avena barbata*), and an approximately 1.5-acre stand of blue gum eucalyptus. Scattered coyote brush (*Baccharis pilularis*) and non-native ruderal species are present in this area.

Laguna Lake and Laguna Lake Park are situated northwest of the Study Area across Madonna Road. Prefumo Creek flows out of Laguna Lake, under Madonna Road, down along the western

edge of the property, and drains into San Luis Obispo Creek approximately half a mile to the south. The creek flows primarily during the winter months, with water going subsurface in the summer. The riparian corridor is dominated by a mixture of arroyo willow (*Salix lasiolepis*) and non-native vegetation. There is a broken concrete slab and dysfunctional control structure in the creek bed by a foot trail extending from Froom Ranch Way on the west to the eastern bank of the creek. Blue gum eucalyptus trees line the eastern creek bank from Madonna Road south to near the creek crossing.

There is also an ephemeral drainage a few feet deep running southwest across the property into Prefumo Creek. The drainage is fairly degraded, and there are chunks of asphalt in the drainage from an old road. The eastern portion of the drainage, which runs along the east side of the Post Office, is dominated by mature arroyo willow and red ironbark (*Eucalyptus sideroxylon).* The western portion of the drainage lacks any large shrubs and is mainly dominated by annual grass and ruderal forbs.

3.2 Soils

The United States Department of Agriculture (USDA) SSURGO data (2007) and Soil Survey of San Luis Obispo County, California, Coastal Part (1984) and USDA SSURGO Data (Tabular data version 4, Spatial data version 1, 2008) delineate three soil map units that intersect the Study Area boundaries (Figure 3). The Study Area is mapped as Cropley clay (127 and 128) and Salinas silty clay loam (197).

The soil survey was not meant to be applied at the acre-scale, but does indicate the soil map units in the vicinity of small properties. Below we discuss the details and properties of the soil types found in the Study Area (in order of area delineated in the Study Area).

Soil map units typically encompass one or two dominant soils that cover more than 50 percent of the mapped area, and one to several soils that occur in small patches not differentiated in mapping at the 1 to 24,000 scale used for NRCS soil maps. Due to the procedures followed in making a soil survey, users of soil survey data are cautioned that not all areas included within a soil survey are closely sampled using soil pits and site descriptions, and a specific site may not have been sampled at all. Therefore, care must be taken in drawing conclusions regarding site-specific soil resources based solely on NRCS soil survey work. Digitized spatial data from the Coastal Part Soil Survey are shown as an overlay of soil map units on an aerial photo of the region with the following caution from NRCS regarding maps: "Enlargement of these maps could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale."

Cropley clay on zero to two percent slopes (127) is the dominant soil type in the Study Area and underlies approximately two-thirds of the irrigated cropland in the center of the property. This soil type is very deep and moderately well-drained. It occurs on alluvial fans and plains, having been formed in alluvium weathered from sedimentary rocks. The permeability is slow, the available water capacity high, and the erosion hazard is low. Included in this map unit are small areas of Concepcion loam, Diablo clay, and Salinas silty clay loam. This soil is in capability units IIs-5 (14), irrigated and IIIs-5 (14), non-irrigated.

Cropley clay, 2 to 9 percent slopes (128) is another soil type found in the northeast section of the Study Area. It consists of very deep and moderately well-drained soils on alluvial fans and plains, having been formed in alluvium weathered from sedimentary rocks. The permeability is

slow, the available water capacity high, and the erosion hazard is low. Included in these map units are small areas of Los Osos loam and Salinas silty clay loam. This soil is in capability units IIs-5 (14), irrigated and IIIs-5 (14), non-irrigated. This soil type underlies the homestead, farm buildings, annual grassland, and the majority of the eucalyptus trees.

Salinas silty clay loam, with zero to two percent slopes (197) underlies the southeastern third of the irrigated cropland as well as a small section along the western edge of the Study Area next to Prefumo Creek. It formed in alluvium weathered from sedimentary rocks, and occurs on alluvial fans and plains. This soil is also very deep and well drained, with a moderately slow permeability and high or very high available water capacity. Included in this map unit are small areas of Cropley clay, Marimel silty clay loam, and Mocho loam. This soil is in capability units IIe-1 irrigated and III3-1 non-irrigated.

4.0 Special Status Plants and Animals

4.1 Regional Special Status Plant, Animal, and Communities Lists

One hundred and five special status plants, 43 special status animals, and 9 sensitive natural communities were reported from within the Morro Bay North, Atascadero, Santa Margarita, Morro Bay South, San Luis Obispo, Lopez Mountain, Port San Luis, Pismo Beach, and Arroyo Grande quadrangles by the CNDDB and CNPS. Seven additional special status species were added to the list from our knowledge of the area. These species are marked with an asterisk (*). Because the search area is so large over varied terrain, species with very restricted habitat requirements far from the Study Area are often reported in the search results. Appropriate habitat and soil conditions are present in the Study Area for 2 special status plants and 17 special status animals (Tables 3 and 4). No sensitive natural communities occur in the Study Area (Section 4.9). Figures 4 and 5 in Section 13.0 depict the current GIS data for special status species and critical habitat mapped in the vicinity of the Study Area by the CNDDB and the U.S. Fish and Wildlife Service (USFWS). A Biological Resource Map indicating locations of habitat types and special status species detected on the Study Area in 2014 is provided in Section 13.0 (Figure 6).

4.2 Introduction to California Rare Plant Ranks (Formerly CNPS Lists)

Plant species are considered rare when their distribution is confined to localized areas, when there is a threat to their habitat, when they are declining in abundance, or are threatened in a portion of their range. The California Rare Plant Rank (CRPR) categories range from species with a low threat (CRPR 4) to species that are presumed extinct (CRPR 1A). The plants of CRPR 1B are rare throughout their range. All but a few species are endemic to California. All of them are judged to be vulnerable under present circumstances, or to have a high potential for becoming vulnerable.

4.3 Introduction to CNDDB Definitions

"Special Plants" is a broad term used to refer to all the plant taxa inventoried by the CNDDB, regardless of their legal or protection status (CDFW April 2013). Special plants include vascular plants and high priority bryophytes (mosses, liverworts, and hornworts).

"Special Animals" is a general term that refers to all of the animal taxa inventoried by the CNDDB, regardless of their legal or protection status (CDFG January 2011). The Special

Animals list is also referred to by the California Department of Fish and Wildlife (CDFW), as the list of "species at risk" or "special status species". These taxa may be listed or proposed for listing under the California and/or Federal Endangered Species Acts, but they may also be species deemed biologically rare, restricted in range, declining in abundance, or otherwise vulnerable.

Each species included on the Special Animals list has a corresponding Global and State Rank (refer to Table 4). This ranking system utilizes a numbered hierarchy from one to five following the Global (G-rank) or State (S-rank) category. The threat level of the organism decreases with an increase in the rank number (1=Critically Imperiled, 5=Secure). In some cases where an uncertainty exists in the designation, a question mark (?) is placed after the rank. More information is available at www.natureserve.org.

Animals listed as California Species of Special Concern (SSC) may or may not be listed under California or Federal Endangered Species Acts. They are considered rare or declining in abundance in California. The Special Concern designation is intended to provide the Department of Fish and Wildlife, biologists, land planners and managers with lists of species that require special consideration during the planning process in order to avert continued population declines and potential costly listing under federal and state endangered species laws. For many species of birds, the primary emphasis is on the breeding population in California. For some species that do not breed in California but winter here, emphasis is on wintering range. The SSC designation thus may include a comment regarding the specific protection provided such as nesting or wintering.

Animals listed as Fully Protected are those species considered by CDFW as rare or faced with possible extinction. Most, but not all, have subsequently been listed under the California Endangered Species Act (CESA) or the Federal Endangered Species Act (FESA). Fully Protected species may not be taken or possessed at any time and no provision of the California Department of Fish and Game (CDFG) code authorizes the issuance of permits or licenses to take any Fully Protected species.

4.4 Potential Special Status Plant List

Table 3 lists 105 special status plant species reported from the region. Federal and California State status, global and State rank, and CNPS ranking status for each species are given. Typical blooming period, habitat preference, potential habitat on site, and whether or not the species was observed in the Study Area are also provided.

TABLE 3. SPECIAL STATUS PLANT LIST. We list 105 special status plants reported from the vicinity of the site or known from the region with potential to occur in the vicinity of the Study Area. Potentially suitable habitat is present in the Study Area for two special status plant species.

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
1	**Red Sand-verbena** *Abronia maritima*	None/None G4?/None 4.2	February - October	Coastal dunes; <100m sCCo, Sco, ChI; Baja CA	No. Dune habitat is not found on site.	No	No Effect
2	**Hoover's Bent grass** *Agrostis hooveri*	None/None G2/None 1B.2	April - July	Sandy soil in oak woodland habitat; <600 m. Endemic to SLO & SB Counties.	No. Oak woodland habitat is not found on site.	No	No Effect
3	**Arroyo de la Cruz Manzanita** *Arctostaphylos cruzensis*	None/None G3/None 1B.2	December - March	Sandy bluffs; <150 m. c CCo (s Monterey, nw SLO Counties)	No. Appropriate bluff habitat is not found on site.	No	No Effect
4	**Santa Lucia Manzanita** *Arctostaphylos luciana*	None/None G3/None 1B.2	February - March	Shale outcrops, slopes, chaparral, 500-700 m. Cuesta Pass, SLO County.	No. Appropriate habitat is not found on site.	No	No Effect
5	**Morro Manzanita** *Arctostaphylos morroensis*	FT/None G2/None 1B.1	December - March	Sand dunes; <200 m. s CCo (Morro Bay, SLO County)	No. Dune habitat is not found on site.	No	No Effect
6	**Bishop Manzanita** *Arctostaphylos obispoensis*	None/None G3?/None 4.3	February - March	Rocky, gen serpentine soils, chaparral, open close-cone forest near coast; 60-950 m; SCoRO	No. Appropriate habitat and serpentine soils are not found on site.	No	No Effect
7	**Oso Manzanita** *Arctostaphylos osoensis*	None/None G1/None 1B.2	February - March	Chaparral, woodland; 300-500 m. s CCo (w Los Osos Valley, SLO County)	No. Appropriate habitat is not found on site.	No	No Effect
8	**Pecho Manzanita** *Arctostaphylos pechoensis*	None/None G2/None 1B.2	November - March	Shale outcrops, chaparral, coniferous forest; <850 m. s CCo (Pecho Hills, SLO)	No. Appropriate habitat is not found on site.	No	No Effect
9	**Santa Margarita Manzanita** *Arctostaphylos pilosula*	None/None G3/None 1B.2	December - March	Shale outcrops, slopes, chaparral; 300-1100 m. s SCoRO Endemic to SLO County	No. Appropriate habitat is not found on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
10	**Sand Mesa Manzanita** *Arctostaphylos rudis*	None/None G2/None 1B.2	November - February	Sandy soils, chaparral. <100m. s CCo (Nipomo, Burton Mesa, Pt. Sal, sw SLO, nw SB Counties	No. Appropriate sandy soils and habitat are not found on site.	No	No Effect
11	**Dacite Manzanita** *Arctostaphylos tomentosa* ssp. *daciticola*	None/None G4T1/None 1B.1	March	Chaparral; <300 m. s CCo (w Los Osos Valley, SLO County)	No. Chaparral is not present on site.	No	No Effect
12	**Marsh Sandwort** *Arenaria paludicola*	FE/CE G1/CE 1B.1	May - August	Boggy meadows, marshes; <300 m. s CCo (Nipomo Mesa, SLO County, Santa Ana River, SCo)	No. Appropriate wetland habitat is not found on site.	No	No Effect
13	**Carlotta Hall's Lace Fern** *Aspidotis carlotta-halliae*	None/None G3/None 4.2	n/a	Generally serpentine slopes, crevices, outcrops	No. Appropriate serpentine soils and habitat are not found on site.	No	No Effect
14	**Miles' Milk-vetch** *Astragalus didymocarpus* var. *milesianus*	None/None G5T2/None 1B.2	March - June	Clay or serpentine soils in coastal scrub, grassy areas near coast. 0-90 m. Endemic to SLO County	No. Appropriate habitat is not found on site.	No	No Effect
15	**Ocean Bluff Milk-vetch** *Astragalus nuttallii* var. *nuttallii*	None/None G3T3/None 4.2	January - November	Rocks, coastal bluff scrub, coastal dunes; 3-120 m.	No. Appropriate habitat is not found on site.	No	No Effect
16	**Coulter's Saltbush** *Atriplex coulteri*	None/None G2/None 1B.2	March - October	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland;	No. Appropriate habitat is not found on site.	No	No Effect
17	**San Joaquin Spearscale** *Atriplex joaquinana*	None/None G2/None 1B.2	April - October	Alkaline soils; <300 m. s ScV, SnJV, SCoRI (e slope).	No. Alkaline soils are not found on site.	No	No Effect
18	**False Gray Horsehair Lichen** *Bryoria pseudocapillaris*	None/None G3/None 3.2	n/a	Usually on conifers. Found on coastal dunes and North Coast coniferous forest. NCo, CCo	No. Neither coniferous forest nor dune habitat are found on site.	No	No Effect
19	**Twisted Horsehair Lichen** *Bryoria spiralifera*	None/None G2/None 1B.1	n/a	Usually on conifers. North Coast coniferous forest. Nco, Cco	No. Coniferous forest habitat is not found on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
20	**Brewer's Calandrinia** *Calandrinia breweri*	None/None G4/None 4.2	February – May	Sandy to loamy soil, disturbed sites, burns; <1200m. NCoR, c SNF, SnFrB, SCoRO, SCo, WTR; n Baja CA	No. Appropriate sandy soils are not found on site.	No	No Effect
21	**Round-leaved Filaree** *California macrophylla*	None/None G2/None 1B.1	March - May	Clay soils in cismontane woodland, valley and foothill grassland; 15-1200 m. ScV, n SnJV, CW, SCo, n ChI	No. Appropriate habitat is not found on site.	No	No Effect
22	**Catalina Mariposa Lily** *Calochortus catalinae*	None/None G3/None 4.2	February - June	Heavy soil in open grassland or shrubland; <700 m.	No. Appropriate heavy soils are not found on site.	No	No Effect
23	**Club-haired Mariposa Lily** *Calochortus clavatus* var. *clavatus*	None/None G4T3/None 4.3	April – June	Generally serpentine; <1300m. s SCoRO, n SCoRI, WTR, SnGb	No. Serpentine soils are not found on site.	No	No Effect
24	**San Luis Mariposa Lily** *Calochortus obispoensis*	None/None G2/None 1B.2	May - July	Chaparral, coastal scrub, valley and foothill grassland, often on serpentine but also sandstone; 100-500 m. SCoRO Endemic to SLO County	No. Appropriate soils and habitat are not found on site.	No	No Effect
25	**La Panza Mariposa Lily** *Calochortus simulans*	None/None G2/None 1B.3	April - May	Grassland, oak woodland & pine forest, on sand, granite, or serpentine; <1100 m. Endemic to SLO County	No. Appropriate soils and habitat are not found on site.	No	No Effect
26	**Dwarf Calycadenia** *Calycadenia villosa*	None/None G3/None 1B.1	May - October	Dry, rocky hills, ridges, in chaparral, woodland, meadows and seeps; <1100 m. c&s SCoRO	No. Appropriate habitat is not found on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
27	**Cambria Morning-Glory** *Calystegia subacaulis* ssp. *episcopalis*	None/None G3T3/None 4.2	April - May	Dry, open scrub, woodland, or grassland; <500 m. c SCoRO Endemic to SLO County	No. Appropriate habitat is not found on site.	No	No Effect
28	**Hardham's Evening-Primrose** *Camissoniopsis hardhamiae*	None/None G1Q/None 1B.2	April - May	Decomposed carbonate soils, in chaparral, cismontane woodland. Monterey, SLO Counties	No. Appropriate soils and habitat are not found on site.	No	No Effect
29	**San Luis Obispo Sedge** *Carex obispoensis*	None/None G2G3/None 1B.2	April - June	Serpentine springs, stream sides; <600 m. Endemic to SLO County	No. Appropriate serpentine soils and habitat are not found on site.	No	No Effect
30	**San Luis Obispo Owl's-Clover** *Castilleja densiflora* var. *obispoensis*	None/None G5T2/None 1B.2	April	Coastal grassland, <100 m. Endemic to SLO County.	No. Appropriate grassland habitat is not found on site.	No	No Effect
31	**Lompoc Ceanothus** *Ceanothus cuneatus* var. *fascicularis*	None/None G5T3/None 4.2	February - April	Chaparral on coastal sandy mesas; <400 m. s Cco	No. Appropriate sandy soils and habitat are not found on site.	No	No Effect
32	**Monterey Ceanothus** *Ceanothus rigidus*	None/None G3/None 4.2	February - June	Sandy soils, closed-cone coniferous forest, chaparral, coastal scrub; <550 m.	No. Appropriate sandy soils and habitat are not found on site.	No	No Effect
33	**Congdon's Tarplant** *Centromadia parryi* ssp. *congdonii*	None/None G3T2/None 1B.1	May - November	Mesic grassland, open ground; <100 m. CW	Unlikely. Appropriate vernal moist soils not found on site.	No	No Effect
34	**Island Mountain-Mahogany** *Cercocarpus betuloides var. blancheae*	None/None G5T3/None 4.3	March - April	Chaparral; <600 m.	No. Chaparral habitat is not found on site.	No	No Effect
35	**Coastal Goosefoot** *Chenopodium littoreum*	None/None G2/None 1B.2	June – October	Generally sandy soils, dunes; <40m. s CCo	No. Appropriate sandy soils and habitat are not found on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
36	**Dwarf Soaproot** *Chlorogalum pomeridianum var. minus*	None/None G5T2/None 1B.2	May - August	Serpentine outcrops in chaparral; gen <750 m. NCoRI, SnFrB, SCoRO	No. Appropriate serpentine soils and chaparral habitat are not found on site.	No	No Effect
37	**Salt Marsh Bird's-beak** *Chloropyron maritimum ssp. maritimum*	FE/CE G4?T1/CE 1B.2	May - October	Coastal salt marshes;<10 m. SCo, n Baja CA	No. Salt marsh habitat is not found on site.	No	No Effect
38	**Brewer's Spineflower** *Chorizanthe breweri*	None/None G2/None 1B.3	May - August	Chaparral, foothill woodland on serpentine; <800 m. Endemic to SLO County	No. Appropriate serpentine soils and habitat are not found on site.	No	No Effect
39	**Douglas' Spineflower** *Chorizanthe douglasii*	None/None G3/None 4.3	April - July	Foothill woodland, pine forest, chaparral, sandy or gravelly soils; 200-1600 m. e SCoRO, SCoRI	No. Appropriate soils and habitat are not found on site.	No	No Effect
40	**Peninsular Spineflower** *Chorizanthe leptotheca*	None/None G4/None 4.2	May - August	Alluvial fan, granitic soils, sand or gravel; chaparral, coast scrub, lower montane coniferous forest; 300-1900 m. e PR	No. Appropriate soils and habitat are not found on site.	No	No Effect
41	**Palmer's Spineflower** *Chorizanthe palmeri*	None/None G3?/None 4.2	May – August	Serpentine; 60-700m. SCoRO (w Monterey, w San Luis Obispo cos.)	No. Serpentine soils are not found on site.	No	No Effect
42	**Straight-awned Spineflower** *Chorizanthe rectispina*	None/None G1/None 1B.3	May - July	Chaparral, dry woodland in sandy soil; 200-600 m. SCoRO	No. Appropriate sandy soils and habitat are not found on site.	No	No Effect
43	**Potbellied Spineflower** *Chorizanthe ventricosa*	None/None G3/None 4.3	May - Sept	Serpentine; 500-1000 m. SCoRI	No. Serpentine soils are not found on site.	No	No Effect
44	**San Luis Obispo Fountain Thistle** *Cirsium fontinale* var. *obispoense*	FE/CE G2T2/CE 1B.2	February - July	Serpentine seeps and streams; <300 m. Endemic to SLO County	No. Serpentine soils are not found on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
45	**Cuesta Ridge Thistle** *Cirsium occidentale* var. *lucianum*	None/None G3G4T2/None 1B.2	April – July	Chaparral, woodland or forest openings, often on serpentine; 500-750m. s SCoRO (s Santa Lucia Range, San Luis Obispo, CA)	No. Appropriate soils and habitat are not found on site.	No	No Effect
46	**Surf Thistle** *Cirsium rhothophilum*	None/CT G1/CT 1B.2	April - June	Dunes, bluffs; <20 m. s CCo (s SLO, n SB Counties)	No. Appropriate dune habitat is not found on site.	No	No Effect
47	**La Graciosa Thistle** *Cirsium scariosum* var. *loncholepis*	FE/CT G5T1/CT 1B.1	April – September	Marshes, dune wetlands; <50m. s CCo (sw San Luis Obispo, nw Santa Barbara counties)	No. Appropriate wetland habitat is not found on site.	No	No Effect
48	**Popcorn Lichen** *Cladonia firma*	None/None G4/None 2B.1	n/a	Reported in maritime chaparral and dune scrub typically in stabilized dunes, grows on soil and detritus.	No. Appropriate soils and habitat are not found on site.	No	No Effect
49	**Slender Clarkia** *Clarkia exilis*	None/None G3/None 4.3	April - May	Woodland; <1000 m.; s SNF, The.	No. Appropriate woodland habitat is not found on site.	No	No Effect
50	**Pismo Clarkia** *Clarkia speciosa* ssp. *immaculata*	FE/CR G4T1/CR 1B.1	May - July	Sandy hills near coast; <100 m. s CCo (±Pismo to Edna, SLO County)	No. Appropriate sandy soils and habitat are not found on site.	No	No Effect
51	**Monkey-flower Savory** *Clinopodium mimuloides*	None/None G3/None 4.2	June – October	Moist places, streambanks, chaparral, woodland; 400-1800 m. CCo, SCoRO, WTR, SnGb	No. Appropriate habitat is not found on site; site is not at proper elevation.	No	No Effect
52	**Paniculate Tarplant** *Deinandra paniculata*	None/None G3G4/None 4.2	May - November	Vernally mesic or sandy soils in coastal scrub and grassland habitats; <1320 m.	No. Appropriate soils and habitat are not found on site.	No	No Effect
53	**Dune Larkspur** *Delphinium parryi* ssp. *blochmaniae*	None/None G4T2/None 1B.2	April - May	Coastal chaparral, sand. 0-200 m. s CCo	No. Appropriate soils and habitat are not found on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
54	**Eastwood's Larkspur** *Delphinium parryi* ssp. *eastwoodiae*	None/None G4T2/None 1B.2	March – May	Coastal chaparral, grassland, on serpentine; 100-500m sCCo, SCoRO (San Luis Obispo County)	No. Serpentine soils are not found on site.	No	No Effect
55	**Beach Spectaclepod** *Dithyrea maritima*	None/CT G2/CT 1B.1	March - May	Sea shores, sandy soils on dunes near the shore; <50 m s CCo, SCo, Baja CA.	No. Dune habitat is not found on site.	No	No Effect
56	**Betty's Dudleya** *Dudleya abramsii* ssp. *bettinae*	None/None G3T1/None 1B.2	May - July	Rocky outcrops in serpentine grassland; <50-180 m. Endemic to SLO County	No. Serpentine soils are not found on site.	No	No Effect
57	**Mouse-gray Dudleya** *Dudleya abramsii* ssp. *murina*	None/None G3T2/None 1B.3	May - June	Serpentine outcrops; 120-300 m. Endemic to SLO County	No. Serpentine soils are not found on site.	No	No Effect
58	**Blochman's Dudleya** *Dudleya blochmaniae* ssp. *blochmaniae*	None/None G2T2/None 1B.1	April - June	Open, rocky slopes, often serpentine or clay soils; <450 m. s CCo, SCo	No. Appropriate habitat is not found on site.	No	No Effect
59	**Small Spikerush** *Eleocharis parvula*	None/None G5/None 4.3	Late Winter – Fall	Brackish, wet soil, coastal; <50 m. NCo, SnFrB, SCo; to BC; KS to NL, FL, LA; Mex, C.Am, Eurasia	No. Appropriate soils and habitat are not found on site.	No	No Effect
60	**Yellow-flowered Eriastrum** *Eriastrum luteum*	None/None G2/None 1B.2	May – June	Bare sandy decomposed granite slopes in cismontane woodland, chaparral, forest; 360-1000 m. SCoR, Monterey, SLO Counties	No. Appropriate habitat and sandy soils are not found on site.	No	No Effect
61	**Blochman's Leafy Daisy** *Erigeron blochmaniae*	None/None G2/None 1B.2	July - August	Sand dunes and hills; <30 m. s CCo	No. Sandy soils are not found on site.	No	No Effect
62	**Indian Knob Mountainbalm** *Eriodictyon altissimum*	FE/CE G1/CE 1B.1	March - June	Sandstone ridges, chaparral; 250± m. Endemic to SLO County	No. Appropriate soils and habitat are not found on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
63	**Elegant Wild Buckwheat** *Eriogonum elegans*	None/None G3/None 4.3	May – November	Sand or gravel; 200 – 1200 m. SnFrB, SCoR, WTR	No. Appropriate sand and gravel substrate are not found on site.	No	No Effect
64	**Hoover's Button-celery** *Eryngium aristulatum* var. *hooveri*	None/None G5T1/None 1B.1	July	Vernal pools, lagunas; 0-1000 m. s SnFrB, SCoR	No. Appropriate vernal pool habitat is not found on site.	No	No Effect
65	**Suffrutescent Wallflower** *Erysimum suffrutescens*	None/None G3/None 4.2	January - July	Coastal dunes and bluffs; 0-150 m. CCo, SCo	No. Appropriate dune habitat is not found on site.	No	No Effect
66	**Stinkbells** *Fritillaria agrestis*	None/None G3/None 4.2	March – June	Clay (gen serpentine) banks, depressions; <500 m. NCoRO , SNF, GV, CW	No. Serpentine soils are not found on site.	No	No Effect
67	**Ojai Fritillary** *Fritillaria ojaiensis*	None/None G2/None 1B.2	March - May	Rocky slopes, river basins; 300-500 m. SCoRO, WTR	No. Appropriate habitat is not found on site.	No	No Effect
68	**San Benito Fritillary** *Fritillaria viridea*	None/None G2/None 1B.2	March - May	Serpentine slopes; 200-1500 m. SCoR (San Benito, SLO Counties)	No. Serpentine soil is not found on site.	No	No Effect
69	**San Francisco Gumplant** *Grindelia hirsutula* var. *maritima*	None/None G5T1Q/None 3.2	August - September	Sandy or serpentine slopes, sea bluffs; <400 m. n CCo	No. Appropriate soils and habitat are not found on site.	No	No Effect
70	**Mesa Horkelia** *Horkelia cuneata* var. *puberula*	None/None G4T2/None 1B.1	February - September	Dry, sandy coastal chaparral; gen 70-700 m. SCoRO, SCo.	No. Appropriate sandy soils and habitat are not found on site.	No	No Effect
71	**Kellogg's Horkelia** *Horkelia cuneata* var. *sericea*	None/None G4T2/None 1B.1	April - September	Old dunes, coastal sand hills; <200 m. CCo	No. Appropriate sandy soils and habitat are not found on site.	No	No Effect
72	**Coulter's Goldfields** *Lasthenia glabrata* ssp. *coulteri*	None/None G4T3/None 1B.1	February - June	Saline places, vernal pools; <1000 m. s SCoRO, SCo, n ChI, PR, w DMoj	No. Appropriate habitat is not found on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
73	**Pale-yellow Layia** *Layia heterotricha*	None/None G2/None 1B.1	March - June	Alkaline or clay soils, open areas, in pinyon-juniper woodland, grassland; 270-1705 m. Teh, SnJV, SCoR, n WTR	No. Appropriate habitat is not found on site.	No	No Effect
74	**Jones' Layia** *Layia jonesii*	None/None G1/None 1B.2	March - May	Open serpentine or clay slopes; <400 m. Endemic to SLO County	Unlikely. Clay soils present on site, but heavily disturbed.	No	No Effect
75	**Small-leaved Lomatium** *Lomatium parvifolium*	None/None G3/None 4.2	February – May	Pine woodland, serpentine outcrops; 70-150 m. CCo, SCoR	No. Appropriate soils and habitat are not found on site.	No	No Effect
76	**San Luis Obispo County Lupine** *Lupinus ludovicianus*	None/None G2/None 1B.2	April - July	Open, grassy limestone in oak woodland; 50-500 m. Endemic to SLO County	No. Oak woodland habitat is not found on site.	No	No Effect
77	**Jones' Bush-mallow** *Malacothamnus jonesii*	None/None G3/None 4.3	May - July	Open chaparral in foothill woodland; 250-830 m. SCoRO (Monterey, SLO Counties).	No. Chaparral habitat is not found on site.	No	No Effect
78	**San Luis Obispo County bush-mallow** *Malacothamnus niveus*	None/None G3Q/None 4.3	May - July	On slopes near canyon bottoms in chaparral habitat; 365-790 m.	No. Chaparral habitat is not found on site.	No	No Effect
79	**Carmel Valley Bush-mallow** *Malacothamnus palmeri* var. *involucratus*	None/None G3T2Q/None 1B.2	May - October	Chaparral, cismontane woodland, coastal scrub; 30-1100 m. s CCo, SCoRO	No. Appropriate habitat is not found on site.	No	No Effect
80	**Santa Lucia Bush-mallow** *Malacothamnus palmeri* var. *palmeri*	None/None G3T2Q/None 1B.2	May - July	Chaparral, cismontane woodland, coastal scrub; 30-1100 m. s CCo, SCoRO	No. Appropriate habitat is not found on site.	No	No Effect
81	**Palmer's Monardella** *Monardella palmeri*	None/None G2/None 1B.2	June - August	Serpentine soils in chaparral, forest; 200-800 m. SCoRO	No. Serpentine soils are not found on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
82	**Southern Curly-leaved Monardella** *Monardella sinuata* ssp. *sinuata*	None/None G2/None 1B.2	April - September	Sandy soils, coastal strand, dune and sagebrush scrub, coastal chaparral and woodland; <300 m. Cco, SCoRO, extirpated Sco.	No. Appropriate sandy soils and habitat are not found on site.	No	No Effect
83	**San Luis Obispo Monardella** *Monardella undulata* ssp. *undulata*	None/None G2/None 1B.2	April - September	Stabilized dunes, coastal scrub, stabilized sandy soils; <200 m. CCo.	No. Appropriate sandy soils and habitat are not found on site.	No	No Effect
84	**Woodland Woolythreads** *Monolopia gracilens*	None/None G2G3/None 1B.2	March – July	Chaparral, serpentine grassland, cismontane woodland, sandy to rocky soils; SnFrB, SCoR	No. Appropriate soils and habitat are not found on site.	No	No Effect
85	**California Spineflower** *Mucronea californica*	None/None G3/None 4.2	March - August	Sandy soil in coastal scrub, chaparral; 0-1400 m. CS, SW	No. Appropriate sandy soils and habitat are not found on site.	No	No Effect
86	**Shining Navarretia** *Navarretia nigelliformis* ssp. *radians*	None/None G4T2/None 1B.2	May - July	Vernal pools, clay depressions, dry grasslands;	No. Appropriate habitat is not found on site.	No	No Effect
87	**Coast Woolly-heads** *Nemacaulis denudata* var. *denudata*	None/None G3G4T3?/None 1B.2	April-September	Coastal dunes; 0-100 m.	No. Dune habitat is not found on site.	No	No Effect
88	**Large-flowered Nemacladus** *Nemacladus secundiflorus* var. *secundiflorus*	None/None G3T3?/None 4.3	April – May	Dry, gravelly slopes; 200-2000m. s SNH, SCoR	No. Appropriate habitat is not found on site.	No	No Effect
89	**Adobe Yampah** *Perideridia pringlei*	None/None G3/None 4.3	April – June	Grassy slopes, serpentine outcrops; 300-1800 m. The, SCoR, WTR.	No. Appropriate serpentine soils and habitat are not found on site.	No	No Effect
90	**Michael's Rein Orchid** *Piperia michaelii*	None/None G3/None 4.2	April - August	Dry oak woodland habitat in SLO County; 3-915 m. NCo, SNF, CCo, SnFrB, n SCo, WTR, S. Cruz Is.	No. Oak woodland habitat is not found on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
91	**Chaparral Popcornflower** *Plagiobothrys torreyi* var. *perplexans*	None/None G4T3/None 4.3	April - June	Burned areas and igneous soils in chaparral, coniferous forest habitats; 500-2100 m.	No. Appropriate soils and habitat are not found on site.	No	No Effect
92	**Hooked Popcorn-flower** *Plagiobothrys uncinatus*	None/None G2/None 1B.2	April - May	Canyon sides, chaparral; on sandstone 300-600 m. n SCoR (Gabilan Range, Santa Lucia Mountains)	No. Appropriate sandstone substrate is not found on site.	No	No Effect
93	**Diablo Canyon Blue Grass** *Poa diaboli*	None/None G2/None 1B.2	March - April	Coastal scrub, chaparral, cismontane woodland in shale. San Luis Range	No. Appropriate habitat is not found on site.	No	No Effect
94	**Hoffmann's Sanicle** *Sanicula hoffmannii*	None/None G3/None 4.3	March – May	Shrubby coastal hills, pine woodland; <500m. CCo, SCo, n ChI	No. Appropriate habitat is not found on site.	No	No Effect
95	**Adobe Sanicle** *Sanicula maritima*	None/CR G2/CR 1B.1	February - May	Coastal, grassy, open wet meadows, ravines; ±150 m. CCo (SLO County)	No. Appropriate wet meadow habitat is not found on site.	No	No Effect
96	**Black-flowered Figwort** *Scrophularia atrata*	None/None G2/None 1B.2	March - July	Closed-cone coniferous forest, riparian scrub, dune habitats; in sand, diatomaceous shales, calcareous and other soil types. 10-250 m. s SCoRO	No. Appropriate soils and habitat are not found on site.	No	No Effect
97	**Chaparral Ragwort** *Senecio aphanactis*	None/None G3?/None 2B.2	January - April	Drying alkaline flats, chaparral, cismontane woodland, coastal scrub; <400 m. CW, SCo, ChI	No. Appropriate soils and habitat are not found on site.	No	No Effect
98	**San Gabriel Ragwort** *Senecio astephanus*	None/None G3/None 4.3	January - April	Drying alkaline flats, chaparral, cismontane woodland, coastal scrub; <400 m. CW, SCo, ChI	No. Appropriate soils and habitat are not found on site.	No	No Effect
99	**Cuesta Pass Checkerbloom** *Sidalcea hickmanii* ssp. *anomala*	None/CR G3T1/CR 1B.2	May - June	Closed-cone-conifer forest, gen serpentine; 600-800 m. Endemic to SLO County	No. Appropriate serpentine soils and coniferous forest habitat are not found on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CRPS Rank	Blooming Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
100	**Guirado's Goldenrod** *Solidago guiradonis*	None/None G3/None 4.3	September – October	Near streams in asbestos-laden soils; 600-900 m. SCoRI	No. Asbestos-laden soils are not found on site.	No	No Effect
101	**Most Beautiful Jewel-flower** *Streptanthus albidus* ssp. *peramoenus*	None/None G2T2/None 1B.2	April - June	Open, grassy or ±barren slopes, often serpentine; ±150-800 m. c SCoRO	No. Serpentine soils are not found on site.	No	No Effect
102	**California Seablite** *Suaeda californica*	FE/None G1/None 1B.1	July - October	Margins of coastal salt marshes; <5 m. CCo	No. Salt marsh habitat is not found on site.	No	No Effect
103	**Splitting Yarn Lichen** *Sulcaria isidiifera*	None/None G1/None 1B.1	n/a	Chaparral, cismontane woodland, on branches of oaks, chamise, Ceanothus; 20-30 m. Los Osos, SLO County.	No. Appropriate habitat is not found on site.	No	No Effect
104	**Saline Clover** *Trifolium hydrophilum*	None/None G2/None 1B.2	April – June	Salt marshes, open areas in alkaline soils; <300m. ScV, nw SnJV, CW	No. Appropriate soils and habitat are not found on site.	No	No Effect
105	**Caper-fruited Tropidocarpum** *Tropidocarpum capparideum*	None/None G1/None 1B.1	March - April	Alkaline clay soil in valley and foothill grassland; 1-455 m. SCoRO, nw SnJV	No. Alkaline clay soil is not found on site.	No	No Effect

Habitat characteristics are from the Jepson Manual and the CNDDB.

Habitat Preference Abbreviations:

CCo: Central Coast
SCo: South Coast
SCoR: South Coast Ranges
SCoRO: Outer South Coast Ranges
SCoRI: Inner South Coast Ranges
SnFrB: San Francisco Bay
TR: Transverse Ranges
WTR: Western Transverse Ranges
SnJV: San Joaquin Valley
ScV: Sacramento Valley
SLO: San Luis Obispo
SN: Sierra Nevada
SnJt: San Jacinto Mtns
SnBr: San Bernardino
Teh: Tehachapi Mtn Area
CW: Central West
SW: South West
DMoj: Mojave Desert
PR: Peninsular Range

Status/Rank Abbreviations:

FE: Federally Endangered
FT: Federally Threatened
PE: Proposed Federally Endangered
PT: Proposed Federally Threatened
CE: California Endangered
CR: California Rare
CT: California Threatened
Cand. CE: Candidate for California Endangered
Cand. CT: Candidate for California Threatened

4.5 Special Status Plants Discussion

Two special status plant species could potentially occur in the Study Area based on analysis of known ecological requirements of these species and habitat conditions observed in the Study Area. No special status plant species were detected in the Study Area during the botanical surveys in May 2014. We discuss each species and describe habitat, range restrictions, known occurrences, and potential to occur for the Study Area.

A. Congdon's Tarplant (*Centromadia [=Hemizonia] parryi* ssp. *congdonii*) is a CRPR 1B.1 subspecies. Congdon's tarplant ranges from Contra Costa County south to San Luis Obispo County. It has no state or federal status. The CNDDB Rarity-Endangerment-Distribution code (R-E-D) lists this subspecies as 3-3-3, meaning it is distributed in one to several highly restricted occurrences (or present in such small numbers that it is seldom reported), is endangered throughout its range, and is endemic to California. The CNDDB lists four occurrences for Congdon's tarplant in San Luis Obispo County. The numerous specimens at the Robert F. Hoover Herbarium at Cal Poly are from only three different localities in San Luis Obispo County. A literature search revealed a total of seven known localities for this rare subspecies in the County, all of which occur in the Los Osos Valley. The nearest occurrence is only 1800 feet away, across Prefumo Creek at the intersection of Froom Ranch Way and Los Osos Valley Road (CNDDB #14). Althouse and Meade, Inc. reported an occurrence for this species approximately 0.75 miles southeast of the project site in ruderal areas surrounding a row crop farm field (Althouse and Meade, Inc., 2004). There is another reported occurrence 1.2 miles southeast of the Study Area (CNDDB #69). There is poor habitat in the Study Area, and the necessary vernal mesic soils are not present, but due to its proximity to these known occurrences Congdon's tarplant may occur. This species was not detected in two May botanical surveys.

B. Jones's Layia (*Layia jonesii*) is a CRPR 1B.2 species endemic to San Luis Obispo County. It grows on open slopes with serpentine or heavy clay soils, blooming from March to May. The Study Area is within the border of the nearest CNDDB occurrence for Jones's layia. This occurrence is 0.65 miles northwest of the Study Area (CNDDB #3) and has an accuracy of 1 mile, making it difficult to ascertain the exact location. The next closest occurrence is 1.7 miles southwest of the Study Area with a 1 mile accuracy (CNDDB #4), meaning that the occurrence could be only 0.7 miles away. Clay soils do occur in the Study Area, but are heavily disturbed. Poor habitat exists in the Study Area, but due its proximity to these known occurrences, Jones's layia may occur onsite. It was not detected in the May 2014 botanical surveys.

4.6 Potential Special Status Animals List

Table 4 lists 50 special status animal species reported from the region. Federal and California State status, global and State rank, and CDFW listing status for each species are given. Typical nesting or breeding period, habitat preference, potential habitat on site, and whether or not the species was observed in the Study Area are also provided.

TABLE 4. SPECIAL STATUS ANIMAL LIST. Fifty special status animals known or reported from the region are listed. Seventeen special status animals could potentially occur in the Study Area based on review of preferred habitat types. Species marked with an asterisk (*) are special status species added to the list from our knowledge of the area.

	Common and Scientific Names	Fed/State Status Global/State Rank CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
1	**Cooper's Hawk** *Accipiter cooperii*	None/None G5/S3 WL	March 15 - August 15	Oak woodland, riparian, open fields. Nests in dense trees, esp. coast live oak.	Yes. Foraging habitat is present, but appropriate nesting sites are not present.	Yes (not nesting)	No Effect
2	**Tricolored Blackbird** *Agelaius tricolor*	None/None G2G3/S2 SSC	March 15 - August 15	Requires open water, protected nesting substrate, & foraging area with insect prey near nesting colony.	No. Appropriate nesting and foraging habitat is not present on site.	No	No Effect
3	**Grasshopper Sparrow** *Ammodramus savannarum*	None/None G5/S2 SSC	March 15 - August 15	Nests in grassland habitats on mountain slopes, foothills, and valleys. May nest colonially.	No. Appropriate grassland habitat is not present on site.	No	No Effect
4	**Black Legless Lizard** *Anniella pulchra nigra*	None/None G3G4T2T3Q/S2 SSC	May - September	Inhabits sandy soil/dune areas with bush lupine and mock heather, from Morro Bay to Monterey Bay.	No. Appropriate habitat is not present on site.	No	No Effect
5	**Silvery Legless Lizard** *Anniella pulchra pulchra*	None/None G3G4T3T4Q/S3 SSC	May - September	Sandy or loose loamy soils under coastal scrub or oak trees. Soil moisture essential.	No. Appropriate soil and habitat is not present on site.	No	No Effect
6	**Pallid Bat** *Antrozous pallidus*	None/None G5/S3 SSC	Spring - Summer	Rock crevices, caves, tree hollows, mines, old buildings, and bridges.	Yes. Appropriate old buildings are present on site.	No	Potentially Adverse Effect can be Mitigated
7	**Golden Eagle** *Aquila chrysaetos*	None/None G5/S3 FP	March 15 - August 15	Nests in large, prominent trees in valley and foothill woodland. Requires adjacent food source.	No. Appropriate woodland habitat is not present on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
8	**Great Blue Heron*** *Ardea herodias*	None/None G5/S4 SA (Rookery only)	March 15 - August 15	Rookeries located in tall trees near foraging areas.	Yes. Tall trees are present on site, and site is located near a known foraging area.	Yes (Rookery)	Potentially Adverse Effect can be Mitigated
9	**Burrowing Owl** *Athene cunicularia*	None/None G4/S3 SSC	March 15 - August 15	Burrows in squirrel holes in open habitats with low vegetation.	Unlikely. Minimal ground squirrel presence on site.	No	No Effect
10	**Oak Titmouse*** *Baeolophus inornatus*	None/None G5/S3 SA	March 15 - August 15	Nests in cavities in oak woodland habitat. Non-migratory.	Yes. Foraging habitat is present, but but appropriate nesting sites are not present.	Yes (not nesting)	No Effect
11	**Vernal Pool Fairy Shrimp** *Branchinecta lynchi*	FT/None G3/S2S3 SA	Rainy Season	Clear water sandstone depression pools, grassed swale, earth slump, or basalt flow depression pools.	No. Appropriate habitat is not present on site.	No	No Effect
12	**Ferruginous Hawk** *Buteo regalis*	None/None G4/S3S4 WL	October - April (Wintering)	Winters locally in open grassland or savannah habitats. More common in interior SLO County than coast.	No. Appropriate grassland habitat is not present on site.	No	No Effect
13	**Western Snowy Plover** *Charadrius alexandrinus nivosus*	FT/None G3T3/S2 SSC	March 15 - August 15	Sandy beaches, salt pond levees, and shorelines of large alkali lakes. Needs friable soils for nesting.	No. Appropriate habitat is not present on site.	No	No Effect
14	**Sandy Beach Tiger Beetle** *Cicindela hirticollis gravida*	None/None G5T2/S1 SA	n/a	Adjacent to non-brackish water near the coast from San Francisco to N. Mexico. Clean, dry, light-colored sand in the upper zone.	No. Appropriate habitat is not present on site.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
15	**Western Yellow-billed Cuckoo** *Coccyzus americanus occidentalis*	PT/CE G5T3Q/S1 SA	March 15 - August 15	Nests in riparian jungles of willow, cottonwood, w/ blackberry, nettles, or wild grape understory. Typically found in larger river systems.	No. Appropriate dense riparian habitat is not present on site.	No	No Effect
16	**Globose Dune Beetle** *Coelus globosus*	None/None G1/S1 SA	n/a	Coastal sand dune habitat. Inhabits foredunes and sand hummocks.	No. Appropriate habitat is not present on site.	No	No Effect
17	**Olive-sided Flycatcher*** *Contopus cooperi*	None/None G4/S4 SSC (Nesting)	March 1 - August 31	Nests in mixed conifer, montane hardwood-conifer forests in California and elsewhere in North America.	Yes. Suitable migration stop-over site, but appropriate nesting habitat is not present.	Yes (not nesting)	No Effect
18	**Townsend's Big-eared Bat** *Corynorhinus townsendii*	None/Cand. CT G3G4/S2S3 SSC	Spring - Summer	Caves, buildings, and mine tunnels. Cave like attics as day roosts. On coast roosts are normally within 100 m. of creeks.	Yes. Appropriate old buildings are present on site.	No	Potentially Adverse Effect can be Mitigated
19	**Monarch Butterfly** *Danaus plexippus*	None/None G5/S3 SA	September - March (aggregations)	Roosts located in wind-protected tree groves with nectar and water nearby.	Yes. Stands of large eucalyptus in the appropriate configuration are present.	No	Potentially Adverse Effect can be Mitigated
20	**Morro Bay Kangaroo Rat** *Dipodomys heermanni morroensis*	FE/CE G3G4T1/S1 FP	n/a	Coastal sage scrub on the south side of Morro Bay. Needs sandy soil, but near active dunes, prefers early seral stages.	No. Appropriate dune habitat is not present on site.	No	No Effect
21	**White-tailed Kite** *Elanus leucurus*	None/None G5/S3 FP	March 15 through August 15	Nests in dense tree canopy near open foraging areas.	Unlikely. Poor quality potential nesting habitat (dense eucalyptus) is present on the property, foraging area at Laguna Lake.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
22	**Western Pond Turtle** *Emys marmorata*	None/None G3G4/S3 SSC	April - August	Permanent or semi-permanent streams, ponds, lakes.	Yes. Appropriate creek habitat is present on site, and Study Area is nearby confluence with San Luis Obispo Creek.	No	Potentially Adverse Effect can be Mitigated
23	**California Horned Lark** *Eremophila alpestris actia*	None/None G5T3Q/S3 WL	March 15 - August 15	Nests on the ground in open habitats. More common in the interior.	No. Appropriate habitat is not present on site.	No	No Effect
24	**Tidewater Goby** *Eucyclogobius newberryi*	FE/None G3/S2S3 SSC	n/a	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	No. Appropriate habitat is not present on site.	No	No Effect
25	**Western Mastiff Bat** *Eumops perotis californicus*	None/None G5T4/S3? SSC	Spring-Fall	Roosts in crevices in cliff faces, high buildings, trees, and tunnels. Inhabits many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral.	No. Appropriate roosting habitat is not present on site.	No	No Effect
26	**Merlin** *Falco columbarius*	None/None G5/S3 WL	September - April (Wintering)	Winters on seacoasts, estuaries, woodlands, savannas, grassland edges, deserts.	Yes. Appropriate wintering habitat is present on site.	No	No Effect
27	**Prairie Falcon** *Falco mexicanus*	None/None G5/S3 WL	March 15 - August 15	Inhabits dry, open terrain. Nests on cliffs near open areas for hunting.	No. Appropriate habitat is not present on site.	No	No Effect
28	**Morro Shoulderband (=Banded Dune) Snail** *Helminthoglypta walkeriana*	FE/None G1/S1 SA	n/a	Restricted to the coastal strand and sage scrub habitats in the immediate vicinity of Morro Bay.	No. Appropriate habitat is not present on site; Study Area is outside known range of Species.	No	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
29	**Loggerhead Shrike** *Lanius ludovicianus*	None/None G4/S4 SSC	March 15 - August 15	Open areas with appropriate perches, near shrubby vegetation for nesting.	No. Appropriate habitat is not present on site.	No	No Effect
30	**California Black Rail** *Laterallus jamaicensis coturniculus*	None/CT G4T1/S1 FP	March 15 - August 15	Occurs in tidal salt marsh heavily grown to pickleweed, also in freshwater and brackish marshes near the coast.	No. Appropriate salt marsh habitat is not present on site.	No	No Effect
31	**California Linderiella** *Linderiella occidentalis*	None/None G3/S2S3 SA	Rainy season	Seasonal pools in unplowed grasslands with alluvial soils.	No. Appropriate habitat is not present on site.	No	No Effect
32	**San Diego Desert Woodrat** *Neotoma lepida intermedia*	None/None G5T3?/S3? SSC	n/a	Moderate to dense canopies preferred. Abundant in rocky areas, outcrops. Ranges from San Diego to SLO Counties.	No. Appropriate habitat is not present on site.	No	No Effect
33	**Big Free-tailed Bat** *Nyctinomops macrotis*	None/None G5/S2 SSC	Spring - Summer	Low lying arid areas in Southern California with rock outcrops or cliffs.	No. Appropriate habitat is not present on site.	No	No Effect
34	**Steelhead - South/Central California Coast DPS** *Oncorhynchus mykiss irideus*	FT/None G5T2Q/S2 SSC	February - April	Fed listing refers to runs in coastal basins from Pajaro River south to, but not including, the Santa Maria River.	Yes. Prefumo Creek is historic habitat.	No	Potentially Adverse Effect can be Mitigated
35	**Coast horned Lizard** *Phrynosoma blainvillii*	None/None G3G4/S3S4 SSC	May - September	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	No. Appropriate habitat is not present on site.	No	No Effect
36	**Nuttall's Woodpecker*** *Picoides nuttallii*	None/None G5/SNR SA	March 15 - August 15	Nests in standing snag or hollow tree in oak woodland and oak forest habitats.	Yes. Foraging habitat is present, but but appropriate nesting sites are not present.	Yes (not nesting)	No Effect

	Common and Scientific Names	Fed/State Status Global/State Rank CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
37	**Morro Bay Blue Butterfly** *Plebejus icarioides moroensis*	None/None G5T1T3/S1S3 SA	n/a	Inhabits stabilized dunes and surrounding areas in coastal SLO County (Morro Bay) and nw SB County.	No. Appropriate dune habitat is not present on site.	No	No Effect
38	**Atascadero June Beetle** *Polyphylla nubila*	None/None G1/S1 SA	n/a	Known only from sand dunes in Atascadero and San Luis Obispo, San Luis Obispo County.	No. Appropriate dune habitat is not present on site.	No	No Effect
39	**Purple Martin** *Progne subis*	None/None G5/S3 SSC	March 15 through August 15	In San Luis Obispo County prefers nesting in Sycamore trees along riparian corridors.	No. Sycamores are not present on site.	No	No Effect
40	**San Luis Obispo Pyrg** *Pyrgulopsis taylori*	None/None G1/S1 SA	n/a	Freshwater habitats in San Luis Obispo County.	No. Only seasonal freshwater habitat is found on site.	No	No Effect
41	**California Clapper Rail** *Rallus longirostris obsoletus*	FE/CE G5T1/S1 FP	March 15 through August 15	Saltwater & brackish marshes traversed by tidal sloughs.	No. Appropriate habitat is not present on site.	No	No Effect
42	**Foothill Yellow-legged Frog** *Rana boylii*	None/None G3/S2S3 SSC	March - September	Partly shaded, shallow streams and riffles with rocky substrate. Min. 15 weeks for larval development.	No. Appropriate habitat is not present on site.	No	No Effect
43	**California Red-legged Frog** *Rana draytonii*	FT/None G2G3/S2S3 SSC	January - September	Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks for larval development.	Yes. Appropriate creek habitat is present on site, and Study Area is nearby confluence with San Luis Obispo Creek.	No	Potentially Adverse Effect can be Mitigated
44	**Allen's Hummingbird*** *Selasphorus sasin*	None/None G5/SNR SA	March 15 - August 15	Nests in coastal lowlands in coastal sage scrub, soft chaparral, riparian, oak woodlands and other coastal forest habitats.	Yes. Moderately appropriate riparian nesting habitat is present on site.	Yes (not nesting)	Potentially Adverse Effect can be Mitigated

	Common and Scientific Names	Fed/State Status Global/State Rank CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential Habitat?	Detected in Study Area?	Effect of Proposed Activity
45	**Yellow Warbler*** *Setophaga petechia brewsteri*	None/None G5T3/S2 SSC	March 15 - August 15	Nests in riparian plant associations, including willows, cottonwoods, etc.	Yes. Appropriate nesting habitat is not present on site. Suitable migration stop-over habitat is present.	Yes (not nesting)	No Effect
46	**Western Spadefoot** *Spea hammondii*	None/None G3/S3 SSC	January – August	Vernal pools in grassland and woodland habitats	No. Appropriate habitat is not present on site.	No	No Effect
47	**Coast Range Newt** *Taricha torosa*	None/None G4/S4 SSC	December - May	Slow moving streams, ponds, and lakes with surrounding evergreen/oak forests along coast.	No. Appropriate habitat is not present on site.	No	No Effect
48	**American Badger** *Taxidea taxus*	None/None G5/S4 SSC	February – May	Needs friable soils in open ground with abundant food source such as California ground squirrels.	No. Minimal ground squirrel presence on site.	No	No Effect
49	**Two-striped Garter Snake*** *Thamnophis hammondii*	None/None G2G3/S2 SSC	Spring	Coastal California from Salinas to Baja, sea level to 7000', aquatic, in or near permanent water, streams with rocky beds and riparian growth	Yes. Poor to moderate riparian habitat is present.	No	Potentially Adverse Effect can be Mitigated
50	**Mimic Tryonia (=California Brackishwater Snail)** *Tryonia imitator*	None/None G2G3/S2S3 SA	n/a	Inhabits coastal lagoons, estuaries, salt marshes from Sonoma to San Diego Counties.	No. Appropriate habitat is not present on site.	No	No Effect

Habitat characteristics are from the CNDDB.
*not listed in the CNDDB or CNPS for the search area, but possibly for the location.

Abbreviations:

FE: Federally Endangered
FT: Federally Threatened
PE: Proposed Federally Endangered
PT: Proposed Federally Threatened
CE: California Endangered
CT: California Threatened
Cand. CE: Candidate for California Endangered
Cand. CT: Candidate for California Threatened
SA: CDFW Special Animal
SCC: CDFW Species of Special Concern
FP: CDFW Fully-Protected
WL: CDFW Watch List

4.7 Special Status Animals Discussion

Seventeen special status animal species could potentially occur in the Study Area. Below we discuss each species and describe habitat, range restrictions, known occurrences, and survey results.

A. Cooper's Hawk (*Accipiter cooperii*) is a Special Animal that occurs regularly in San Luis Obispo County during the winter months and during spring and fall migration. It is generally regarded as a regular but uncommon nesting species in San Luis Obispo County. Cooper's hawks frequent oak and riparian woodland habitats, and increasingly urban areas, where they prey primarily upon small birds. There is no appropriate oak tree nesting habitat present in the Study Area, and there are no reports in the CNDDB of Cooper's Hawks nesting in the San Luis Obispo area. However, there is ample foraging habitat and ample prey in the form of small birds. A Cooper's hawk was seen in the Study Area during the April 29 survey. The bird was flushed from its perch in a large eucalyptus tree next to Prefumo Creek. Cooper's hawks may forage within the Study Area but they are highly unlikely to nest there.

B. Pallid Bat (*Antrozous pallidus*) is a California Species of Special Concern. This is a large, long-eared bat occurring throughout the state from deserts to moist forests. *Antrozous pallidus* is primarily a crevice roosting species and selects roosts where they can retreat from view. They frequently occur in oak woodlands where they roost in tree cavities. These roosts are generally day or night roosts for one or a few bats. Attics may be used as roosts and during hot days they may emerge from crevices and roost on open rafters. This species has been recorded at 22 localities in San Luis Obispo County (Pierson 2002). There are several records of Pallid bat in the San Luis Obispo area, the nearest of which was less than 2 miles to the northeast (CNDDB #77). Pallid bat could occur in the structures in the Study Area. No pallid bats were detected in the Study Area.

C. Great Blue Heron (*Ardea herodias*) is a large wading bird that occurs in a variety of habitats from wetlands to pastures where it forages for fish, small mammals, and other small wildlife. They nest in colonies at the top of large snags or live trees, and their nesting colonies are given Special Animal status by CDFW due to state-wide declines in heron rookeries. Great blue herons have been nesting in the Study Area since at least 1979, though not always in the same trees (Envicom 1982, Rincon Consultants Inc., 2004) There is currently an active great blue heron rookery in the Study Area, located in the stand of blue gum eucalyptus between the Post Office and the farm buildings. The rookery consists of six nests, at least three of which contained nestlings during the survey period.

D. Burrowing Owl (*Athene cunicularia*) is a small, rare owl that nests in abandoned holes in the ground, most notably those of the California ground squirrel. It is listed as a California Species of Special Concern. Burrowing owls are a common resident in local areas of the interior, from the Bitterwater Valley to the Carizzo Plains and elsewhere. Less frequent reports are from coastal grasslands. There is one record of a pair of burrowing owls wintering at Camp San Luis Obispo in 2003, approximately 6 miles north of the Study Area (CNDDB #573). Very few suitable burrows were found in the

Study Area, appropriate foraging habitat is not present, and no signs of burrowing owls were found during surveys. Burrowing owls are highly unlikely to occur in the Study Area.

E. Oak Titmouse (*Baeolophus inornatus*) is a Special Animal that is an oak woodland obligate, nesting in cavities in oak trees. It is a common species in oak woodlands on the central coast, but is tracked by the CDFW due to state-wide losses of oak woodland habitat. They nest in cavities in oak trees but may forage in a wide variety of habitats. There are no oak trees in the Study Area, and no nesting habitat for the oak titmouse, but they may venture into the Study Area from adjacent properties to forage. One oak titmouse was seen foraging in the Study Area.

F. Olive-sided Flycatcher (*Contopus cooperi*) is a California Species of Special Concern that nests in mixed conifer and montane hardwood-conifer forests in California and elsewhere in North America. During migration, they may forage in a wide variety of habitats. There is no suitable nesting habitat for olive-sided flycatchers in the Study Area, but there is ample foraging habitat. One olive-sided flycatcher was detected during the April 29 survey, most likely a migratory individual. No other individuals were detected during later surveys. Olive-sided flycatchers do not breed in the Study Area.

G. Townsend's Big-eared Bat (*Corynorhinus townsendii*) is a California Species of Special Concern. They have been recorded in a number of different habitats in California. In our area they are both found consistently in the vicinity of creek beds where they use the riparian corridor for foraging. Typical roost sites are in caves or buildings with cave-like features. Townsend's big-eared bat is sedentary and is presumed to spend the winter within 25 miles of its summer roosts. This bat has been recorded in at least six localities within San Luis Obispo County (Pierson 2002). There are two records of Townsend's big-eared bat in the CNDDB, the nearest of which is approximately 10 miles northeast (CNDDB #119). Townsend's big-eared bat could possibly occur in the structures in the Study Area. No Townsend's big-eared bats were detected in the Study Area.

H. Monarch Butterfly (*Danaus plexippus*) is a Special Animal that migrates in the fall to wintering locations along the coast of central and southern California, and on mainland Mexico. There are more than 50 known wintering sites in San Luis Obispo County (Xerces Society 2014). Eucalyptus groves on the property were recorded as harboring small winter aggregations in the 1980s and 1990s. The site is designated in the CNDDB as Prefumo Creek (CNDDB #253). The most recent recorded sighting was 100 monarch butterflies in January 1998. Monarchs have not been noted in the Study Area since then, but no winter surveys have been done since 1998. Based on the condition of the trees in the former overwintering grove, monarchs are unlikely to use the grove as an overwintering site. It is possible they may still use it as a transitional (autumnal) site in autumn.

I. White-tailed Kite (*Elanus leucurus*) is a Fully Protected species that nests primarily in evergreen trees, especially coast live oaks, near meadows, marshes, or grasslands. There are several records of nesting white-tailed kites in the San Luis Obispo area, the nearest of which was less than five miles away at El Chorro Regional Park (CNDDB #103). In

every instance, the birds nested in oak trees in either oak savannah or riparian woodland. Moderate to poor quality nesting habitat is present in the eucalyptus forest in the Study Area. There is no appropriate foraging habitat in the Study Area but foraging habitat is present across Madonna Road at Laguna Lake. White-tailed kites are unlikely to nest in the Study Area but they may roost in the eucalyptus trees. No white-tailed kites were detected during surveys.

J. Western Pond Turtle (*Emys marmorata*) is a California Species of Special Concern that inhabits ponds and slow moving streams with adequate pools. Pond turtles will move up seasonal streams during the winter months, and can over-summer in underground burrows during dry years when ponds are empty. CNDDB contains numerous reports within the project vicinity, including a record of pond turtles at the confluence of San Luis Obispo Creek and Prefumo Creek approximately half a mile south of the Study Area (CNDDB #1162). Pond turtles could move up Prefumo Creek into the Study Area when conditions are right. No pond turtles were detected in the Study Area during spring surveys.

K. Merlin (*Falco columbarius*) is a Special Animal that winters in various habitats in San Luis Obispo County. Merlins do not breed locally. Appropriate roosting habitat is present in the eucalyptus trees in the Study Area. There is poor quality foraging habitat in the Study Area but appropriate foraging habitat present nearby at Laguna Lake. Winter bird surveys were not conducted on the property. Merlin may use habitats on the property seasonally for roosting, but will not breed on site. No merlins were detected in the Study Area during spring surveys.

L. Steelhead - South/Central California Coast ESU (*Oncorhynchus mykiss irideus*) is a federally listed threatened species in this area of California. The National Marine Fisheries Service (NMFS) is the agency responsible for review for this federally listed species. The nexus for NMFS review is the permit process with the United States Army Corps of Engineers. Steelhead are known to occur in coastal streams and rivers in San Luis Obispo County, including San Luis Obispo Creek and its tributaries. The San Luis Obispo Creek watershed accounts for approximately 25 percent of available steelhead rearing habitat in San Luis Obispo County (Becker et al. 2010). Steelhead have been documented in Prefumo Creek in high water years, though there is a lack of spawning gravel within the creek (City of San Luis Obispo 1998). Therefore project details should be carefully considered with respect to storm water quality, public access, and habitat impacts related to the development.

M. Nuttall's Woodpecker (*Picoides nuttallii*) is a Special Animal tracked by the CDFW due to statewide reduction in preferred oak woodland habitats. Nuttall's woodpeckers remain fairly common residents in oak woodland habitats throughout Santa Barbara and San Luis Obispo Counties. There are no oak trees in the Study Area, and no nesting habitat for Nuttall's woodpecker, but they may venture into the Study Area from adjacent properties to forage. One Nuttall's woodpecker was seen foraging in the Study Area.

N. California Red-legged Frog (*Rana draytonii*) is a federally listed threatened species known from sporadic occurrences documented throughout San Luis Obispo County. It generally requires seasonal pools or streams that hold water until late summer for

successful breeding. Bullfrogs and introduced fish are detrimental to its breeding success, and have severely reduced many populations in larger watercourses and perennial ponds. Prefumo Creek connects to San Luis Obispo Creek approximately half a mile downstream. San Luis Obispo Creek is known to harbor red-legged frogs at this confluence (CNDDB #895), and they may move into Prefumo Creek if the appropriate amount of water is present. No California red-legged frogs were observed during site visits.

O. Allen's Hummingbird (*Selasphorus sasin*) is a Special Animal tracked by CDFW, which nests in coastal lowlands in coastal sage scrub, soft chaparral, riparian, oak woodlands and other coastal forest habitats. They have a restricted breeding range in North America, breeding only in a narrow area along the coast from southern Oregon to southern California. Males and females have different habitat preferences; while the males defend territories in open coastal scrub or riparian shrubs, females choose nest sites in dense vegetation. The riparian habitat present in the Study Area is only moderately appropriate for nesting Allen's hummingbirds, though there is plentiful foraging habitat. One Allen's hummingbird was observed during the April 29 survey, feeding on red ironbark flowers in the riparian habitat south of the Post Office. No evidence of nesting was seen.

P. Yellow Warbler (*Setophaga petechia brewsteri*) is a California Species of Special Concern with a restricted breeding range in Central and Southern California. The status of this subspecies of yellow warbler is described by the CNDDB as "restricted range, rare." They frequent riparian habitats, nesting in sycamores, cottonwoods, willows, and other riparian trees. There are no breeding records in the CNDDB for yellow warbler in San Luis Obispo County; however, yellow warbler is a regular spring and fall migrant that will breed in the County. The riparian habitat in Prefumo Creek and in the seasonal drainage is poor nesting habitat, but suitable for foraging. Yellow warblers are highly unlikely to breed in the Study Area, but will stop and forage during migration. Multiple yellow warblers were seen foraging in the willows south of the Post Office in the seasonal drainage during spring surveys.

Q. Two-striped Garter Snake (*Thamnophis hammondii*) is a California Species of Special Concern that occurs along the coast from Monterey County south to San Diego County. Its range extends throughout the Transverse and Peninsular Ranges, including desert localities near Victorville, and also on Catalina Island. Two-striped garter snakes are an aquatic species that feeds primarily on fish, amphibians and their larvae. There are no reports of two-striped garter snakes in the San Luis Obispo area in the CNDDB, but suitable riparian habitat exists in San Luis Obispo Creek half a mile south of the Study Area, and moderate to poor quality riparian habitat exists in Prefumo Creek. No two-striped garter snakes were seen in the Study Area.

4.8 Special Status Species Not Expected to Occur

The remaining 136 special status species reported to occur in the Morro Bay South, San Luis Obispo, Lopez Mountain, Port San Luis, Arroyo Grande NE, Oceano, and Pismo Beach quadrangles are not expected to occur in the Study Area due to the absence of required soil type, lack of appropriate habitat, or because the Study Area is substantially outside the known range of the species.

4.9 Potential Sensitive Natural Communities

The CNDDB reports nine sensitive natural communities in the Morro Bay North, Atascadero, Santa Margarita, Morro Bay South, San Luis Obispo, Lopez Mountain, Port San Luis, Pismo Beach, and Arroyo Grande quadrangles. None of the below sensitive natural communities is found in the Study Area.

TABLE 5. POTENTIAL SENSITIVE NATURAL COMMUNITIES.

	Common Name	Global/State Rank	Potential Habitat?	Effect of Proposed Activity
1	**Central Dune Scrub**	G2/S2.2	No. Dune habitat is not found on site.	No Effect
2	**Central Foredunes**	G1/S1.2	No. Dune habitat is not found on site.	No Effect
3	**Central Maritime Chaparral**	G2/S2.2	No. Chaparral is not present on site.	No Effect
4	**Coastal and Valley Freshwater Marsh**	G3/S2.1	No. Wetland habitat is not present on site.	No Effect
5	**Coastal Brackish Marsh**	G2/S2.1	No. Marsh habitat is not found on site.	No Effect
6	**Northern Coastal Salt Marsh**	G3/S3.2	No. Marsh habitat is not found on site.	No Effect
7	**Northern Interior Cypress Forest**	G2/S2.2	No. There is only a few cypress trees on site and no cypress forest.	No Effect
8	**Serpentine Bunchgrass**	G2/S2.2	No. Serpentine soils are not found on site.	No Effect
9	**Valley Needlegrass Grassland**	G3/S3.1	No. Needlegrass is not found on site.	No Effect

5.0 Habitat Types

We describe six habitat types in the Study Area and provide approximate acreages for each habitat type present during 2014 (Table 6): cropland, eucalyptus forest, anthropogenic/ruderal, riparian, and annual grassland. The Habitat Map (Figure 6) provided in Section 13 indicates the locations of each habitat type in the Study Area as of 2014. No sensitive natural communities occur in the Study Area.

TABLE 6. HABITAT DATA. The approximate acreage and location are provided for all habitat types occurring in the Study Area.

Habitat Type	Approx. Acreage
Cropland	110
Eucalyptus forest	12
Anthropegenic/Ruderal	6
Riparian	1
Ephemeral drainage	n/a
Annual grassland	2

5.1 Cropland

The dominant habitat type in the Study Area is cropland, which covers approximately 110 acres. The City of San Luis Obispo Land Use and Circulation Elements Update (LUCE) designates this land as prime farmland if irrigated. The cropland is continuously planted and plowed, and a variety of crops such as broccoli, lettuce, celery, and peas have been planted and irrigated.

5.2 Eucalyptus forest

Blue gum eucalyptus forest covers approximately 12 acres of the study area. The trees were planted around the turn of the century, and many are 80-100 feet tall. The understory beneath the eucalyptus stand southwest of the Post Office mainly consists of non-native grasses, goose grass (*Galium aparine*) and periwinkle (*Vinca major*). Southwest of the farm buildings and east of Prefumo Creek there is an approximately 6-acre blue gum eucalyptus plantation, which has an understory of non-native grasses and non-native ruderal forbs. On the western edge of this eucalyptus stand, near Prefumo Creek, the understory also consists of native shrubs including toyon (*Heteromeles arbutifolia*), coast live oak (*Quercus agrifolia*), and coffeeberry (*Frangula californica).* In other places, there is little understory due to the build-up of fallen eucalyptus leaves and woody debris. The eucalyptus forest provides nesting habitat for raptors, great blue herons, and a variety of songbirds, and roosting habitat for owls and turkey vultures. It also provides foraging habitat for birds and small mammals. The largest eucalyptus stand in the Study Area is a historic monarch butterfly overwintering site.

The overall health of the eucalyptus trees in the Study Area is degraded due to senescence and neglect. Several decades ago, most of the trees were cut down and allowed to re-sprout from stumps. This has resulted in an abundance of multi-trunked trees, many of which are structurally unsound. Arborist evaluation of 180 eucalyptus trees in the Study Area found 114 trees (63%) to be dead or hazardous and should be removed. An additional 40 trees (22%) might have to be removed, for a total of 85% of the eucalyptus trees inspected in unhealthy condition. Only eight trees (4.4%) were assessed as being in good health.

5.3 Anthropogenic/Ruderal

Anthropogenic and ruderal habitat covers approximately 6 acres of the Study Area. In the northwest portion of the Study Area there are two houses, three barns, and a handful of sheds and small outbuildings. There are many old trailers, trucks, and vehicles parked to the east and northeast of the structures. There are ornamental trees and shrubs planted around the houses. There are two entrances to this part of the Study Area off of Madonna Road, which are connected by a hard-packed dirt road. There are dirt roads around the buildings and over to where the trailers and vehicles are parked. Ruderal habitat surrounds the buildings, dirt roads, and abandoned vehicles, dominated by slender oat grass (*Avena barbata*), ripgut brome (*Bromus diandrus*), Italian thistle (*Carduus pycnocephalus*) and poison hemlock (*Conium maculatum*). A variety of mostly non-native ruderal forbs and grasses are present in the area. Two non-native bird species actively nest in the barns: rock pigeon and European starling. These structures may also house roosting colonies of bats.

5.4 Riparian

Prefumo Creek runs along the western edge of the Study Area, flowing south from Laguna Lake, under Madonna Road and into San Luis Obispo Creek. This riparian corridor is dominated by arroyo willow (*Salix lasiolepis*), but is invaded by non-native trees such as Canary Island date palm (*Phoenix canariensis*) which have encroached from residential yards on the west side of the creek. The eastern creek bank is lined with mature blue gum eucalyptus. Prefumo Creek is an important connection between San Luis Obispo Creek and Laguna Lake, and could provide important habitat in high-water years for sensitive herpetofauna such as California red-legged frog and western pond turtle. Prefumo Creek is often seasonally dry, and water flow is subsurface during summer months.

Riparian habitat also occurs in the eastern portion of the ephemeral drainage for a distance of approximately 400 linear feet, from Dalidio Drive to the southwest corner of the Post Office parking lot. The riparian habitat in this portion of the drainage is dominated by mature arroyo willow, red ironbark (*Eucalyptus sideroxylon),* umbrella sedge (*Cyperus eragrostis*), poison hemlock (*Conium maculatum*), and Harding grass (*Phalaris aquatic*).

5.5 Ephemeral Drainage

Approximately 1,650 linear feet of ephemeral drainage runs across the northwest portion of the Study Area. The drainage crosses into the Study Area just east of the Post Office, runs southwest, and flows into Prefumo Creek approximately 700 feet south of where Prefumo Creek crosses under Madonna Road. The eastern portion of the drainage is dominated by riparian habitat (refer to Section 5.4 above). The western portion of the drainage lacks any large shrubs and is mainly dominated by Harding grass and ruderal forbs. The eastern end of the drainage

provides excellent shelter and foraging habitat for small mammals and birds, and is of value as migratory stopover habitat for sensitive species such as yellow warbler.

5.6 Annual Grassland

Non-native annual grassland covers approximately 2 acres of the Study Area, in the northwest section between the Post Office and a stand of blue gum eucalyptus. This area is dominated by non-native grasses, including slender wild oat (*Avena barbata*) and Harding grass. The southern portion of the grassland is being invaded by coyotebush (*Baccaris pilularis*). This grassland habitat is currently of low botanical value, as no native grass species were found during surveys. This area could provide habitat for a variety of small mammals, and therefore could be foraging habitat for raptors and mesocarnivores.

6.0 Botanical Inventory

6.1 Botanical Survey Results

Botanical surveys conducted in May 2014 identified 63 species, subspecies, varieties, and hybrids of vascular plant taxa in the Study Area (Table 7). The list includes 18 species native to California and 45 introduced (naturalized or planted) species. No special status plant species occur in the Study Area. Native plant species account for approximately 29 percent of the taxa within the Study Area; introduced species account for approximately 71 percent.

TABLE 7. PRELIMINARY VASCULAR PLANT LIST. The 63 species of vascular plants identified in the Study Area consist of 18 native species and 45 planted or introduced species. The vascular plant list is separated into general life form categories, within which the taxa are listed alphabetically by scientific name.

Scientific Name	Status	Origin	Common Name
Trees - 9 species			
Betula pendula	None	Planted	Silver birch
Eucalyptus globulus	None	Introduced	Blue-gum
Eucalyptus sideroxylon	None	Introduced	Red Ironbark
Hesperocyparis [=Cupressus] macrocarpa	List 1B.2	Planted	Monterey cypress
Phoenix canariensis	None	Introduced	Canary Island date palm
Platanus x *hispanica [=P. x acerifolia]*	None	Planted	London plane
Quercus agrifolia var. *agrifolia*	None	Native	Coast live oak
Salix lasiolepis	None	Native	Arroyo willow
Schinus molle	None	Introduced	Pepper tree
Shrubs – 9 species			
Baccharis pilularis	None	Native	Coyote brush
Frangula [=Rhamnus] californica ssp. *californica*	None	Native	Coffeeberry
Heteromeles arbutifolia	None	Native	Toyon

Scientific Name	Status	Origin	Common Name
Lonicera sp.	None	Native	Honeysuckle
Opuntia sp.	None	Planted	Prickly pear
Prunus ilicifolia ssp. *Ilicifolia*	None	Native	Holly-leaf cherry
Rubus armeniacus [=R. discolor]	None	Introduced	Himalayan blackberry
Rubus ursinus	None	Native	California blackberry
Toxicodendron diversilobum	None	Native	Poison oak
Herbs – 36 species			
Anagallis arvensis	None	Introduced	Scarlet pimpernel
Artemisia douglasiana	None	Native	Mugwort
Asclepias fascicularis	None	Native	Narrow-leaved milkweed
Brassica nigra	None	Introduced	Black mustard
Carduus pycnocephalus	None	Introduced	Italian thistle
Chenopodium album	None	Introduced	Lamb's-quarters
Conium maculatum	None	Introduced	Poison hemlock
Convolvulus arvensis	None	Introduced	Bindweed
Cyperus eragrostis	None	Native	Umbrella sedge
Dipsacus sp.	None	Introduced	Teasel
Eleocharis sp.	None	Native	Spikerush
Epilobium brachycarpum	None	Native	Annual willow-herb
Erodium sp.	None	Introduced	Filaree
Euphorbia spathulata	None	Native	Spurge
Foeniculum vulgare	None	Introduced	Fennel
Galium aparine	None	Native	Goose grass
Geranium dissectum	None	Introduced	Geranium
Helminthotheca [=*Picris*] *echioides*	None	Introduced	Bristly ox-tongue
Hirschfeldia incana	None	Introduced	Mustard
Malva parviflora	None	Introduced	Cheeseweed
Matricaria [=Chamomilla] discoidea	None	Introduced	Pineapple weed
Oxalis pes-caprae	None	Introduced	Bermuda buttercup
Pelargonium sp.	None	Planted	Geranium
Plantago coronupus	None	Native	Buckhorn plantain
Plantago lanceolata	None	Introduced	English plantain
Portulaca oleracea	None	Introduced	Purslane
Raphanus sativus	None	Introduced	Wild radish
Rumex crispus	None	Introduced	Curly dock
Silybum marianum	None	Introduced	Milk thistle

Scientific Name	Status	Origin	Common Name
Solanum sp.	None	Native	Nightshade
Sonchus asper ssp. *Asper*	None	Introduced	Prickly sow-thistle
Spergularia rubra	None	Introduced	Red sand spurrey
Stellaria media	None	Introduced	Chickweed
Tragopogon sp.	None	Introduced	Goat's beard
Vicia villosa	None	Introduced	Winter vetch
Vinca major	None	Introduced	Periwinkle
Grasses – 9 species			
Avena barbata	None	Introduced	Slender wild oat
Brachypodium distachyon	None	Introduced	False brome
Bromus diandrus	None	Introduced	Ripgut brome
Bromus madritensis	None	Introduced	Brome
Cynodon dactylon	None	Introduced	Bermuda grass
Festuca perennis [=Lolium multiflorum]	None	Introduced	Italian rye grass
Hordeum murinum	None	Introduced	Foxtail barley
Phalaris aquatica	None	Introduced	Harding grass
Stipa [=Piptatherum] miliaceum	None	Introduced	Smilo grass

7.0 Wildlife Inventory

7.1 Wildlife Survey Results

At least one hundred and six (106) animal species are listed that could potentially occur in the Study Area (Table 8). These include at least 10 fish species, 4 amphibians, 8 reptiles, 69 birds, and 15 mammals. Small mammal trapping studies were beyond the scope of this report; however, several small mammal species are likely to occur. We provide this list as a guide to the wildlife observed in the Study Area and to the species that could potentially be present. Other species could occur as transients, particularly avian fauna.

Wildlife species detected in the Study Area include 2 reptile, 52 bird, and 2 mammal species. There is an active great blue heron rookery in the eastern section of the eucalyptus forest, and a large turkey vulture roost which has up to 20 individuals on any given morning. Red-tailed hawks nest in the eucalyptus, and American kestrels also likely nest there. Many songbirds utilize the willows and blooming *Eucalyptus sideroxylon* in the eastern part of the drainage, southeast of the Post Office. Cooper's hawk and great horned owl were found roosting near Prefumo Creek. Alligator lizards and Coast Range fence lizards were spotted in several places around the Study Area. Mule deer were observed foraging in the eucalyptus forest next to Prefumo Creek. A few California ground squirrel burrows were observed in the ruderal and grassland areas.

7.1.1 *Wildlife list*

TABLE 8. WILDLIFE LIST. At least 106 animal species have the potential to occur in the Study Area. The Special Status column indicates listing status of the organism under the Federal Endangered Species Act, the California Endangered Species Act, or by CDFW. Species observed at the site during our surveys are designated by the check symbol (✓) in the fourth column.

Common Name	Scientific Name	Special Status	Found On-site	Habitat Type
Fish – 10 species				
Bullhead Catfish	*Ameiurus sp.*	None		Rivers, creeks, lakes, ponds
Carp	*Cyprinus carpio*	None		Streams, lakes, ponds. Often very shallow, warm water
Pacific lamprey	*Entosphenus tridentata*	None		Coastal streams with an ocean connection
Mosquito Fish	*Gambusia affinis*	None		Rivers, creeks, lakes, ponds
Channel Catfish	*Ictalurus punctatus*	None		Rivers, creeks, lakes, ponds
Bluegill	*Lepomis macrochirus*	None		Rivers, creeks, lakes, ponds
Green Sunfish	*Lepomis cyanellus*	None		Rivers, creeks, lakes, ponds
Largemouth Bass	*Micropterus salmoides*	None		Lakes, ponds
Steelhead - South/Central ESU	*Oncorhynchus mykiss*	FT[1]		Coastal streams with an ocean connection
Speckled Dace	*Rhinichthys osculus*	None		Rivers, creeks, lakes, ponds
Amphibians – 4 species				
California (Western) Toad	*Anaxyrus [=Bufo] boreas halophilus*	None		Grassland, woodland
Sierran Treefrog [=Pacific Chorus Frog]	*Pseudacris sierra* [formerly *P. regilla*]	None		Many habitats near water
Bullfrog	*Rana catesbeiana*	None		Perennial streams, ponds
California Red-legged Frog	*Rana draytonii*	FT[2]		Streams, creeks, and ponds
Reptiles – 8 species				
Western Yellow-bellied Racer	*Coluber constrictor mormon*	None		Grasslands, open areas
California Alligator Lizard	*Elgaria multicarinata multicarinata*	None	✓	Open grassland, woodland, chaparral
Western Pond Turtle	*Emys marmorata*	SSC[3]		Lakes, ponds, streams
California Kingsnake	*Lampropeltis getula californiae*	None		Woodland, grassland, streams
Pacific Gopher Snake	*Pituophis catenifer catenifer*	None		Woodland, grassland, rural
Coast Range [=Western] Fence Lizard	*Sceloporus occidentalis bocourtii*	None	✓	Wide range; variety of habitats
Coast Garter Snake	*Thamnophis elegans terrestris*	None		Many habitats near water

[1] FT = Federally Threatened
[2] FT = Federally Threatened
[3] SSC = California Species of Special Concern

Common Name	Scientific Name	Special Status	Found On-site	Habitat Type
Two-striped Garter Snake	*Thamnophis hammondii*	SSC		Rocky streams, ponds, wetlands.
Birds – 69 species				
Cooper's Hawk	*Accipiter cooperii*	Special Animal[4] (Nesting)	✓	Oak, riparian woodland
Western Scrub-Jay	*Aphelocoma californica*	None	✓	Oak, riparian woodlands
Great Egret	*Ardea alba*	SSC (Rookery Site)	✓	Water habitats, grasslands
Great Blue Heron	*Ardea herodias*	SSC (Rookery Site)	✓	Water habitats, grasslands
Oak Titmouse	*Baeolophus inornatus*	Special Animal (Nesting)	✓	Oak woodland
Cedar Waxwing	*Bombycella cedrorum*	None	✓	Wooded habitat with berry bushes; urban
Great Horned Owl	*Bubo virginianus*	None	✓	Woodland, grassland
Red-tailed Hawk	*Buteo jamaicensis*	None	✓	Open, semi-open country
Red-shouldered Hawk	*Buteo lineatus*	None	✓	Oak, riparian woodlands
California Quail	*Callipepla californica*	None		Shrubby habitats
Anna's Hummingbird	*Calypte anna*	None	✓	Many habitats
Lesser Goldfinch	*Carduelis psaltria*	None	✓	Riparian, oak woodlands
American Goldfinch	*Carduelis tristis*	None	✓	Weedy fields, woodlands
House Finch	*Carpodacus mexicanus*	None	✓	Riparian, grasslands, chaparral, and woodlands
Turkey Vulture	*Cathartes aura*	None	✓	Open country
Swainson's Thrush	*Catharus ustulatus*	None		Mixed woodlands
Belted Kingfisher	*Cerle alcyon*	None	✓	Riparian, lakes and streams
Northern Flicker	*Colaptes auratus*	None		Woodlands
Rock Dove	*Columba livia*	None	✓	Urban areas
Olive-sided Flycatcher	*Contopus cooperi*	SSC	✓	Riparian
American Crow	*Corvus brachyrhynchos*	None	✓	Many habitats, esp. urban
Steller's Jay	*Cyanocitta stelleri*	None	✓	Woodlands
White-tailed Kite	*Elanus leucurus*	Fully Protected		Nests in dense live oaks
Pacific-slope Flycatcher	*Empidonax difficilis*	None	✓	Riparian, oak woodlands
Brewer's Blackbird	*Euphagus cyanocephalus*	None		Open habitats

4 Special Animal refers to all of the animal taxa inventoried by the CNDDB, regardless of their legal or protection status. Refer to discussion of Special Animals in Section 3.5.2.

Common Name	Scientific Name	Special Status	Found On-site	Habitat Type
Merlin	*Falco columbarius*	Special Animal (Wintering)		Open country with adjacent woodlands
American Kestrel	*Falco sparverius*	None	✓	Open, semi-open country
Common Yellowthroat	*Geothlypis trichas*	None	✓	Marshes, streamsides
Barn Swallow	*Hirundo rustica*	None		Riparian, grasslands, lakes
Bullock's Oriole	*Icterus bullockii*	None	✓	Oak, riparian woodlands
Hooded Oriole	*Icterus cucullatus*	None	✓	Urban, mixed woodland
Dark-eyed Junco	*Junco hyemalis*	None	✓	Oak woodland
Song Sparrow	*Melospiza melodia*	None	✓	Oak, riparian woodland
Northern Mockingbird	*Mimus polyglottos*	None	✓	Riparian, chaparral and woodlands. Also urban
Brown-headed Cowbird	*Molothrus ater*	None		Rural areas, ranches
House Sparrow	*Passer domesticus*	None	✓	Urban
Cliff Swallow	*Petrochelidon pyrrhonota*	None		Urban; open areas near water
Black-headed Grosbeak	*Pheucticus melanocephalus*	None	✓	Woodlands
Nuttall's Woodpecker	*Picoides nuttallii*	Special Animal (Nesting)	✓	Oak, riparian woodlands
Downy Woodpecker	*Picoides pubescens*	None		Oak, riparian woodlands
Hairy Woodpecker	*Picoides villosus*	None	✓	Oak, riparian woodlands
California Towhee	*Pipilo crissalis*	None	✓	Brushy habitats
Spotted Towhee	*Pipilo maculatus*	None	✓	Dense brushy areas
Western Tanager	*Piranga ludoviciana*	None	✓	Oak, riparian woodlands
Chestnut-backed Chickadee	*Poecile hudsonica*	None	✓	Mixed woods
Bushtit	*Psaltriparus minimus*	None	✓	Woodlands, chaparral
Ruby-crowned Kinglet	*Regulus calendula*	None		Oak, riparian woodlands
Black Phoebe	*Sayornis nigricans*	None	✓	Near water
Allen's hummingbird	*Selasphorus sasin*	Special Animal (Nesting)	✓	Riparian, chaparral and woodland
Yellow-rumped Warbler	*Setophaga coronata*	None	✓	Woodlands, brush, open country
Yellow Warbler	*Setophaga petechia brewsteri*	SSC	✓	Riparian woodlands
Townsend's Warbler	*Setophaga townsendii*	None		Riparian, oak woodlands
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	None	✓	Riparian, lakes, open areas
Eurasian Collared-Dove	*Streptopelia decaocto*	None	✓	Urban areas
European Starling	*Sturnus vulgaris*	None	✓	Agricultural, livestock areas

Common Name	Scientific Name	Special Status	Found On-site	Habitat Type
Tree Swallow	*Tachycineta bicolor*	None	✓	Oak, riparian woodlands, open areas near water
Violet-green Swallow	*Tachycineta thalassina*	None	✓	Oak, riparian woodlands, open areas near water
Bewick's Wren	*Thryomanes bewickii*	None	✓	Riparian woodland, scrub
House Wren	*Troglodytes aedon*	None	✓	Shrubby areas
American Robin	*Turdus migratorius*	None	✓	Streamsides, woodlands
Western Kingbird	*Tyrannus verticalis*	None	✓	Grasslands, savanna
Barn Owl	*Tyto alba*	None		Agricultural, woodlands
Orange-crowned Warbler	*Vermivora celata*	None	✓	Oak, riparian woodlands
Warbling Vireo	*Vireo gilvus*	None		Oak, riparian woodlands
Hutton's Vireo	*Vireo huttonii*	None		Oak, riparian woodlands
Wilson's Warbler	*Wilsonia pusilla*	None	✓	Oak, riparian woodlands
Mourning Dove	*Zenaida macroura*	None	✓	Open and semi-open habitats
Golden-crowned Sparrow	*Zonotrichia atricapilla*	None		Dense woodlands, brushy areas
White-crowned Sparrow	*Zonotrichia leucophrys*	None		Oak, riparian woodlands
Mammals – 15 species				
Pallid Bat	*Antrozous pallidus*	SSC		Riparian, woodland, urban
Townsend's Big-eared Bat	*Corynorhinus townsendii*	SSC		Arid western desert scrub and pine forest regions
Virginia Opossum	*Didelphis virginiana*	None		Woodlands, streams
Feral Cat	*Felis catus*	None		Varied
Hoary Bat	*Lasiurus cinereus*	None		Variety of habitats, roosts in foliage
Striped Skunk	*Mephitis mephitis*	None		Mixed woods, brush, semi-open country
California Vole	*Microtus californicus*	None		Grassland meadows
California Myotis	*Myotis californicus*	None		Tunnels, hollow trees, buildings, bridges.
Mule Deer	*Odocoileus hemionus*	None	✓	Many habitats
Deer Mouse	*Peromyscus maniculatus*	None		All dry land habitats
Raccoon	*Procyon lotor*	None		Streams, lakes, rock cliffs, dens in trees
Broad-footed Mole	*Scapanus latimanus*	None		Grasslands, agricultural, in moist soils
California Ground Squirrel	*Spermophilus beecheyi*	None	✓	Grasslands
Brush Rabbit	*Sylvilagus bachmani*	None		Brushy habitats
Brazilian Free-tailed Bat	*Tadarida brasiliensis*	None		Variety of habitats; roosts in bridges, buildings, caves

8.0 Project Overview

8.1 General Discussion

The 131-acre Study Area consists of seasonally plowed cropland, eucalyptus forest, ruderal, annual grassland, and riparian habitat. The proposed project includes single and multifamily residential housing, along with commercial and office space and a hotel. A portion of the existing cropland would remain in cultivation as the San Luis Ranch Organic Farm, and most of the large stand of eucalyptus southwest of the current farm buildings would be preserved as open space. The farm buildings would be demolished or moved. A bridge would be constructed over Prefumo Creek to extend Froom Ranch Way to the east, and the eastern bank of Prefumo Creek would be widened. A culvert would be installed in the drainage on the northwest side of the Study Area to allow access to Madonna Road. The drainage would be protected and enhanced. The north end of the drainage is dominated by arroyo willow and red ironbark and provides potential migratory stopover habitat for a wide variety of birds. The riparian habitat in Prefumo Creek provides habitat for birds and small wildlife. The eucalyptus forest provides important nesting habitat for raptors and colonial wading birds, and is a historical overwintering site for monarch butterflies. Sensitive resources detected in the Study Area include yellow warbler, Nuttall's woodpecker, oak titmouse, Cooper's hawk, Allen's hummingbird, olive-sided flycatcher, and nesting great blue herons.

8.2 Regulatory Framework

8.2.1 *CEQA guidance*

The California Environmental Quality Act (CEQA) requires the lead agency to evaluate potential environmental effects of the Project. The lead agency must also identify other State and local agencies (known as responsible agencies) that will be issuing a discretionary approval subject to CEQA for an activity that is part of the Project. The following section of the State CEQA Guidelines provides general direction for the evaluation of biological resource impacts as a part of the environmental review of proposed Projects.

CEQA Guidelines Section 15070 states that a Lead Agency shall prepare or have prepared a mitigated negative declaration for a Project subject to CEQA when the initial study shows that "there is no substantial evidence, in light of the whole record before the agency, that the Project may have a significant effect on the environment, or the initial study identifies potentially significant effects but revisions in the Project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and there is no substantial evidence in light of the whole record before the agency, that the Project as revised may have a significant effect on the environment."

The following definition of a significant effect is defined in Section 15382 of the CEQA Guidelines, "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."

8.2.2 *Federal and state resource protections*

The agencies that administer the Federal Endangered Species Act (FESA) and California Endangered Species Act (CESA) formally list plant and animal species determined to be Threatened or Endangered, and they have adopted regulations to implement these laws to protect such species.

Other federal statutes that provide protection for species and/or their habitats include, but are not limited to, the National Environmental Policy Act (NEPA), the Clean Water Act (for protection of federal wetlands), Bald and Golden Eagle Protection Act (BGEPA), Migratory Bird Treaty Act (MBTA), Executive Order 11990 (wetlands protection), and California Fish and Game Code Sections 1601, 1602, and 1603 (Streambed Alteration Agreements).

9.0 Potential Impacts to Biological Resources

Construction of the Project could affect common and special-status species, nesting birds, cropland, eucalyptus forest, and riparian habitat. Disturbance would occur primarily in cropland and eucalyptus forest habitat, but non-native grassland and ruderal habitat would also be impacted. Riparian habitat would be impacted by the proposed widening of Prefumo Creek and the construction of a bridge over the creek, and may be impacted by the construction of the road off of Dalidio Drive.

9.1 Potential Habitat Impacts

The proposed Project would primarily affect cropland, eucalyptus forest, riparian habitat, and the ephemeral drainage. Ruderal and annual grassland would also be impacted. Habitat types mapped within the Study Area and discussed in this Section are overlaid on an aerial photograph provided as a Biological Resource Map (Figure 7) in Section 13.0.

9.1.1 *Cropland*

Approximately 75 acres of cropland mapped within the Study Area would be affected by the proposed Project. Cropland in the Study Area is poor quality habitat to most plants and wildlife, however some organisms may utilize it. It may provide foraging opportunities for songbirds, small mammals and raptors including special status birds such as Cooper's hawk. It may also provide foraging habitat for the great blue herons nesting in the eucalyptus trees in the northwest section of the Study Area. However, regular tilling of the cropland in the Study Area makes it an inconsistent resource for flora and fauna. Cropland is not a sensitive habitat type and usually does not require mitigation.

9.1.2 *Riparian*

Approximately 0.5 acres of riparian habitat within the Study Area would be impacted by the proposed Project. Proposed bridge construction across Prefumo Creek may entail temporary removal of native vegetation such as arroyo willow. Proposed channel improvements to the eastern portion of the drainage may entail temporary removal of approximately 400 linear feet of native willows and understory vegetation, but would increase drainage functionality and downstream water quality. Impacts to riparian habitat in the Study Area may have impacts on sensitive bird, herpetofauna, and fish species. Riparian habitat is sensitive habitat type and impacts to it typically requires mitigation (refer to Section 10.1).

9.1.3 *Ephemeral drainage*

The proposed Project may impact approximately 1150 linear feet of drainage. A culvert is proposed just west of the Post Office, and the eastern section of drainage would be widened and reformed to allow for improved water quality and flow. Revegetation and habitat restoration would take place (refer to Section 10.1).

9.1.4 *Eucalyptus forest*

Based on preliminary site plans, the proposed Project may impact approximately 9 acres of non-native eucalyptus forest in the Study Area. The trees provide habitat and potential habitat for a wide variety of common and sensitive bird species including nesting red-tailed hawks and great blue herons. At least 20 turkey vultures regularly roost in eucalyptus in the Study Area. The dense understory likely provides shelter and foraging habitat for a variety of small mammals. Several stands of eucalyptus trees would be removed to allow for the widening of Madonna Road. To compensate for the loss of floodplain due to conversion of cropland, the east bank of Prefumo Creek would be widened to allow for increased storm flow, and this may result in the removal of eucalyptus along the east bank of the creek. Eucalyptus forest is not a sensitive habitat type and does not require mitigation, but a survey for nesting birds is recommended prior to any tree removal in the Study Area (refer to Sections 10.2 and 10.3). Setbacks for nesting great blue herons are recommended (see Section 10.3). The eucalyptus forest in the Study Area is also a historic monarch butterfly overwintering site, and protection and enhancement of the core overwintering grove is recommended (refer to Section 10.3).

9.1.5 *Anthropogenic/ruderal*

Approximately 6 acres of anthropogenic and ruderal habitat would be impacted by the proposed Project. The ruderal habitat is highly disturbed and dominated by non-native species, but may provide foraging habitat for songbirds and small mammals. The existing structures and ornamental plants may provide habitat for nesting birds, bats, and small mammals. Ruderal and anthropogenic habitats are not sensitive habitat types and do not require mitigation, but a survey for roosting bats and nesting birds is recommended before demolition of existing structures and removal of habitat (refer to Sections 10.2 and 10.3).

9.1.6 *Annual grassland*

The proposed Project would impact approximately 2 acres of annual grassland. The grassland is fairly disturbed habitat dominated by non-native species, but may provide foraging habitat for songbirds, raptors, and small mammals. This is not a sensitive habitat type and does not require mitigation.

9.2 Potential Impacts to Nesting Birds

Vegetation removal and construction activities associated with the proposed structures could result in adverse impacts to nesting birds if conducted during nesting season (March 15 through August 15). Impacts to nesting birds are expected to be highest where eucalyptus trees are removed along Madonna Road and in other parts of the Study Area, and where riparian habitat is removed or disturbed for bridge construction and widening of Prefumo Creek. Construction of a road next to the northeast end of the drainage could also disturb nesting birds. The potential for eucalyptus and riparian habitat removal to adversely affect nesting birds can be reduced (see Sections 10.2 and 10.3).

9.3 Potential Impacts to Special Status Species

9.3.1 *Special status plants*

Habitat and soil types are only poorly suitable for two special status plants known from the area. Appropriately timed floristic surveys were conducted to determine if either of these species occur in the Study Area. No special status plants were observed in the Study Area.

9.3.2 *Special status reptiles and amphibians*

Potential habitat occurs in the Study Area for three special status reptiles and amphibians: California red-legged frog, western pond turtle, and two-striped garter snake. The riparian habitat in Lower Prefumo Creek is somewhat degraded and currently there is little to no water in several reaches of the creek after three years of drought. In years of average rainfall, appropriate permanent or semi-permanent pool habitat may be present. The creek channel would be widened to accommodate the increase in water flowing into the creek due to loss of cropland in the creek's floodplain, and a bridge would be constructed across the creek. Construction noise and equipment, changes in the flow and hydrology of the creek, and sediment deposits resulting from earthmoving may impact California red-legged frog, western pond turtle, and two-striped garter snake. These three species were not observed in the Study Area during site surveys, but potential habitat exists. Recommendations are provided to avoid or minimize impacts to these special status species (Section 10.3).

9.3.3 *Special status birds*

Great blue herons nest in the blue gum eucalyptus trees in the Study Area, and they may be adversely impacted by the removal of eucalyptus trees. Human disturbance, especially on foot, may lead to temporary or permanent nest abandonment. Set-backs from existing nests are proposed to minimize impacts to nesting herons (refer to Section 10.3, and see Figure 7). Allen's hummingbird may nest in the riparian habitat of the Study Area, and may be adversely impacted by adjacent construction. Preconstruction surveys are recommended prior to activities that affect trees and anthropogenic structures during the nesting season, March 15 to August 15 (refer to Section 10.3).

Several special status species forage in the Study Area, but do not breed there. These include Cooper's hawk, Nuttall's woodpecker, oak titmouse, olive-sided flycatcher, and yellow warbler. Impacts to these species are predicted to be less than significant.

The proposed Project may also impact the wintering habitat of merlin. Removal of eucalyptus trees on site may result in a loss of merlin roosting habitat but effects are predicted to be less than significant. The foraging habitat found in the Study Area is very low quality for merlin and the loss of the annual grassland in the Study Area will not have an impact on merlins. No merlins were observed in the Study Area.

Construction activities could result in nest abandonment or loss of special status bird species if appropriate preconstruction surveys, setback requirements, and management practices are not implemented (refer to Sections 10.2 and 10.3).

9.3.4 *Bats*

Pallid bat and Townsend's big-eared bat are two special status bat species that may occur in the Study Area. Both are known to roost in buildings and pallid bat may roost in trees. The Study Area does contain structures with appropriate day roosting habitat, and a few suitable trees and snags with cavities are present. Maternal bat colonies are protected by the California Department of Fish and Wildlife but are not expected to occur in the Study Area. Removal of structures and snags could affect pallid and Townsend's big-eared bats. Significant impacts to special status bats and maternal bat colonies can be avoided (see Section 10.3).

9.3.5 *Monarch butterflies*

There is a historic monarch butterfly overwintering site in the Study Area, located in the large stand of eucalyptus trees east of Prefumo Creek and south of the farm buildings. Records in the CNDDB indicate that this site has not been occupied by overwintering monarchs since 1998, when only 100 monarchs were observed in clusters. However, winter surveys have not been conducted within the Study Area since then. It is unlikely that monarchs currently overwinter at the site, as it may have become unsuitable due to tree senescence and increased canopy density. It is possible that monarchs may still utilize the eucalyptus grove as a transitional (autumnal) site in October and November. Winter surveys for monarch butterflies are recommended. Impacts to monarch butterflies can be avoided by enhancing and protecting the overwintering grove (see Section 10.3).

9.3.6 *Steelhead*

Steelhead is a federally listed threatened species which has historically occurred in Prefumo Creek, especially in high water years. There is no longer spawning gravel within the creek, but they may still move upstream from San Luis Obispo Creek to Laguna Lake via Lower Prefumo Creek. Steelhead habitat may be impacted by widening of Prefumo Creek and construction of a bridge across the creek. Significant impacts to steelhead may be mitigated (refer to Section 10.3).

10.0 Constraints Discussion

Biological constraints on San Luis Ranch include a heron rookery south of the U.S. Post Office, a red-tail hawk stick nest (Figure 8), an historic monarch butterfly area in the eucalyptus grove near Prefumo Creek, and Prefumo Creek and a tributary drainage that contain riparian and wetland habitats and jurisdictional drainages. Biological constraints to development on the San Luis Ranch property are identified in this document, and were described in previous documents (Envicom 1982, Rincon 2004, City of San Luis Obispo 2014). State and federally listed species, and state special status plant and animal species do not occur in agricultural areas of the property, but may occur in adjacent habitats such as Prefumo Creek and eucalyptus groves. Steelhead trout and California red-legged frog (both federally listed species) and southwestern pond turtle and two-striped garter snake (both California Species of Special Concern) may all occur in the Prefumo Creek corridor, and could be adversely affected either directly or indirectly by development activities. Eucalyptus trees on site are utilized by great blue herons as a rookery, and by nesting songbirds and raptors such as hawks and vultures.. Raptor stick nests were present in 2014, and may not be disturbed during breeding season.

Mitigation measures and recommendations are provided in this report to avoid impacts to rare species, and to mitigate and compensate for project effects if avoidance is not feasible. With standard mitigation measures the efficacy of a mitigation recommendation is often a known quantity (e.g. nest avoidance and storm water best practices). However with novel, unique or rarely used mitigation measures, the lead agency and responsible agencies must have assurance that the measure will be effective. The following mitigation measure discussion presents one such seldom utilized measure: relocation of a great blue heron rookery. We have found only one example of a successfully relocated heron rookery for black-crowned night heron, not great blue heron. However, the current location is poor quality habitat, and is degrading rapidly from dead and dying trees. The previous rookery location with10 nests was observed either in 1999 or 2003 by Rincon biologists adjacent to Prefumo Creek. Subsequent to that time, pedestrian activity has increased dramatically due to trespass camping and pedestrians running and walking along the creek bank in the vicinity of heron nests. The herons relocated their rookery with 4 active nests (2014 observations) to trees near the post office. Since great blue heron rookeries are sensitive to human activity under theirs nests, moving the rookery from the current location to a protected site could result in more successful nesting for a long time period (Taylor et al. 1981, Parker 1989, Vermeer 1970, Buckley and Buckley 1978, Bowman and Siderius 1984).

11.0 Potential Mitigations

Riparian habitat and special status species are present in the Study Area. This section provides mitigation recommendations appropriate to potential project impacts identified in Section 9.0. Where potentially adverse impacts to biological resources could occur during construction of the Project or due to the presence of the Project, these biological resource (BR) mitigation measures are designed to reduce the adverse effect to less than significant.

11.1 Habitats

11.1.1 *Cropland*

Loss of cropland habitat usually does not require mitigation except where it affects special status species or important wildlife populations. Preliminary plans indicate that approximately 75 acres of cropland would be impacted by the proposed project.

11.1.2 *Riparian*

Approximately 0.5 acres of riparian habitat is predicted to be temporarily impacted by the Project in the eastern portion of the drainage, and where the proposed bridge would cross Prefumo Creek. Where drainage and creek crossings affect riparian habitats, the Applicant may need to obtain permits from Army Corps of Engineers, California Department of Fish and Wildlife, and certification from the Regional Water Quality Control Board. As part of this process we recommend a restoration and enhancement plan for offsetting temporary impacts to these habitat types. Project design should consider crossing designs with minimal impact to streams, such as span bridges or rail car bridges.

BR-1. To minimize impacts on riparian habitat, prepare a restoration and enhancement plan. Temporary impacts typically require a minimum 1 to 1 ratio restoration (area of

restored habitat to impacted habitat). Appropriate restoration and enhancement activities include planting appropriate native species, correcting bank stabilization issues, and providing habitat enhancements.

11.1.3 *Ephemeral drainage*

The Project is predicted to temporarily impact 1150 linear feet of ephemeral drainage, 400 feet of which contains riparian vegetation (see 10.1.2 above). The drainage channel would be widened, and form and function would be improved. As part of this process we recommend a restoration and enhancement plan for offsetting temporary impacts to the ephemeral drainage.

BR-2. To minimize impacts on ephemeral drainages, prepare a restoration and enhancement plan. Temporary impacts typically require a minimum 1 to 1 ratio restoration (area of restored habitat to impacted habitat). Appropriate restoration and enhancement activities include planting appropriate native species, correcting bank stabilization issues, and providing habitat enhancements.

11.1.4 *Eucalyptus forest*

Approximately 9 acres of eucalyptus forest is predicted be impacted by the Project. Loss of eucalyptus habitat usually does not require mitigation except where it affects special status species or important wildlife populations. Nesting birds and sensitive species utilize eucalyptus trees within the Study Area (refer to Sections 10.2 and 10.3).

11.1.5 *Anthropogenic/ruderal*

Preliminary plans indicate that approximately 6 acres of ruderal and anthropogenic habitat would be impacted by the proposed project. Loss of ruderal habitat usually does not require mitigation except where it affects special status species or important wildlife populations. The Project would alter existing anthropogenic habitat for other anthropogenic uses. Conversion of anthropogenic habitat to other uses does not typically require mitigation.

11.2 Nesting Birds

Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take (as defined therein) of all native birds and their active nests, including raptors and other migratory non-game birds (as listed under the Federal MBTA). The proposed Project may impact nesting birds if construction occurs between March 1 and August 31.

BR-3. Within one week of ground disturbance or tree removal/trimming activities, if work occurs between March 1 and August 31, nesting bird surveys shall be conducted. To avoid impacts to nesting birds, grading and construction activities that affect trees and grasslands shall not be conducted during the breeding season from March 15 to August 15. If construction activities must be conducted during this period, nesting bird surveys shall take place within one week of habitat disturbance. If surveys do not locate nesting birds, construction activities may be conducted. If nesting birds are located, no construction activities shall occur within 100 feet of nests (or other setback distance determined by a qualified ornithologist) until chicks are fledged. Construction activities shall observe a 300-foot buffer for active raptor nests.

11.3 Avoidance, Minimization, and Mitigation for Special Status Species

11.3.1 *Special status plants*

No special status plants were observed in the Study Area during the appropriately timed spring 2014 botanical surveys. The proposed Project will not impact special status plants. No mitigations are required.

11.3.2 *Western pond turtle*

Suitable habitat was identified in Prefumo Creek for western pond turtle, though this species was not detected during surveys. If work is proposed in the creek while water is present, the following potential mitigation measures may be undertaken.

BR-4. A pre-construction survey would be conducted within 48 hours prior to starting work in or within 50 feet of habitats likely to support western pond turtle such as seasonal drainages and riparian. The survey would be conducted by a qualified biologist approved to relocate pond turtles should they occur. If pond turtles are located during the pre-construction survey, a biologist would monitor ground-breaking work conducted within 50 feet of turtle habitats.

BR-5. Silt fence can be used as a barrier to overland movements of pond turtles (and other small animals) if concern arises that pond turtle overland movements could put them in construction areas.

BR-6. Qualified biologists will brief all project personnel prior to participating in construction activities. At a minimum, the briefing will include a description of the project components and techniques, a description of the listed species occurring in the project area, and the general and specific measures and restrictions to protect the species during implementation of the project.

11.3.3 *California red-legged frog*

Potential habitat for California red-legged frogs is present in the Study Area although this species was not observed during spring 2014 surveys. We offer the following measures to protect California red-legged frogs. Regulatory agencies may require additional measures as part of permits to construct drainage crossings.

BR-7. Qualified biologists will brief all project personnel prior to participating in construction activities. At a minimum, the briefing will include a description of the project components and techniques, a description of the listed species occurring in the project area, and the general and specific measures and restrictions to protect the species during implementation of the project.

BR-8. Frog-exclusion fencing can be used as a barrier to overland movements of frogs if concern arises that movements could put them in construction areas. Frog exclusion fencing must be a smooth material installed with no gaps, and must be at least 18 inches tall. These fences may be opened during periods of no-construction (e.g. on weekends) to prevent entrapment of CRLF.

BR-9. U.S. Fish and Wildlife Service-approved biological monitor(s) shall be present on site during all construction activities occurring within 50 feet of drainages and in the riparian zone. Prior to the start of construction activities each day, biologist(s) will survey the work sites for CRLF. A biologist will look under parked vehicles and heavy equipment frequently (especially every morning before work starts). California red-legged frogs captured during surveys or construction activities will be relocated to the nearest suitable habitat outside of the project area. Relocation of CRLF requires permits from U.S. Fish and Wildlife Service.

11.3.4 *Two-striped garter snake*

Two-striped garter snakes were not detected in the Study Area during surveys, but potential habitat exists in Prefumo Creek. In order to reduce potential impacts on two-striped garter snakes, the following potential mitigation measures may be implemented.

BR-10. A pre-construction survey would be conducted within 48 hours prior to starting work in or within 50 feet of habitats likely to support two-striped garter snakes such as seasonal drainages and riparian. The survey would be conducted by a qualified biologist approved to relocate two-striped garter snakes should they occur. If two-striped garter snakes are located during the pre-construction survey, a biologist would monitor ground-breaking work conducted within 50 feet of garter snake habitats.

BR-11. Qualified biologists will brief all project personnel prior to participating in construction activities. At a minimum, the briefing will include a description of the project components and techniques, a description of the listed species occurring in the project area, and the general and specific measures and restrictions to protect the species during implementation of the project.

11.3.5 *Great blue herons*

An active great blue heron rookery exists in the Study Area. Rookeries are granted special status by CDFW and must be protected. We offer two potential scenarios to mitigate for disturbances to nesting great blue herons. The applicant may choose to implement either BR-12 or BR-13. Figure 7 provides the location and extent of buffers from the existing heron rookery.

BR-12. Maintain great blue heron nesting habitat within the Study Area. Active great blue heron nests will be mapped using GPS or survey equipment, and a 200 foot buffer shall be maintained around the rookery. Buffer size may be adjusted using the formula described in Rodgers and Smith (1995), depending on the flush distance of the nesting birds. The grove of eucalyptus trees that the nests are located in shall be protected and maintained. Breeding great blue herons typically arrive at nests in February and March, so regular monitoring visits will be made to the rookery during this time to determine the state of the eucalyptus trees and the number of active nests. The protective buffer shall be maintained as long as the trees are in good health and the herons continue to nest there.

BR-13. Create new offsite nesting habitat to mitigate for removal of onsite nesting habitat. The current rookery may be removed and moved to a suitable offsite location where the same great blue herons can resume nesting, following methods detailed in Crouch et al. (2002). This entails at least one year of pre-construction monitoring of the rookery,

where the timing of rookery activities will be noted: arrival of breeding adults, egg laying, hatching, and fledging. During this time, audio recordings of adults and juveniles shall be made. Following the completion of the nesting season in late summer, the mature trees containing nests shall be boxed and moved across Madonna Road to a suitable location at Laguna Lake Open Space. Prior to the start of the next nesting season (based on timing of adult arrival in previous years), nesting adults will be recruited to the new location via decoys and playback of vocalizations. The new location will be monitored regularly for the following 3 breeding seasons.

11.3.6 *Other special status birds*

In order to reduce the potential for disturbance of special status birds such as Allen's hummingbird that may be present during nesting season, the applicant shall implement BR-2 one week prior to ground disturbance or tree pruning activities (refer to Section 10.3). If nests of sensitive birds are identified in the work area, the following additional mitigation measures shall be implemented:

BR-14. Occupied nests of special status bird species shall be mapped using GPS or survey equipment. Work shall not be allowed within a 100 foot buffer while the nest is in use. Construction activities shall observe a 300-foot buffer for active raptor nests. The buffer zone shall be delineated on the ground with orange construction fencing where it overlaps work areas.

BR-15. Occupied nests of special status bird species that are within 300 feet of project work areas shall be monitored at least every two weeks through the nesting season to document nest success and check for project compliance with buffer zones. Once burrows or nests are deemed inactive and/or chicks have fledged and are no longer dependent on the nest, work may commence in these areas.

11.3.7 *Bats*

Roosting bats and/or maternal bat colonies may be present in anthropogenic structures or trees with appropriate cavities or loose bark in the Study Area.

BR-16. Upon project approval, a qualified biologist shall conduct a survey of existing structures on the Property to determine if roosting bats are present. If possible, the survey shall be conducted during the non-breeding season (November through March). The biologist shall have access to all interior attics, as needed. If a colony of bats is found roosting in any structure, further surveys shall be conducted sufficient to determine the species present and the type of roost (day, night, maternity, etc.) If the bats are not part of an active maternity colony, passive exclusion measures may be implemented with approval from CDFW. November is the best time of the year to exclude bats from a roost because it is after the breeding season and before winter hibernation (not all species hibernate).

BR-17. If bats are roosting in a structure on the Property during the daytime but are not part of an active maternity colony, then exclusion measures must include one-way valves that allow bats to get out but are designed so that the bats may not re-enter the structure.

BR-18. If a bat colony is excluded from the Property, appropriate alternate bat habitat shall be installed on the Property. An ideal location for alternate bat house installation would be near the onsite drainage.

BR-19. Prior to removal of any trees over 20 inches DBH, a survey shall be conducted by a qualified biologist to determine if any of the trees proposed for removal or trimming harbor sensitive bat species or maternal bat colonies. If a non-maternal roost is found, the qualified biologist, with prior approval from California Department of Fish and Wildlife, will install one-way valves or other appropriate passive relocation method. For each occupied roost removed, one bat box shall be installed in similar habitat and should have similar cavity or crevices properties to those which are removed, including access, ventilation, dimensions, height above ground, and thermal conditions. Maternal bat colonies may not be disturbed.

11.3.8 *Monarch butterflies*

Monarch butterflies have historically overwintered in the eucalyptus trees along Prefumo Creek. We offer the following potential mitigation measures to reduce impacts to overwintering monarch butterflies.

BR-20. Monitor clustering monarch butterflies and weather conditions in the grove throughout the overwintering season. Trained biologists shall visit the eucalyptus grove multiple times during the overwintering season before construction or tree removal begins in order to collect data on weather conditions in the grove, identify cluster trees, and count the number of monarchs present. These visits will continue during construction and for at least three years post-construction.

BR-21. To avoid impacts to overwintering monarchs, tree trimming/removal and construction activities that affect eucalyptus trees near or within the overwintering grove shall not be conducted during the overwintering season from October 1 through March 31. If construction activities must be conducted during this period, overwintering monarch surveys shall take place within one week of habitat disturbance. If surveys do not locate clustering monarchs, construction activities may be conducted. If clustering monarchs are located, no construction activities shall occur within 100 feet of the edge of the overwintering grove.

BR-22. Prepare and implement a habitat enhancement plan to enhance and restore overwintering habitat. A habitat plan shall be developed that includes native shrubs and trees. As eucalyptus trees senesce, they will be replaced with native species. Native trees and shrubs shall also be used to supplement gaps in canopy or act as windbreaks.

BR-23. Create a monarch butterfly preserve. The eucalyptus grove which comprises the core of the monarch butterfly overwintering habitat in the Study Area will be delineated and fenced off. Public access to the grove will be restricted in order to minimize disturbance to clustering monarchs.

11.3.9 *Steelhead*

Steelhead may occur in Prefumo Creek in high water years. Impacts to steelhead habitat are expected to be minimal, and the following recommendations will reduce impacts to steelhead.

BR-24. Construction and earthmoving activities along the creek bank shall take place during the dry season. Modification of the eastern bank of Prefumo Creek and bridge construction shall take place while water is at its lowest level in the creek to minimize the chance that steelhead are present during work.

BR-25. Best management practices shall be implemented to minimize erosion and sedimentation in the creek channel. Appropriate erosion control measures should be implemented at all times in areas that could potentially flow into Prefumo Creek. Erosion control measures should include, but are not limited to, effective placement of silt fence, straw waddles, hydroseed applications, and erosion control fabric. Project planning should strive for temporary and permanent erosion control.

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13.0 Photographs

Photo 1. Looking north at the blue gum eucalyptus stand which is south of the Post Office. A great blue heron rookery is located in this stand of trees. Photo taken May 14, 2014.

Photo 2. Facing west looking across ruderal habitat to the row of eucalyptus trees lining Madonna Road, which forms the western border of the Study Area. In front of the trees is one of two houses on the property. Abandoned vehicles and other debris cover the east half of the anthropogenic/ruderal portion of the Study Area. Photo taken May 14, 2014.

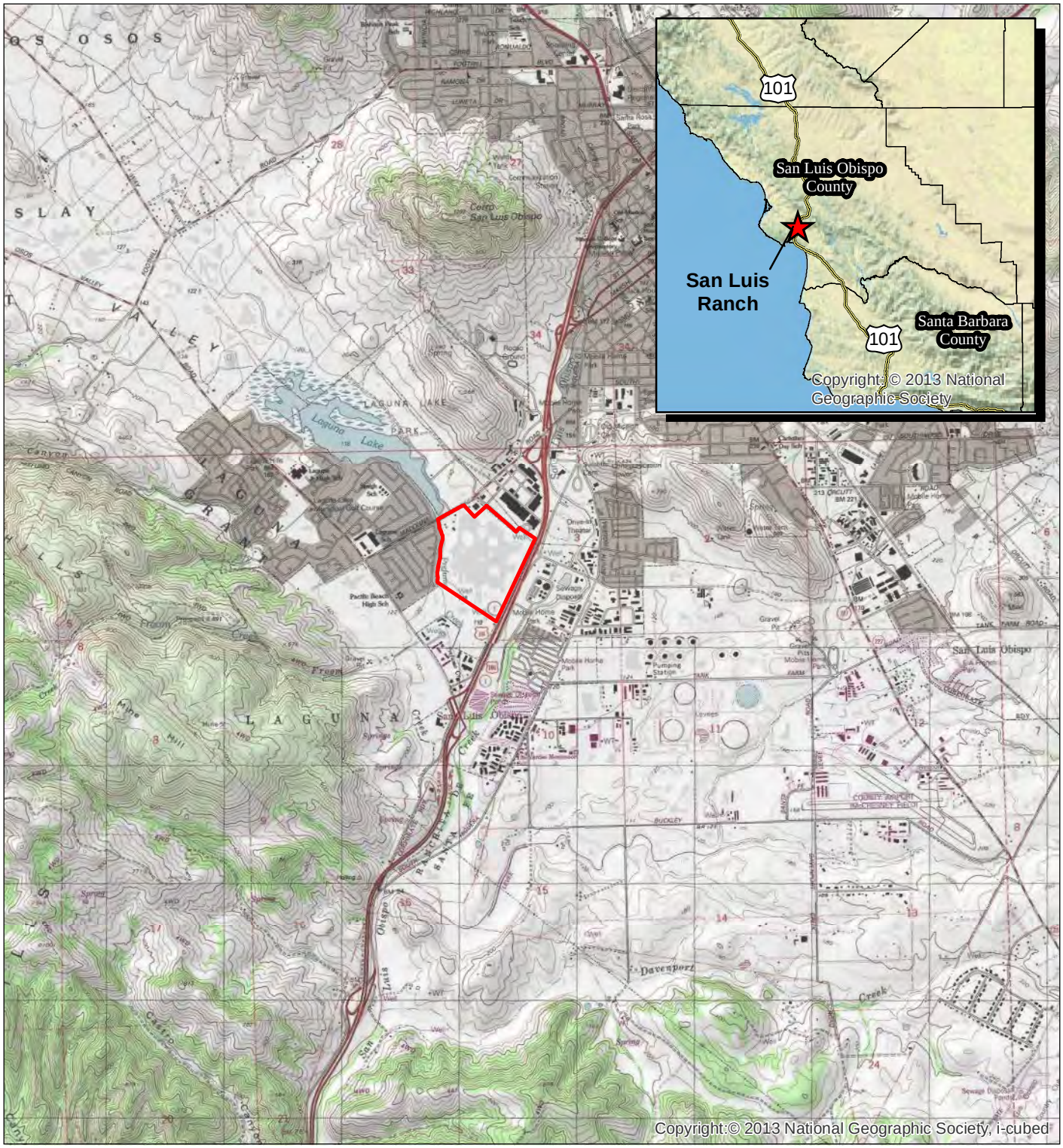
Photo 3. Central portion of the ephemeral drainage. The drainage runs along the eastern edge of the ruderal habitat and along the west side of a dirt road used by farm vehicles. Agricultural fields are out of sight to the left (east). Photo taken 2014.

Photo 4. Chunks of asphalt in the ephemeral drainage. The eucalyptus trees lining the east bank of Prefumo Creek are in the background. Photo taken May 14, 2014.

Photo 5. Foot trail paralleling Prefumo Creek. Creek is out of sight on the left, one of the barns is visible through the trees to the north. The trail leads south from Madonna Road to a concrete creek crossing which connects to Froom Ranch Way. The east bank of Prefumo Creek is lined with non-native trees such as blue gum eucalyptus and Canary Island date palm. Photo taken 2014.

14.0 Figures

Figure 1. USGS Topographic Map



N
W E
S

Legend

Parcel Boundary

0 0.5 1 2 Miles

San Luis Ranch

USGS Topographic Map
Map Updated: August 11, 2014, 10:24 AM

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Figure 2. Aerial Photograph

San Luis Ranch

2012 San Luis Obispo County
NAIP Aerial Photography
Map Updated: August 11, 2014, 10:28 AM

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Figure 3. USDA Soils Map

127: Cropley clay, 0 to 2 percent slopes
128: Cropley clar, 2 to 9 percent slopes
197: Salinas silty clay loam, 0 to 2 percent slopes

Soil Survey Map Unit
Parcel Boundary

N
W
E
S

0 500 1,000 2,000 Feet

San Luis Ranch

Soil Survey of San Luis Obispo County
Coastal Soils
2012 San Luis Obispo County
NAIP Aerial Photography
Map Updated: August 11, 2014, 10:29 AM

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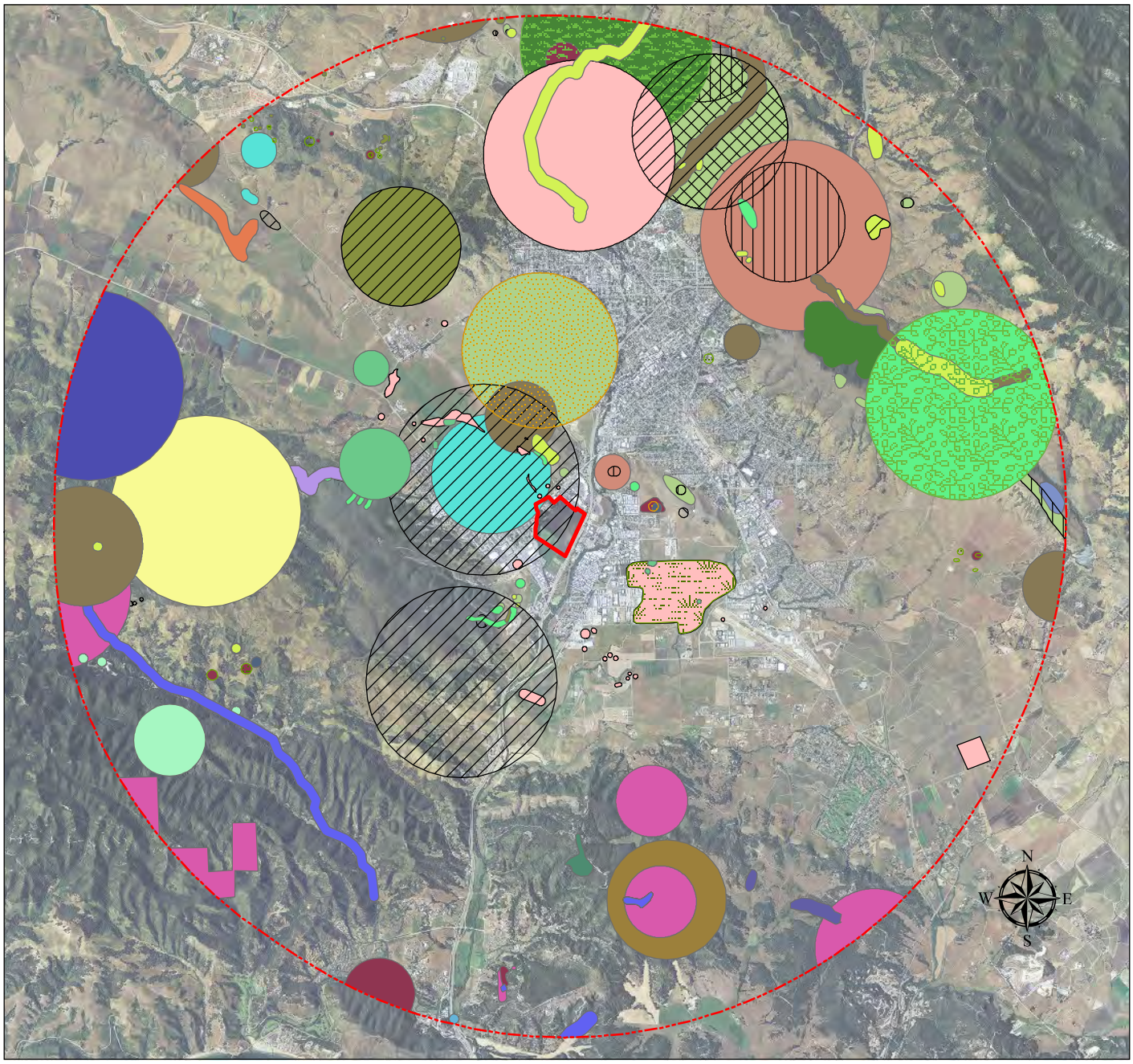
Figure 4. CNDDB & FWS Critical Habitat Map (Plants)



- 5-mile buffer
- Parcel
- Arroyo de la Cruz manzanita
- Betty's dudleya
- Blochman's dudleya
- Brewer's spineflower
- Cambria morning-glory
- Congdon's tarplant
- Cuesta Ridge thistle
- Eastwood's larkspur
- Hoover's bent grass
- Hoover's button-celery
- Indian Knob mountainbalm
- Jones' layia
- La Panza mariposa-lily
- Miles' milk-vetch
- Morro manzanita
- Palmer's monardella
- Pecho manzanita
- Pismo clarkia
- San Benito fritillary
- San Luis Obispo County lupine
- San Luis Obispo fountain thistle
- San Luis Obispo owl's-clover
- San Luis Obispo sedge
- San Luis mariposa-lily
- Santa Margarita manzanita
- adobe sanicle
- black-flowered figwort
- chaparral ragwort
- dune larkspur
- dwarf soaproot
- mesa horkelia
- most beautiful jewelflower
- mouse-gray dudleya
- saline clover

0 1 2 4 Miles

San Luis Ranch

CNDDB Data from May 1, 2014
2012 San Luis Obispo County
NAIP Aerial Photography
Map Updated: August 11, 2014, 11:07 AM

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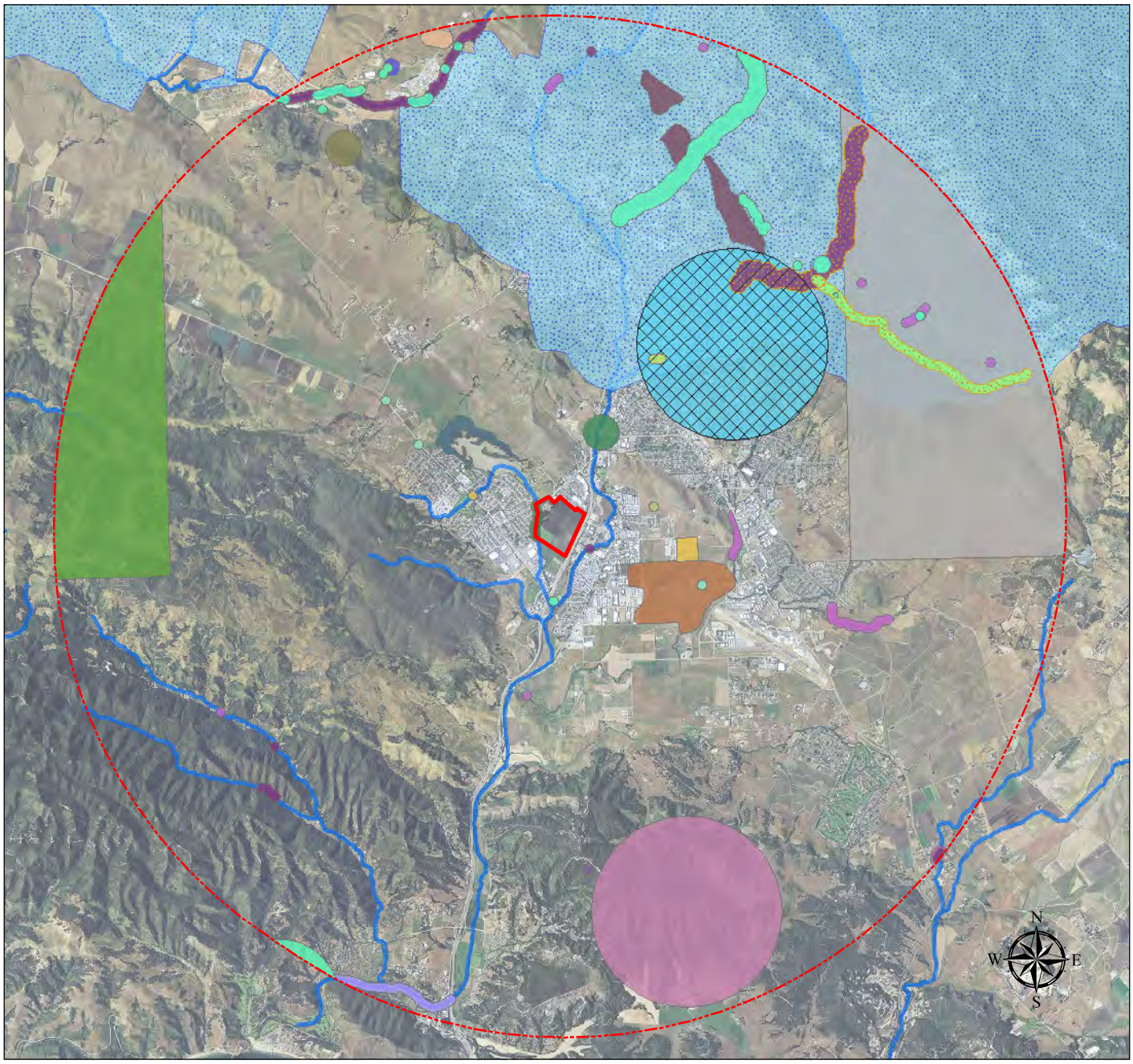
Figure 5. CNDDB & FWS Critical Habitat Map (Animals)



- 5-mile buffer
- Parcel
- American badger
- Atascadero June beetle
- California horned lark
- California red-legged frog
- Central Maritime Chaparral
- Coast Range newt
- Coastal and Valley Freshwater Marsh
- San Luis Obispo pyrg
- Serpentine Bunchgrass
- Townsend's big-eared bat
- black legless lizard
- coast horned lizard
- ferruginous hawk
- foothill yellow-legged frog
- loggerhead shrike
- monarch butterfly
- pallid bat
- prairie falcon
- steelhead - south/central California coast DPS
- tidewater goby
- vernal pool fairy shrimp
- western mastiff bat
- western pond turtle
- western yellow-billed cuckoo
- white-tailed kite

Critical Habitat

- California red-legged frog
- steelhead

0 1 2 4 Miles

San Luis Ranch

CNDDB Data from May 1, 2014
2012 San Luis Obispo County
NAIP Aerial Photography
Map Updated: August 11, 2014, 11:07 AM

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Figure 6. Habitat Map

Legend

- Annual Grassland
- Anthropogenic/Ruderal
- Cropland
- Eucalyptus Forest
- Riparian
- Parcel Boundary

0 500 1,000 2,000 Feet

N W E S

San Luis Ranch

2012 San Luis Obispo County
NAIP Aerial Photography
Map Updated: August 11, 2014, 03:12 PM

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Figure 7. Biological Constraints

0 250 500 1,000 Feet

N W E S

Parcel Boundary
Creek
100' Great Blue Heron Setback
200' Great Blue Heron Setback
Eucalyptus Preserve
Great Blue Heron Nest

San Luis Ranch

Map Updated: August 11, 2014 11:10 AM

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Figure 8. Stick Nests

San Luis Ranch

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