

4.4 BIOLOGICAL RESOURCES

4.4.1 Setting

The analysis of biological resources within the 131-acre San Luis Ranch Specific Plan Area is based on a search of available biological databases, review of aerial photographs and topographic maps, review of multiple literature resources, and site visits. Wildlife and botanical surveys were conducted on the project site in April, May, and June 2014 by Althouse and Meade, Inc. Additional site visits were conducted by Rincon Consultants, Inc. (Rincon) in April and May 2016. Discussion of existing conditions on the project site is based on peer reviews of the *Biological Constraints Report, California Red-legged Frog Protocol Survey Site Assessment, and Delineation of Potential Jurisdictional Wetlands and Waters, San Luis Ranch Monarch Trees Inspection Memo, Results of 2015 and 2016 San Luis Ranch Heron Rookery Surveys Memo, and San Luis Ranch – Prefumo Creek Widening Biological Constraints Memo* prepared by Althouse and Meade (refer to Appendix F). A biological resource investigation was conducted by Rincon in April and May 2016 to confirm the accuracy of the applicant studies and to supplement the applicant-provided findings with an independent evaluation of biological resources.

a. Regional Setting. The project site is located in unincorporated San Luis Obispo County, California, completely surrounded by the corporate boundary of San Luis Obispo. The project site is generally bounded by residential uses and Madonna Road to the west, commercial uses and Dalidio Drive to the north, U.S. 101 to the east and the San Luis Obispo City Farm to the south (see Figure 2-1 in Section 2.0, *Project Description*). The project site is within the South Coast Ranges (SCoR) geographic subregion of California. The SCoR subregion is a component of the larger Central Western California Region, which occurs within the even larger California Floristic Province (Baldwin et al., 2012). Floristic provinces within California are typically dictated by climate, and have distinctive flora.

b. Project Site Setting. The project site is located in unincorporated San Luis Obispo County and is generally bounded by Madonna Road to the west, Dalidio Drive to the north, United States Highway 101 (U.S. 101) to the east and the San Luis Obispo City Farm to the south. Although the project site is generally surrounded by urban and active agricultural uses, the Laguna Lake open space is located northwest of the site, and the Prefumo Creek corridor is located along the western edge of the site. Prefumo Creek flows out of Laguna Lake, under Madonna Road, along the western edge of the property, and drains into San Luis Obispo Creek approximately half a mile to the south. In addition, a shallow ephemeral drainage named Cerro San Luis Channel runs southwest across the property into Prefumo Creek. The approximate center of the project site occurs at latitude 35°15'23"N and longitude 120°40'46"W (WGS-84 datum). The project site occurs within the *San Luis Obispo, California* United States Geological Survey (USGS) 7.5-minute topographic quadrangle in Meridian Mt. Diablo, Township 31S, Range 12E and Section 03.

The project site boundary encompasses roughly 131 acres (refer to Figure 2-2 in Section 2.0, *Project Description*). In addition to the proposed on-site project components outlined in Section 2.0, *Project Description*, the project includes an off-site connection of From Ranch Way across Prefumo Creek. These components collectively comprise the potential disturbance area for the project.



Approximately 109 acres of the 131-acre site support continuously planted and plowed farmland. The remainder of the site consists primarily of blue gum eucalyptus (*Eucalyptus globulus*) groves; developed residences, barns, and outbuildings; non-native annual grassland; disturbed ruderal habitat; and riparian vegetation associated with Cerro San Luis Channel and Prefumo Creek. The topography of the project site is generally flat with onsite elevations ranging from approximately 120 to 140 feet above mean sea level.

Habitat Types. Six terrestrial vegetation communities or land cover types occur within the project site: Agriculture, Eucalyptus Grove, Ruderal/Developed, Willow-Riparian, Riverine, and Non-native Annual Grassland. Vegetation was classified and mapped during botanical resources surveys conducted in May 2014 by Althouse and Meade to characterize the site. Vegetation classification and mapping was field-verified by Rincon in April and May 2016, and is discussed in more detail below. A summary of vegetation/land cover types identified in the project site is presented in Table 4.4-1 and Figure 4.4-1 provides a map of these features.

Habitat characterizations were based on the classification systems presented in A Manual of California Vegetation, Second Edition (MCV2; Sawyer et al., 2009) and Preliminary Description of Terrestrial Natural Communities of California (Holland, 1986); but have been modified slightly to most accurately reflect the existing site conditions. California Vegetation (Holland and Keil, 1995) and California Wildlife Habitat Relationships (CWHR) were also referenced for describing the habitat types within the project site. Plant species nomenclature and taxonomy used for the project site follow treatments within Baldwin et al. (2012).

Table 4.4-1 Summary of Vegetation/Land Cover Types within the Project Site

Habitat Type	Approximate Acreage	Approximate Percentage of Total Area
Agriculture	111.5	84.9%
Eucalyptus Grove	10.1	7.7%
Ruderal/Developed	7.0	5.3%
Willow Riparian	0.5	0.4%
Riverine	0.1	0.1%
Non-native Annual Grassland	2.1	1.6%
TOTAL	131.3	100%

Agriculture. Agricultural is the predominant habitat type within the project site, covering approximately 111.7 acres. Agriculture is an anthropogenic, frequently disturbed habitat and includes irrigated row crops that are usually monotypic. This habitat type occurs within and adjacent to the project site. The 20-acre San Luis Obispo City Farm is adjacent to the project site on the south, creating a contiguous 151-acre agricultural area. During the site visit, lettuce (*Lactuca sativa*) and cruciferous vegetables, such as broccoli (*Brassica oleracea*), were in production. Regular cultivation and other agricultural practices generally eliminate habitat for burrowing animals such as small mammals, and many amphibian and reptile species that utilize small mammal burrows or construct their own burrows.

Given that this community type is not naturally occurring, it is not described in either the Holland (1986) or Sawyer et al. (2009) classification systems.





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Vegetation Communities and Jurisdictional Features Figure 4.4-1

Eucalyptus Grove. Blue gum eucalyptus groves cover approximately 10.2 acres of the project site. The trees range in size from sapling to mature trees 80 to 100 feet tall. The understory beneath the eucalyptus grove southwest of the U.S. Post Office consists primarily 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 six-acre blue gum eucalyptus grove, which has an understory of non-native grasses and non-native ruderal forbs. On the western edge of this eucalyptus grove, 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 grove 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 grove in the project site is a historic monarch butterfly overwintering site. The overall health of the eucalyptus trees onsite is degraded, likely due to several years of drought conditions and overall age of the stands.

Eucalyptus Grove habitat type within the project site is not described by Holland (1986) but most closely corresponds with the Eucalyptus groves Semi-Natural Woodland Stands (Eucalyptus [*globulus*, *camaldulensis*] Semi-Natural Stands) described in MCV2 (Sawyer et al., 2009).

Ruderal/Developed. Anthropogenic manipulated and maintained ruderal and developed habitat covers approximately 7.0 acres of the project site. Vegetation can vary depending on the degree of disturbance or development. This land cover type consists of two houses, three barns, sheds, small outbuildings, parking areas, access areas, and storage areas surrounded by ornamental trees and shrubs in the northwestern portion of the project site. In less developed areas, ruderal species dominate, including slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), Italian thistle (*Carduus pycnocephalus*) and poison hemlock (*Conium maculatum*). Cover by plant species is generally low due to disturbance, and there is a high percentage of bare soil. Ruderal areas provide poor habitat for animal species; however, these areas can be used during dispersal and for movement during foraging in adjacent habitats. In addition, the structures have suitable nesting habitat for birds and may house roosting colonies of bats.

Ruderal/Developed areas are not classified in the MCV2 classification system (Sawyer et al., 2009) or the Holland classification system (Holland, 1986); however, developed areas but are included in the California Department of Fish and Wildlife (CDFW) CWHR as Urban (Mayer and Laudenslayer, 1988).

Red Willow Thicket. Within the project site, red willow thicket occurs on both the eastern and western banks of Prefumo Creek where the Froom Ranch Way bridge crossing is proposed. The upper canopy is dominated by red willow (*Salix laevigata*) with intermittent arroyo willow (*Salix lasiolepis*), Fremont cottonwood (*Populus fremontii*) and 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 red willow thicket vegetation community surrounding Prefumo Creek may be considered a sensitive habitat community by CDFW because it is a riparian vegetation community that has been known to host sensitive species. The red willow thicket vegetation community within the project area most closely corresponds to element #61210

Central Coast Cottonwood-Sycamore Riparian Forest (Holland, 1986) and to *Salix laevigata* Shrubland Alliance in the Manual of California Vegetation system (Sawyer et al., 2009).

Willow Riparian. Willow-dominated riparian scrub and riparian woodlands are present in the eastern portion of Cerro San Luis Channel for a distance of approximately 400 linear feet, from Dalidio Drive to the southwest corner of the U.S. Post Office parking lot. The riparian vegetation in this portion of the drainage is dominated by mature arroyo willow, red ironbark (*Eucalyptus sideroxylon*), umbrella sedge (*Cyperus eragrostis*), poison hemlock, and Harding grass (*Phalaris aquatica*). Willow riparian vegetation units are consistent with Arroyo Willow Thickets Alliance in A Manual of California Vegetation, Second Edition (Sawyer et al., 2009) and Central Coast arroyo willow riparian forest in the Holland classification (Holland, 1986).

Riverine. Running alongside the western edge of the property is the Prefumo Creek streambed. The streambed traverses the project site at the proposed Froom Ranch Way bridge crossing location in the southwest corner of the site. The majority of the streambed contains gravel; however, intermittent portions of the streambed also consist of vegetative litter and woody debris. This land cover type was also documented within the Cerro San Luis Channel which runs across the northwest portion of the project site and connects to Prefumo Creek on the western boundary of the site. The bed is vegetated with ruderal and invasive forbs such as periwinkle, bristly ox-tongue (*Helminthotheca echioides*), red-stem filaree (*Erodium cicutarium*), and Italian thistle that recruit after the water recedes in the early summer. Patches of wetland species such as tule (*Schoenoplectus* sp.) are also present. The streambed and surrounding habitat on its banks provides excellent nesting and foraging habitat for nesting birds and a variety of common and special status species.

This community type is also not described in either the Holland (1986) or Sawyer et al. (2009) classification systems. However, riverine is described in the Cowardin (1979) and U.S. Fish and Wildlife Service (USFWS) (2015) classification systems.

Non-native Annual Grassland. Non-native annual grassland was mapped in the northwest section of the project site where non-native grasses predominate. Vegetation composition is variable and patchy within this community. Slender wild oat, ripgut brome, Harding grass, and foxtail (*Hordeum murinum*) are dominant in patches; mustards (*Brassica nigra*; *Hirschfeldia incana*) are also common. This habitat type 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, including pocket gopher (*Thomomys* sp.) and California ground squirrel (*Otospermophilus beecheyi*) and therefore could be suitable foraging habitat for raptors.

This vegetation type most closely corresponds to non-native grassland type (Element Code #42200) described by Holland (1986) and includes areas that are consistent with two semi-natural herbaceous stands described in the MCV2: *Avena (barbata, fatua)* semi-natural stands and *Bromus (diandrus, hordeaceus)-Brachypodium distachyon* semi-natural stands (Sawyer et al., 2009).

Natural Drainages and Wetlands. The project site is located within the Central Coastal Watershed (Hydrologic Unit Code [HUC] 18060006) and contains two aquatic features: Prefumo Creek and Cerro San Luis Channel. Prefumo Creek runs just outside the majority of the western boundary of the project site, but does occur within the project site at the proposed Froom Ranch Way bridge crossing and flows north to south. Cerro San Luis Channel runs



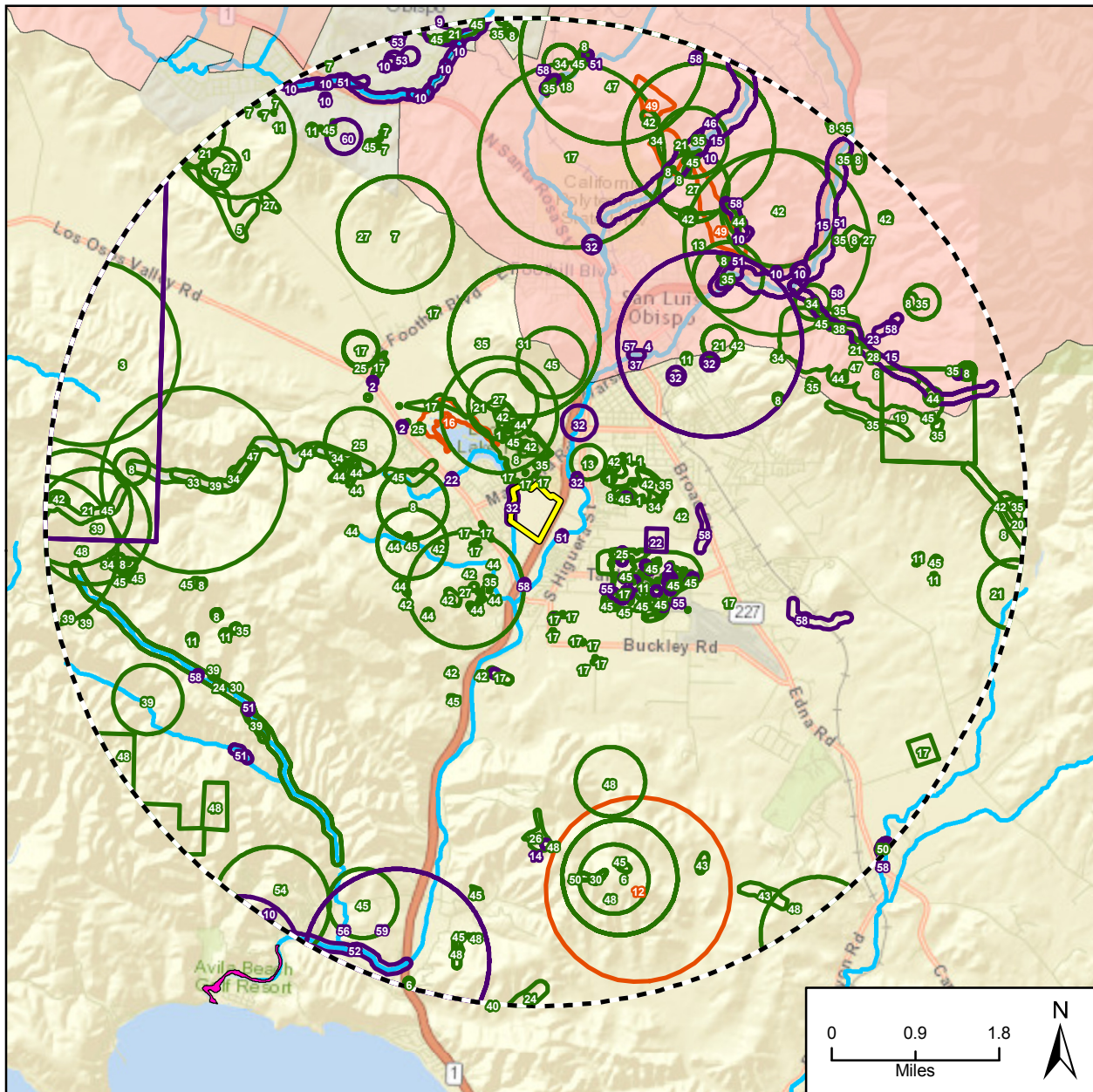
across the northwest portion of the project site and connects to Prefumo Creek on the western boundary of the site. These drainage features are visible on aerial photography. The extents of these drainages within the project site are presented in Figure 4.4-1 and are discussed in greater detail below.

Prefumo Creek. Prefumo Creek is a named tributary to San Luis Obispo Creek that conveys water from the Irish Hills and farm fields, to Laguna Lake, and then to a box culvert under Madonna Road and flows along the western edge of the property. Prefumo Creek flows into San Luis Obispo Creek approximately half a mile south of the project site. Prefumo Creek has been managed by adjacent farmers and homeowners with evidence of concrete structures to prevent scour and occasional wooden structures installed by homeowners southwest of the project site. The eastern bank is dominated by blue gum eucalyptus and the western bank is dominated by red willow, with intermittent arroyo willow, Fremont cottonwood and non-native trees. The bed contains gravel; however, intermittent portions also consist of vegetative litter and woody debris. The bed is vegetated with ruderal and invasive forbs such as periwinkle, bristly ox-tongue, red-stem filaree, and Italian thistle. On May 26, 2016 Rincon observed two large pools with standing water in the portion of Prefumo Creek where the Froom Ranch Way bridge crossing is proposed. The pools were approximately 35 feet wide, 45 feet long, and 2 to 3 feet deep. Both pools contained a sufficient amount of cover, emergent vegetation, and water depth to support California red-legged frog (*Rana draytonii*; CRLF) breeding. The California Natural Diversity Database (CNDDDB) documents an occurrence of CRLF just north of the confluence of Prefumo Creek and San Luis Obispo Creek approximately one half mile downstream from the project site. In addition, Prefumo Creek is federally designated critical habitat for the south-central California Coast distinct population segment (DPS) steelhead (steelhead; *Oncorhynchus mykiss irideus*) (Figure 4.4-2). Special status species are discussed in greater detail below.

Cerro San Luis Channel. As previously mentioned, the project site contains an ephemeral drainage named Cerro San Luis Channel, which runs southwest across the site into Prefumo Creek. The drainage carries run off from Cerro San Luis Obispo, through shopping centers, to a culvert under Dalidio Road. The drainage feature daylight east of the U.S. Post Office, on the west side of an active farm field. The drainage is actively maintained for adjacent agricultural purposes and is degraded, with chunks of asphalt in the drainage from an old road. The eastern portion of the drainage, which runs along the east side of the U.S. Post Office, is dominated by mature arroyo willow and red ironbark. The western portion of the drainage lacks large shrubs and is dominated by non-native annual grassland and ruderal vegetation. No flowing or pooled water was observed within Cerro San Luis Channel during the site visits.

Wetlands. Wetlands occur in nutrient-rich mineral soils that are saturated to the surface throughout part or all of the year. These habitats are best developed in locations with slow-moving or stagnant shallow water such as drainage corridors, seeps or in areas with adequate water sources. These features occur where high water tables and seeps create conditions that support hydrophytic (i.e., water-tolerant) vegetation. Within the project site, wetlands that have been identified by the USFWS National Wetlands Inventory (NWI) include Freshwater Forested/ Shrub Wetland and Riverine along Prefumo Creek. Within the project site, Prefumo Creek and the Cerro San Luis Channel contain riparian and wetland habitats and jurisdictional drainages. All wetlands observed within the project site contain a hydrologic connection to a waterway, no isolated wetlands were observed.





Imagery provided by ESRI and its licensors © 2016. Special status species data source: California Natural Diversity Database, May, 2016. Additional suppressed records reported by the CNDDDB known to occur or potentially occur within this search radius include: prairie falcon, black legless lizard. For more information please contact the Department of Fish and Game. Critical habitat data source: U.S. Fish and Wildlife Service, January, 2016. Final critical habitat acquired via the USFWS Critical Habitat Portal. It is only a general representation of the data and does not include all designated critical habitat. Contact USFWS for more specific data.

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| <ul style="list-style-type: none"> Project Location 5-Mile Buffer CNDDDB Animals Plants Natural Communities Final Critical Habitat Steelhead California red-legged frog | <ul style="list-style-type: none"> 1 - adobe sanicle 2 - American badger 3 - Arroyo de la Cruz manzanita 4 - Atascadero June beetle 5 - Betty's dudleya 6 - black-flowered figwort 7 - Blochman's dudleya 8 - Brewer's spineflower 9 - California horned lark 10 - California red-legged frog 11 - Cambria morning-glory 12 - Central Maritime Chaparral 13 - chaparral ragwort 14 - coast horned lizard 15 - Coast Range newt 16 - Coastal and Valley Freshwater Marsh 17 - Congdon's tarplant 18 - Cuesta Ridge thistle 19 - dune larkspur 20 - dwarf soaproot 21 - Eastwood's larkspur 22 - ferruginous hawk 23 - foothill yellow-legged frog 24 - Hoover's bent grass 25 - Hoover's button-celery 26 - Indian Knob mountainbalm 27 - Jones' layia 28 - La Panza mariposa-ily 29 - loggerhead shrike 30 - mesa horkelia 31 - Miles' milk-vetch 32 - monarch - California overwintering population 33 - Morro manzanita 34 - most beautiful jewelflower 35 - mouse-gray dudleya 36 - Ojai fritillary 37 - pallid bat 38 - Palmer's monardella 39 - Pecho manzanita 40 - Pismo clarkia 41 - saline clover 42 - San Luis mariposa-ily 43 - San Luis Obispo County lupine 44 - San Luis Obispo fountain thistle 45 - San Luis Obispo owl's-clover 46 - San Luis Obispo pyrg 47 - San Luis Obispo sedge 48 - Santa Margarita manzanita 49 - Serpentine Bunchgrass 50 - southern curly-leaved monardella 51 - steelhead - south-central California coast DPS 52 - tidewater goby 53 - Townsend's big-eared bat 54 - umbrella larkspur 55 - vernal pool fairy shrimp 56 - western bumble bee 57 - western mastiff bat 58 - western pond turtle 59 - western yellow-billed cuckoo 60 - white-tailed kite |
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Sensitive Elements Reported in the California Natural Diversity Database and Federally Designated Critical Habitats Located within 5 miles Figure 4.4-2

c. Special Status Species and Plant Communities. Several species protected by federal and State agencies occur within San Luis Obispo County. The CNDDDB (CDFW, 2015a), California Native Plant Society (CNPS) (2015), and USFWS ECOS (2015b) together list seventy-two (72) special status plants, forty-three (43) special status animals, and nine sensitive plant communities within the San Luis Obispo, California USGS 7.5-minute topographic quadrangle and the surrounding eight quadrangles.

For the purpose of this analysis, special status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS and National Marine Fisheries Service (NMFS) under the federal Endangered Species Act (FESA); those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as “Species of Special Concern,” “Fully Protected,” or “Watch List” by the CDFW; “Special Animals” designated by the CDFW with potential nesting and/or overwintering habitat on site; and plants with a California Rare Plant Rank (CRPR) of 1, 2, 3, and 4, which are defined as:

- *List 1A = Plants presumed extinct in California;*
- *List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);*
- *List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);*
- *List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);*
- *List 2 = Rare, threatened or endangered in California, but more common elsewhere;*
- *List 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CRPR and CESA);*
- *List 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened); and*
- *List 4.3 = Plants of limited distribution (watch list), not very endangered in California (<20% occurrences threatened or no current threats known).*

Rincon staff determined that the project site contains suitable habitat for sixteen (16) special status animal species, but no special status plant species (Tables 4.4-2 and 4.4-3). In addition, the project site contains designated critical habitat for steelhead within Prefumo Creek. Species marked with an asterisk (*) are special status species added to the list because they were either directly observed onsite or have the potential occur based on our knowledge of the area. The CNDDDB occurrences of special status plants, wildlife, sensitive plant communities and federally designated critical habitats within five miles of the project site are illustrated on Figure 4.2-2. The evaluation of potential to occur for each species identified in the records search is presented in Tables 4.4-2 and 4.4-3 and is based on the presence of the habitat types occurring within the project site and each respective species range.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Agrostis hooveri</i> Hoover's bent grass Poaceae	--/-- 1B.2	Santa Barbara and San Luis Obispo Counties	Usually occurs on sandy substrates within closed-cone coniferous forest, chaparral, cismontane woodland, and valley and foothill grassland. Elevations range: 6-610 meters. Blooms April-July	No Potential	Not detected in project site during bloom period. Oak woodland is not found on site.
<i>Arctostaphylos cruzensis</i> Arroyo de la Cruz manzanita Ericaceae	--/-- 1B.2	San Luis Obispo County	Perennial evergreen shrub. Blooms Dec-Mar. Chaparral. On shale outcrops, on slopes, in chaparral. Elevations 350-850m. Blooms December-March	No Potential	Not detected in project site. Appropriate bluff habitat is not found on site.
<i>Arctostaphylos luciana</i> Santa Lucia manzanita Ericaceae	--/-- 1B.2	San Luis Obispo County	Shale substrates within chaparral and cismontane woodland. Elevations range: 350-850 meters. Blooms December- March	No Potential	Not detected in project site. Appropriate habitat is not found on site.
<i>Arctostaphylos morroensis</i> Morro manzanita Ericaceae	FT/-- 1B.1	San Luis Obispo County	Baywood fine sand substrates within maritime chaparral, cismontane woodland, coastal dunes and coastal scrub. Elevations: 5-205 meters. Blooms December- March	No Potential	Not detected in project site. Dune habitat is not found on site.
<i>Arctostaphylos osoensis</i> Oso manzanita	--/-- 1B.2	San Luis Obispo County	Perennial evergreen shrub. Blooms Feb-Mar. Occurs within chaparral and cismontane woodland. Elevations: 95-500 meters.	No Potential	Not detected in project site. Appropriate habitat is not found on site.
<i>Arctostaphylos pechoensis</i> Pecho manzanita Ericaceae	--/-- 1B.2	Santa Barbara and San Luis Obispo Counties	Siliceous shale substrates within closed-cone coniferous forest, chaparral, and coastal scrub. Elevations range: 125-850 meters. Blooms November-March	No Potential	Not detected in project site. Appropriate habitat is not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Arctostaphylos pilosula</i> Santa Margarita manzanita Ericaceae	--/-- 1B.2	Monterey and San Luis Obispo Counties	Broadleaf upland forest, closed-cone coniferous forest, chaparral, and cismontane woodland, reported growing on decomposed granite or sandstone. Elevations range: 170-1100 meters. Blooms December-May	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.
<i>Arctostaphylos rudis</i> sand mesa manzanita	--/-- 1B.2	Santa Barbara and San Luis Obispo Counties	Perennial evergreen shrub. Sandy, chaparral (maritime), and coastal scrub. Elevation: 25-322 meters Blooms November-February	No Potential	Not detected in project site. Appropriate sandy soils and habitat are not found on site.
<i>Arctostaphylos tomentosa</i> ssp. <i>daciticola</i> Dacite manzanita Ericaceae	--/-- 1B.1	San Luis Obispo County	Perennial evergreen shrub. Blooms Mar-May. Chaparral, cismontane woodland. Only known from one site in San Luis Obispo County on dacite porphyry buttes. Elevation about 120m. Blooms March -May	No Potential	Not detected in project site during bloom period. Chaparral is not present on site.
<i>Arenaria paludicola</i> marsh sandwort Caryophyllaceae	FE/SE 1B.1	Los Angeles, San Bernardino*, Santa Cruz*, San Francisco*, and San Luis Obispo Counties	Sandy openings within freshwater marshes and swamps. Elevations range: 3-170 meters. Blooms May- August.	No Potential	Not detected in project site during bloom period. Appropriate wetland habitat is not found on site.
<i>Astragalus didymocarpus</i> var. <i>milesianus</i> Miles' milk-vetch Fabaceae	--/-- 1B.2	Santa Barbara, San Luis Obispo, and Ventura Counties	Clay substrates within coastal scrub and native grasslands. Elevations range: 20-90 meters. Blooms March-June	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Atriplex coulteri</i> Coulter's saltbush Chenopodiaceae	--/-- 1B.2	Channel Islands; Southern California	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. Elevations 10-440 m. Blooms March - October	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.
<i>Bryoria spiralifera</i> Twisted horsehair lichen Parmeliaceae	--/-- 1B.1	Del Norte, Humboldt, Monterey, San Luis Obispo, and Sonoma Counties	Fruticose lichen (epiphytic). Usually on conifers. North Coast coniferous forest (immediate coast). Elevations 0-30m.	No Potential	Not detected in project site. Coniferous forest habitat is not found on site.
<i>California macrophylla</i> Round-leaved filaree Geraniaceae	--/-- 1B.2	Widely distributed in California	Annual herb. Cismontane woodland, valley and foothill grassland. Clay soils. Elevations 15-1200 m. Blooms March-May	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.
<i>Calochortus obispoensis</i> San Luis mariposa-lily Liliaceae	--/-- 1B.2	San Luis Obispo County	Often on serpentinite substrates within chaparral, coastal scrub, and valley and foothill grassland. Elevations range: 50-730 meters. Blooms May-July	No Potential	Not detected in project site during bloom period. Appropriate heavy soils are not found on site.
<i>Calochortus simulans</i> La Panza mariposa-lily Liliaceae	--/-- 1B.3	Santa Barbara and San Luis Obispo Counties	Sandy, granitic or serpentine within chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland. Elevations range: 395-1100 meters. Blooms April-June	No Potential	Not detected in project site during bloom period. Appropriate soils and habitat are not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Calycadenia villosa</i> dwarf calycadenia	--/-- 1B.1	Fresno, Monterey, Santa Barbara, and San Luis Obispo Counties	Annual herb. Rocky, fine soils. Chaparral, cismontane woodland, meadows and seeps, and valley and foothill grassland. Elevation: 240-1350 meters Blooms May-October	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.
<i>Camissoniopsis hardhamiae</i> Hardham's evening- primrose Onagraceae	--/-- 1B.2	Monterey and San Luis Obispo Counties	Annual herb. Chaparral, cismontane woodland. Decomposed carbonate. Elevations 330-500 meters. Blooms March-May	No Potential	Not detected in project site during bloom period. Appropriate soils and habitat are not found on site.
<i>Carex obispoensis</i> San Luis Obispo sedge Cyperaceae	--/-- 1B.2	Monterey, San Diego, and San Luis Obispo Counties	Often serpentinite seeps and clay soils, occasionally gabbro substrates within closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland. Elevations range: 10-820 meters. Blooms April-June	No Potential	Not detected in project site during bloom period. Appropriate serpentine soils and habitat are not found on site.
<i>Castilleja densiflora</i> ssp. <i>obispoensis</i> San Luis Obispo owl's- clover Orobanchaceae	--/-- 1B.2	San Luis Obispo County	Occasionally serpentinite substrates; found within meadows and seeps and valley and foothill grassland. Elevations range: 10-400 meters. Blooms March-May	No Potential	Not detected in project site during bloom period. Appropriate grassland habitat is not found on site.
<i>Centromadia parryi</i> ssp. <i>congdonii</i> Congdon's tarplant Asteraceae	--/-- 1B.1	Alameda, Contra Costa, Monterey, Santa Clara, Santa Cruz*, San Luis Obispo, San Mateo, and Solano* Counties	Alkaline valley and foothill grassland. Elevations range: 0-230 meters. Blooms May-November	No Potential	Not detected in project site during bloom period. Appropriate vernal moist soils not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Chenopodium littoreum</i> Coastal goosefoot Chenopodiaceae	--/-- 1B.2	Los Angeles, Santa Barbara, and San Luis Obispo Counties	Annual herb. Coastal dunes. Elevations 10-30 meters. Blooms April-August	No Potential	Not detected in project site during bloom period. Appropriate sandy soils and habitat are not found on site.
<i>Chlorogalum pomeridianum</i> var. <i>minus</i> dwarf soaproot Agavaceae	--/-- 1B.2	Colusa, Lake, San Luis Obispo, Sonoma, and Tehama Counties	Serpentinite substrates within chaparral. Elevations range: 305-1000 meters. Blooms from May to August	No Potential	Not detected in project site during bloom period. Appropriate serpentine soils and chaparral habitat are not found on site.
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i> Salt marsh bird's-beak Orobanchaceae	FE/SE 1B.2	Los Angeles, Orange, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, and Ventura Counties	Annual herb (hemiparasitic). Coastal salt marsh, coastal dunes. Limited to the higher zones of the salt marsh habitat. Elevations 0-30 meters. Blooms May-October	No Potential	Not detected in project site during bloom period. Salt marsh habitat is not found on site.
<i>Chorizanthe breweri</i> Brewer's spineflower Polygonaceae	--/-- 1B.3	Monterey and San Luis Obispo Counties	Serpentinite, rocky or gravelly substrates within closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub. Elevations range: 45-800 meters. Blooms April-August	No Potential	Not detected in project site during bloom period. Appropriate serpentine soils and habitat are not found on site.
<i>Chorizanthe rectispina</i> Straight-awned spineflower Polygonaceae	--/-- 1B.3	Monterey, Santa Barbara, and San Luis Obispo Counties	Annual herb. Chaparral, cismontane woodland, coastal scrub. Often on granite in chaparral. Elevations 85-1035 meters. Blooms April – July	No Potential	Not detected in project site during bloom period. Appropriate sandy soils and habitat are not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Cirsium fontinale</i> var. <i>obispoense</i> Chorro Creek Bog thistle (San Luis Obispo fountain thistle) Asteraceae	FE/SE 1B.2	San Luis Obispo County	Serpentine seeps and drainages within chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. Elevations range: 35-380 meters. Blooms February – September	No Potential	Not detected in project site during bloom period. Serpentine soils are not found on site.
<i>Cirsium occidentale</i> var. <i>lucianum</i> Cuesta Ridge thistle Asteraceae	--/-- 1B.2	San Luis Obispo County	Serpentine substrates and often on steep rocky slopes and disturbed roadsides within openings in chaparral. Elevations range: 500-750 meters. Blooms April-June	No Potential	Not detected in project site during bloom period. Appropriate soils and habitat are not found on site.
<i>Cirsium rhotophilum</i> Surf thistle Asteraceae	--/ST 1B.2	Santa Barbara and San Luis Obispo Counties	Perennial herb. Coastal dunes, coastal bluff scrub. Open areas in central dune scrub; usually in coastal dunes. Elevations 3-60 meters. Blooms April - June	No Potential	Not detected in project site during bloom period. Appropriate dune habitat is not found on site.
<i>Cirsium scariosum</i> var. <i>loncholepis</i> La Graciosa thistle	FE/ST 1B.1	Monterey, Santa Barbara, and San Luis Obispo Counties	Perennial herb. Mesic, sandy. Cismontane woodland, coastal dunes, coastal scrub, marshes and swamps (brackish), and valley and foothill grassland. Elevation: 4-220 meters Blooms May-August	No Potential	Not detected in project site during bloom period. Appropriate wetland habitat is not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Cladonia firma</i> popcorn lichen Cladoniaceae	--/-- 2B.1	San Luis Obispo County	Maritime habitats in Europe and North America. Stabilized sand dunes on the coast. On soil and detritus on stabilized sand dunes, in pure stands or intermixed with other lichens and mosses forming biotic soil crusts, covering areas up to several meters.	No Potential	Not detected in project site. Appropriate soils and habitat are not found on site.
<i>Clarkia speciosa</i> ssp. <i>immaculata</i> Pismo clarkia Onagraceae	FE/SR 1B.1	southern San Luis Obispo County	Sandy substrates, margins and openings within chaparral, cismontane woodland, and valley and foothill grassland. Elevations range: 25-185 meters. Blooms April - July	No Potential	Not detected in project site during bloom period. Appropriate sandy soils and habitat are not found on site.
<i>Delphinium parryi</i> ssp. <i>blochmaniae</i> dune larkspur Ranunculaceae	--/-- 1B.2	Santa Barbara, San Luis Obispo, and Ventura Counties	Maritime chaparral and coastal dunes. Elevations range: 0-200 meters. Blooms April-June	No Potential	Not detected in project site during bloom period. Appropriate soils and habitat are not found on site.
<i>Delphinium parryi</i> ssp. <i>eastwoodiae</i> Eastwood's larkspur Ranunculaceae	--/-- 1B.2	San Luis Obispo County	Coastal serpentinite substrates within openings in chaparral and valley and foothill grassland. Elevations range: 75-500 meters. Blooms February – March	No Potential	Not detected in project site during bloom period. Serpentine soils are not found on site.
<i>Delphinium umbraculorum</i> Umbrella larkspur Ranunculaceae	--/-- 1B.3	San Luis Obispo County	Perennial herb. Chaparral, cismontane woodland. Mesic sites. Elevations 400- 1600 meters. Blooms April- June	No Potential	Not detected in project site during bloom period. Project site is outside of the known elevation range for this species.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Dithyrea maritima</i> Beach spectaclepod Brassicaceae	--/ST 1B.1	Los Angeles, Ventura, Santa Barbara, San Luis Obispo Counties; Channel Islands	Perennial rhizomatous herb. Coastal dunes, coastal scrub. Formerly more widespread in coastal habitats in So. Calif. Sea shores, on sand dunes, and sandy places near the shore. Elevations 3-50 meters. Blooms March-May	No Potential	Not detected in project site during bloom period. Dune habitat is not found on site.
<i>Dudleya abramsii</i> ssp. <i>bettinae</i> Betty's dudleya Crassulaceae	--/-- 1B.2	San Luis Obispo County	Perennial herb. Coastal scrub, valley and foothill grassland, chaparral. On rocky, barren exposures of serpentine within scrub vegetation. Elevations 20-180 meters. Blooms May - July	No Potential	Not detected in project site during bloom period. Serpentine soils are not found on site.
<i>Dudleya abramsii</i> ssp. <i>murina</i> mouse-gray dudleya Crassulaceae	--/-- 1B.3	San Luis Obispo County	Serpentinite outcrops within chaparral, cismontane woodland, and valley and foothill grassland. Elevations range: 90-440 meters. Blooms May - June	No Potential	Not detected in project site during bloom period. Serpentine soils are not found on site.
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> Blochman's dudleya Crassulaceae	--/-- 1B.1	Los Angeles, Orange, Santa Barbara, San Diego, San Luis Obispo, and Ventura Counties	Rocky, often clay or serpentinite substrates within coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland. Elevations range: 5-450 meters. Blooms April - June	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.
<i>Eriastrum luteum</i> Yellow-flowered eriastrum Polemoniaceae	--/-- 1B.2	Monterey and San Luis Obispo Counties	Annual herb. Broadleaved upland forest, cismontane woodland, chaparral. On bare sandy decomposed granite slopes. Elevations 360-1000 meters. Blooms May - June	No Potential	Not detected in project site during bloom period. Appropriate habitat and sandy soils are not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Erigeron blochmaniae</i> Blochman's leafy daisy Asteraceae	--/-- 1B.2	Santa Barbara and San Luis Obispo Counties	Perennial rhizomatous herb. Coastal dunes. Sand dunes and hills. Elevations 3-185 meters. Blooms June - August	No Potential	Not detected in project site during bloom period. Sandy soils are not found on site.
<i>Eriodictyon altissimum</i> Indian Knob mountainbalm Boraginaceae	FE/SE 1B.1	San Luis Obispo County	Perennial evergreen shrub. Chaparral (maritime), cismontane woodland, coastal scrub. Ridges in open, disturbed areas within chaparral on Pismo sandstone. Also occurs on Baywood sands. Elevations 80-270 meters. Blooms March – June	No Potential	Not detected in project site during bloom period. Appropriate soils and habitat are not found on site.
<i>Eryngium aristulatum</i> var. <i>hooveri</i> Hoover's button-celery Apiaceae	--/-- 1B.1	Alameda, San Benito, Santa Clara, San Diego, and San Luis Obispo Counties	Vernal pools and serpentine seeps in mesic grasslands. Elevations range: 3-45 meters. Blooms in July-August.	No Potential	Not detected in project site during bloom period. Appropriate vernal pool habitat is not found on site.
<i>Extriplex</i> [=Atriplex] <i>joaquiniana</i> San Joaquin spear scale Chenopodiaceae	--/-- 1B.2	Southern and Central California and the Great Valley	Annual herb. Alkaline, chenopod scrub, meadows and seeps, playas, valley and foothill grassland. Elevations 1-835 meters. Blooms April-October	No Potential	Not detected in project site during bloom period. Alkaline soils are not found on site.
<i>Fritillaria ojaiensis</i> Ojai fritillary Liliaceae	--/-- 1B.2	Monterey, Santa Barbara, San Luis Obispo, and Ventura Counties	Perennial bulbiferous herb. Broadleaved upland forest (mesic), chaparral, lower montane coniferous forest. Rocky sites; one reported as "moist shale talus." Elevations 300-670 meters. Blooms February-May	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Fritillaria viridea</i> San Benito fritillary Liliaceae	--/-- 1B.2	Fresno, Monterey, San Benito, and San Luis Obispo Counties	Perennial bulbiferous herb. Chaparral. Serpentine slopes. Elevations 200-1525 meters. Blooms March-May	No Potential	Not detected in project site during bloom period. Serpentine soil is not found on site.
<i>Horkelia cuneata</i> var. <i>puberula</i> mesa horkelia Rosaceae	--/-- 1B.1	Los Angeles, Orange, Riverside*, Santa Barbara, San Bernardino, San Diego*, San Luis Obispo, and Ventura Counties	Sandy or gravelly substrates within maritime chaparral, cismontane woodland, and coastal scrub. Elevations: 70-810 meters. Blooms February-September	No Potential	Not detected in project site during bloom period. Appropriate sandy soils and habitat are not found on site.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields Asteraceae	--/-- 1B.1	Colusa, Kern, Los Angeles, Merced, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, Santa Rosa Island, Tehama, Tulare, Venture, and Yolo Counties	Annual herb. Coastal salt marshes, playas, valley and foothill grassland, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. Elevations 1-1400 meters. Blooms February-June	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.
<i>Layia heterotricha</i> Pale-yellow layia Asteraceae	--/-- 1B.1	Fresno, Kings, Kern, Los Angeles, Monterey, Santa Barbara, San Benito, San Luis Obispo, and Ventura Counties	Annual herb. Cismontane woodland, pinyon-juniper woodland, valley and foothill grassland. Alkaline or clay soils; open areas. Elevations 270-1365 meters. Blooms March - June	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.
<i>Layia jonesii</i> Jones' layia Asteraceae	--/-- 1B.2	San Luis Obispo County	Clay or serpentinite substrates within chaparral and valley and foothill grassland. Elevations range: 5-400 meters. Blooms March-May	No Potential	Not detected in project site during bloom period. Clay soils present on site, but heavily disturbed.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Lupinus ludovicianus</i> San Luis Obispo County lupine Fabaceae	--/-- 1B.2	San Luis Obispo County	Sandstone or sandy substrates within chaparral and cismontane woodland. Elevations range: 50-525 meters. Blooms April-July	No Potential	Not detected in project site during bloom period. Oak woodland habitat is not found on site.
<i>Malacothamnus gracilis</i> Slender bush-mallow Malvaceae	--/-- 1B.1	Santa Barbara and San Luis Obispo Counties	Perennial deciduous shrub. Usually rocky chaparral. Dry, rocky slopes. Elevations 190-575 meters. Blooms May-October	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.
<i>Malacothamnus palmeri</i> var. <i>Involucratus</i> Carmel Valley bush- mallow	--/-- 1B.2	Monterey and San Luis Obispo Counties.	Perennial deciduous shrub. Chaparral, cismontane woodland, coastal scrub. Elevation: 30-1100 meters Blooms April-October	No Potential	Not detected in project site during bloom period Appropriate habitat is not found on site.
<i>Malacothamnus palmeri</i> var. <i>palmeri</i> Santa Lucia bush-mallow Malvaceae	--/-- 1B.2	Monterey and San Luis Obispo Counties	Perennial deciduous shrub. Chaparral. Dry rocky slopes, mostly near summits, but occasionally extending down canyons to the sea. Elevations 60-365 meters. Blooms May – July	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.
<i>Monardella palmeri</i> Palmer's monardella Lamiaceae	--/-- 1B.2	Monterey and San Luis Obispo Counties	Serpentinite substrates within chaparral and cismontane woodland. Elevations range: 200-800 meters. Blooms June- August	No Potential	Not detected on site during bloom period. Serpentine soils are not found on site.
<i>Monardella sinuata</i> ssp. <i>sinuata</i> Southern curly-leaved monardella Lamiaceae	--/-- 1B.2	Santa Barbara, San Luis Obispo, and Ventura Counties	Coastal dunes, coastal scrub, chaparral, cismontane woodlands. Sandy soils. Elevations 0- 300 meters. Blooms April- September	No Potential	Not detected in project site during bloom period. Appropriate sandy soils and habitat are not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Monardella undulata</i> ssp. <i>undulata</i> San Luis Obispo monardella	--/-- 1B.2	Santa Barbara and San Luis Obispo Counties	Perennial rhizomatous herb. Coastal dunes and coastal scrub (sandy). Elevation: 10-200 meters. Blooms: May-September	No Potential	Not detected in project site during bloom period. Appropriate sandy soils and habitat are not found on site.
<i>Monolopia gracilens</i> Woodland woollythreads Asteraceae	--/-- 1B.2	Alameda, Contra Costa, Monterey, San Benito, Santa Clara, Santa Cruz, San Luis Obispo, and San Mateo Counties	Annual herb. Chaparral, valley and foothill grasslands (serpentine), cismontane woodland, broadleaved upland forests, north coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns but may have only weak affinity to serpentine. Elevations 100-1200 meters. Blooms February-July	No Potential	Not detected in project site during bloom period. Appropriate sandy soils and habitat are not found on site.
<i>Navarretia fossalis</i> Spreading Navarretia	FT / -- 1B.1	Los Angeles, Riverside, San Diego, San Luis Obispo, and Ventura Counties	Annual herb. Occurs in vernal pools, ditches, and other areas that are wet or flooded during the rainy season and dry during the rest of the year, and in areas with alkali soils.	No Potential	Not detected in project site. Species has not been documented by CNDDB within 5 miles of the project site. Appropriate alkali soils not present. Not expected to occur.
<i>Navarretia nigelliformis</i> ssp. <i>radians</i> Shining navarretia Polemoniaceae	--/-- 1B.2	Alameda, Contra Costa, Colusa, Fresno, Madera, Merced, Monterey, San Benito, San Joaquin, and San Luis Obispo Counties	Annual herb. Cismontane woodland, valley and foothill grassland, vernal pools. Apparently in grassland, and not necessarily in vernal pools. Elevations 200-100 meters. Blooms April - July	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Nemacaulis denudata</i> var. <i>denudata</i> Coast woolly-heads Polygonaceae	--/-- 1B.2	Los Angeles, Orange, Santa Catalina Island, San Diego, and San Luis Obispo Counties	Annual herb. Coast dunes. Elevations 0-100 meters. Blooms April-September	No Potential	Not detected in project site during bloom period. Dune habitat is not found on site.
<i>Plagiobothrys uncinatus</i> Hooked popcorn flower Boraginaceae	--/-- 1B.2	Monterey, San Benito, Santa Clara, San Luis Obispo, and Stanislaus Counties	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Sandstone outcrops and canyon sides; often in burned or disturbed areas. Elevations 300-760 meters. Blooms April-May	No Potential	Not detected in project site during bloom period. Appropriate sandstone substrate is not found on site.
<i>Poa diabolic</i> Diablo Canyon blue-grass Poaceae	--/-- 1B.2	San Luis Obispo County	Perennial rhizomatous herb. Shale; sometimes burned areas. Closed-cone coniferous forest, chaparral (mesic), cismontane woodland, coastal scrub. Elevations 120-400 meters. Blooms March-April	No Potential	Not detected in project site during bloom period. Appropriate habitat is not found on site.
<i>Sanicula maritima</i> adobe sanicle Apiaceae	--/SR 1B.1	Alameda*, Monterey, San Francisco*, and San Luis Obispo Counties	Clay and serpentinite substrates within chaparral, coastal prairie, meadows and seeps, and valley and foothill grassland. Elevations range: 30-240 meters. Blooms February – May	No Potential	Not detected in project site during bloom period. Appropriate wet meadow habitat is not found on site.
<i>Scrophularia atrata</i> black-flowered figwort Scrophulariaceae	--/-- 1B.2	Santa Barbara and San Luis Obispo Counties	Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, and riparian scrub. Elevations range: 10-500 meters. Blooms March-July.	No Potential	Not detected in project site during bloom period. Appropriate soils and habitat are not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Senecio aphanactis</i> chaparral ragwort Asteraceae	--/-- 2B.2	Alameda, Contra Costa, Fresno, Los Angeles, Merced, Monterey, Orange, Riverside, Santa Barbara, San Benito, Santa Clara, Santa Cruz, Santa Catalina Island, San Diego, San Luis Obispo, Solano, Santa Rosa Island, and Ventura Counties	Occasionally alkaline substrates within chaparral, cismontane woodland, and coastal scrub. Elevations range: 15-800 meters. Blooms January – April.	No Potential	Not detected in project site during bloom period. Appropriate soils and habitat are not found on site.
<i>Sidalcea hickmanii</i> ssp. <i>anomala</i> Cuesta Pass checkerbloom Malvaceae	--/SR 1B.2	San Luis Obispo County	Perennial herb. Closed-cone coniferous forest. Rocky serpentine soil; associated with Sargent cypress forest. Elevations 600-800 meters. Blooms May-June	No Potential	Not detected in project site during bloom period. Appropriate serpentine soils and coniferous forest habitat are not found on site.
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i> most beautiful jewel-flower Brassicaceae	--/-- 1B.2	Alameda, Contra Costa, Monterey, Santa Clara, and San Luis Obispo Counties	Serpentinite substrates within chaparral, cismontane woodland, and valley and foothill grassland. Elevations range: 94-1000 meters. The Jepson eFLora does not recognize <i>S. albidus</i> ssp. <i>peramoenus</i> reported from SLO County as distinct from the common <i>Streptanthus glandulosus</i> ssp. <i>glandulosus</i> . Blooms March - October	No Potential	Not detected in project site during bloom period. Serpentine soils are not found on site.
<i>Suaeda californica</i> California seablite Chenopodiaceae	FE/-- 1B.1	Alameda, Contra Costa, Santa Clara, San Francisco, and San Luis Obispo Counties	Perennial evergreen subshrub. Found on the margins of coastal salt marshes and swamps. Elevations 0-15 meters. Blooms July-October	No Potential	Not detected in project site. Salt marsh habitat is not found on site.

Table 4.4-2 Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name Family	Status Fed/State ESA CRPR	Distribution	Habitat Requirements	Potential to Occur	Rationale
<i>Sulcaria isidiifera</i> Splitting yarn lichen Alectoriaceae	--/-- 1B.1	San Luis Obispo County	Chaparral, cismontane woodland. On branches of oaks and shrubs. Elevations 20-30 meters.	No Potential	Not detected in project site. Appropriate habitat is not found on site.
<i>Trifolium hydrophilum</i> saline clover Fabaceae	--/-- 1B.2	Alameda, Contra Costa, Colusa, Lake, Monterey, Napa, Sacramento, San Benito, Santa Clara, Santa Cruz, San Luis Obispo, San Mateo, Solano, Sonoma, and Yolo Counties	Marshes and swamps, mesic and alkaline areas within valley and foothill grassland, and vernal pools. Elevations range: 0-300 meters. Blooms April-June	No Potential	Not detected in project site during bloom period. Appropriate soils and habitat are not found on site.
<i>Tropidocarpum capparideum</i> Caper-fruited tropidocarpum	--/-- 1B.1	Alameda, Contra Costa, Fresno, Glenn, Monterey, Santa Clara, San Joaquin, San Luis Obispo Counties	Annual herb. Valley and foothill grassland (alkaline hills). Elevation: 1-455 meters. Blooms: March-April	No Potential	Not detected in project site during bloom period. Alkaline clay soil is not found on site.

Sources: CNDDDB (CDFW, 2016); USFWS IPaC (2016), CDFW Special Plants List (2013), and CNPS Rare Plant Inventory (2016).

FE = Federally Endangered, FT = Federally Threatened, DL = Delisted

SE = State Endangered, ST = State Threatened, SR = State Rare

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDDB RareFind3.

CRPR (California Rare Plant Rank):

1A=Presumed Extinct in California

1B=Rare, Threatened, or Endangered in California and elsewhere

2=Rare, Threatened, or Endangered in California, but more common elsewhere

3=Need more information (a Review List)

4=Plants of Limited Distribution (a Watch List)

CRPR Threat Code Extension:

.1=Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2=Fairly endangered in California (20-80% occurrences threatened)

.3=Not very endangered in California (<20% of occurrences threatened)

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
Invertebrates					
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	FT/--	Endemic to the grasslands of the Central Valley, and Central Coast and the South Coast mountains of San Luis Obispo County.	Rain-filled pools; small, clear-water sandstone-depression pools and grassland swale, earth slump, or basalt-flow depression pools. Adults: wet season, approximately December-April; Cysts: dry season, approximately June-October	No Potential	Not detected in project site. Appropriate habitat is not present on site.
<i>Helminthoglypta walkeriana</i> Morro shoulderband snail	FE/--	Restricted to the coastal strand in the immediate vicinity of Morro Bay.	Coastal dunes and scrub. Inhabits the duff beneath <i>Haplopappus</i> , <i>Salvia</i> , <i>Dudleya</i> , and <i>Mesembryanthemum</i> as well as iceplant. Can be detected year round.	No Potential	Not detected in project site. Appropriate habitat is not present on site; project site is outside known range of species.
Fish					
<i>Eucyclogobius newberryi</i> tidewater goby	FE/-- SSC	Coastal California from Del Norte County to San Diego County.	Occurs in brackish and freshwater shallow lagoons and slow-moving lower stream reaches. Requires fairly calm and still waters, but not stagnant. Avoids open areas with strong currents or wave action. Typically July-October (occasionally outside this period with agency consultation)	No Potential	Not detected in project site. Appropriate habitat is not present on site.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
<i>Oncorhynchus mykiss irideus</i> steelhead – south/central California coast DPS	FT/-- --	All naturally spawned populations that occur in coastal streams from the Pajaro River south to, but excluding the Santa Maria River. The major watersheds include the Pajaro, Salinas, and Carmel, as well as the smaller rivers along the Big Sur Coast and south.	Occurs in perennial water within riparian, emergent, and palustrine habitats. Spawning and rearing occurs in cool, clear fast-flowing streams with abundant gravel or cobble and riffles. Feeds and forages in open waters within estuarine subtidal and riverine habitats. Connectivity to the Pacific Ocean is required to complete its life cycle. Can be detected year round.	High Potential	Not detected in project site. However, Prefumo Creek is historic habitat.
Amphibians					
<i>Ambystoma californiense</i> California tiger salamander	FT/ST SSC	Sonoma and Santa Barbara Counties and Central California.	Restricted to vernal pools and seasonal ponds, including constructed stock ponds, in grassland and oak savannah plant communities, predominantly from sea level to 2,000 feet, in Central California.	No Potential	Species has not been documented by CNDDDB within 5 miles of the BSA. No vernal pools or ponds have been documented on-site. Not expected to occur.
<i>Rana boylei</i> Foothill yellow-legged frog	--/-- SSC	Occurs along the coast of California and east of the Central Valley.	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	No Potential	Not detected in project site. Prefumo creek does not have suitable substrate for this species. Not expected to occur.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
<i>Rana draytonii</i> California red-legged frog	FT/-- SSC	Coastal drainages of central California, from Marin County, south to San Diego County	Found in permanent and temporary pools of deep water in streams, marshes, and ponds with dense grassy, shrubby, or emergent vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to upland aestivation habitat. The Survey period is typically between November and June.	High Potential	Not detected in project site. However, appropriate creek habitat is present on site and, project site is 0.5 mile from the confluence of Prefumo and San Luis Obispo Creek and a documented occurrence of CRLF.
<i>Spea hammondi</i> Western spadefoot	-- / -- SSC	Occurs in Central Valley and bordering foothills of California and along the coast ranges in the USA south of San Francisco Bay.	Open areas with sandy or gravelly soils, including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rain pools that do not support bullfrogs, fish, or crayfish are required for breeding. Breeding season: January-August	Moderate Potential	Wetland depressions that hold water for several weeks were observed onsite that may be suitable for Western spadefoot to breed.
<i>Taricha torosa</i> Coast Range newt	--/-- SSC	Coastal drainages from Mendocino County to San Diego County.	Prefers wooded rocky streambanks in forested and wooded areas and will migrate over 1 kilometer to breed in slow water.	Moderate Potential	Pools within Prefumo Creek where some tree canopy is available may be suitable for breeding.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
Reptiles					
<i>Emys marmorata</i> western pond turtle	--/-- SSC	Western portion of California, including the coast ranges and the central valley, west of the crest of Cascades and Sierra Nevadas.	Occurs in river/streams w/deep pools and irrigation canals with moderate amounts of riparian and emergent vegetation. Slow moving waters, perm aquatics. Note that taxonomy of pond turtles in southern California has been revised multiple times in recent years. Detection is most likely between March-October	High Potential	Not detected in project site. However, appropriate creek habitat is present on site, and project site is nearby confluence with San Luis Obispo Creek, which has documented occurrences of this species.
<i>Anniella pulchra nigra</i> black legless lizard	-- / -- SSC	Occurs from southern edge of the San Joaquin River in northern Contra Costa County south to Ventura County. Also occurs in coastal dunes from Morro Bay south to the mouth of the Santa Maria River in San Luis Obispo County.	Sand dunes and sandy soils in the Monterey Bay and Morro Bay regions. Inhabit sandy soil/dune areas with bush lupine and mock heather as dominant plants. Moist soil is essential. Detectable year round.	No Potential	Not detected in project site. Appropriate habitat is not present on site.
<i>Anniella pulchra pulchra</i> silvery legless lizard	--/-- SSC	Contra Costa County south through the Coast, Transverse, and Peninsular Ranges, along the western edge of the Sierra Nevada Mountains and parts of the San Joaquin Valley and Mojave Desert.	Requires dune scrub, coastal scrub, chaparral, pine-oak woodland, oak woodland, and riparian woodland. Utilizes loose sandy or loamy soils for burrowing, moisture, warmth, and adequate vegetative cover. Detectable year round.	No Potential	Not detected in project site. Appropriate habitat is not present on site.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
<i>Gambelia silus</i> blunt-nosed leopard lizard	FE / SE FP	Fresno, Kern, Kings, Los Angeles, Madera, Mariposa, Merced, Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Clara, Stanislaus, Tulare, and Ventura Counties.	Occur in semiarid grasslands, alkali flats, and washes. Prefer flat areas with open space for running, avoiding densely vegetated areas. Elevation: 30-730 meters.	No Potential	Not expected to occur on site. No suitable habitat occurs on site and no observations were made during the surveys.
<i>Phrynosoma blainvillii</i> coast horned lizard	--/-- SSC	Fragmented distribution that includes the Pacific coast from the Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area, and inland as far north as Shasta Reservoir, and south into Baja California.	Coastal sage, chaparral, grassland, conifer forests and other woodlands, riparian, with open areas and patches of loose soil. Peak detection is between May and September.	No Potential	Not detected in project site. Appropriate habitat is not present on site.
<i>Thamnophis hammondi</i> * two-striped garter snake	--/-- SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 feet elevation.	Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Moderate Potential	Suitable riparian habitat is present onsite adjacent to Prefumo Creek.
Birds					
<i>Accipiter cooperii</i> Cooper's hawk (nesting)	--/-- WL	Breeding resident throughout most of the wooded portion of the state. Breeds in southern Sierra Nevada foothills, New York Mts., Owens Valley, and other local areas in southern California.	Forages and nests in open woodlands and wood margins, riparian forests. Can be detected year round.	High Potential	Detected in project site (not nesting). Foraging habitat is present, may nest in eucalyptus.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
<i>Agelaius tricolor</i> tricolored blackbird (nesting colony)	--/-- SSC	Common locally throughout Central Valley and in coastal districts from Sonoma County to southern California Counties.	Grassland and cropland habitats with emergent wetland with tall, dense cattails and/or tules. Also occurs in thickets of willow, blackberry, and tall herbs. Can be detected Year Round.	No Potential	Not detected in project site. Appropriate nesting and foraging habitat is not present on site.
<i>Ammodramus savannarum</i> grasshopper sparrow	--/-- SSC	Coastal districts from Humboldt County to San Diego County as well as east to the Great Plains.	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting. Detection during Summer.	No Potential	Not detected in project site. Appropriate grassland habitat is not present on site.
<i>Aquila chrysaetos</i> golden eagle (nesting & wintering)	--/-- FP	Extensive range throughout California. Known to occur in San Luis Obispo.	Nests on cliffs, rocks, and large trees and forages in open country, grasslands. Can be detected year round.	No Potential	Not detected in project site. Appropriate woodland habitat is not present on site.
<i>Ardea Herodias</i> * great blue heron (rookery)	--/-- SSA (rookery)	Extensive range from the Americas to Canada. Known to occur in San Luis Obispo.	Rookeries located in tall trees near foraging areas.	High Potential	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.
<i>Athene cunicularia</i> burrowing owl	--/-- SSC	Central Valley, the Modoc Plateau and northeastern California, and the southeastern portions of the state.	Occurs in open dry grasslands and desert habitats. Also occurs in open areas within pinyon-juniper habitat. Can be detected year round.	No Potential	Small isolated patches of grassland habitat on-site are highly disturbed and not suitable for nesting burrowing owl. Not detected in project site.
<i>Buteo regalis</i> ferruginous hawk	--/-- WL	Uncommon winter resident and migrant at lower elevations and open grasslands in the Modoc Plateau, Central Valley, and Coast Ranges.	Open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitat. Detection during Winter.	No Potential	Not detected in project site. Appropriate grassland habitat is not present on site.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
<i>Charadrius alexandrinus nivosus</i> western snowy plover	FT/-- SSC	Range is largely restricted to coastal California. Also occurs in a few inland alkaline lakes, the Salton Sea, and Mono Lake.	Requires dune-backed beaches, barrier beaches, and salt-evaporated ponds. Uses sandy, gravelly, or friable soils for nesting. Occasionally uses agricultural waste ponds of the Central Valley. Can be detected year round.	No Potential	Not detected in project site. Appropriate habitat is not present on site.
<i>Contopus cooperi*</i> <i>olive-sided flycatcher</i>	--/-- SSC	Nests in mixed conifer, montane hardwood-conifer forests in California and elsewhere in North America.	Nesting habitats are mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir and lodge-pole pine. Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain.	High Potential	Eucalyptus in project site contains moderately suitable nesting habitat. Site contains 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.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FT/SE --	Coastal valleys from the Mexican border to Sebastopol, Sonoma County and the Central Valley from Bakersfield and Weldon, Kern County, north to Redding, Shasta County.	Riparian plants, prefers willows, cottonwoods, aspens, sycamores and alders for resting and foraging. Year Round.	No Potential	Not detected in project site. Appropriate dense riparian habitat is not present on the site.
<i>Elanus leucurus</i> white-tailed kite	--/-- FP	California's coastal and valley regions excluding the Cascades, Sierra Nevadas, Mojave Desert, and Peninsular Ranges.	Grasslands, dry farmed agricultural fields, savannahs and relatively open oak woodlands, and other relatively open lowland scrublands. Year Round	Moderate Potential	Not detected in project site. Suitable habitat onsite for foraging and nesting. No nests were documented in the project site, but white tailed kites could nest in eucalyptus.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	FE/SE --	Alpine, Fresno, Imperial, Inyo, Kern, Los Angeles, Madera, Mono, Monterey, Orange, Riverside, San Benito, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Santa Cruz, Tulare, Tuolumne, and Ventura Counties.	Breeds in relatively dense riparian tree and shrub communities associated with rivers, swamps, lakes and reservoirs. Nests in non-native, mixed-native, and native vegetation including willow, seepwillow, boxelder, buttonbrush, and cottonwood.	No Potential	There are no documented occurrences by CNDDB within 5 miles of the project site. Not known to occur in area.
<i>Eremophila alpestris actia</i> California horned lark	--/-- WL	A common resident throughout California, and known populations in San Luis Obispo County.	Grasslands, open coastal plains, and alkali flats. Prefers low, sparse vegetation. Year Round	No Potential	Not detected in project site. Appropriate habitat is not present on site.
<i>Falco columbarius</i> merlin	--/-- WL	Extensive range throughout California. Known to occur in San Luis Obispo.	Forages over coastlines, open grasslands, savannahs, woodlands, and wetlands. Winter	High Potential	Not detected in project site. However, appropriate wintering habitat is present on site.
<i>Falco mexicanus</i> prairie falcon	--/-- WL	Southeastern deserts northwest throughout the Central Valley and along the inner Coast Ranges and Sierra Nevada.	Dry, open terrain, flat or hilly with breeding sites located on cliffs. February-September	No Potential	Not detected in project site. Appropriate habitat is not present on site.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
<i>Gymnogyps californianus</i> California condor	FE / SE FP	Fresno, Inyo, Kern, Kings, Los Angeles, Merced, Mono, Monterey, San Benito, San Bernardino, San Luis Obispo, Santa Barbara, Santa Clara, Tulare, and Ventura Counties.	Require large areas of remote country for foraging, roosting, and nesting. Roost on large trees or snags, or on isolated rocky outcrops and cliffs. Nests are located in shallow caves and rock crevices on cliffs where there is minimal disturbance. Foraging habitat includes open grasslands and oak savanna foothills that support populations of large mammals such as deer and cattle.	No Potential	Extremely unlikely to occur. Marginal foraging habitat.
<i>Lanius ludovicianus</i> loggerhead shrike	--/-- SSC	Extensive range throughout California. Known to occur in San Luis Obispo.	Coastal sage scrub, grasslands. Year Round	High Potential	Not detected in project site. Appropriate nesting and foraging habitat is present on site. Known to occur in vicinity.
<i>Laterallys jamaicensis coturniculus</i> California black rail	--/ST FP	Placer County, San Joaquin County, the San Francisco Bay area, Marin County, and Morro Bay in San Luis Obispo County. Populations have also been found in Yuba, Butte, and Nevada Counties.	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about one inch that does not fluctuate during the year and dense vegetation for nesting habitat. Year Round	No Potential	Not detected in project site. Appropriate salt marsh habitat is not present on site.
<i>Progne subis</i> purple martin	--/-- SSC	San Luis Obispo County.	Inhabits woodlands including sycamores, low elevation coniferous forest of Douglas fir, ponderosa pine, and Monterey pine. Primarily nests in old woodpecker cavities. Summer	No Potential	Not detected in project site. Sycamores are not present on site.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
<i>Rallus longirostris obsoletus</i> California clapper rail	FE/SE FP	Humboldt County, Monterey County, and in Morro Bay in San Luis Obispo County.	Salt-water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickle weed, but feeds away from cover on invertebrates from mud-bottomed sloughs. Year Round	No Potential	Not detected in project site. Appropriate habitat is not present on site.
<i>Setophaga petechia brewsteri*</i> yellow warbler	--/-- SSC	Found throughout much of North America and southern Canada in habitats briefly categorized as wet, deciduous thickets	Riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. Also nests in montane shrubbery in open conifer forests.	High Potential	The riparian habitat in Prefumo Creek is marginally suitable nesting habitat. Multiple yellow warblers were seen foraging in the willows south of the Post Office in the seasonal drainage during spring surveys.
<i>Sterna antillarum browni</i> California least tern	FE/SE --	Alameda, Contra Costa, Los Angeles, Marin, Monterey, Napa, Orange, Sacramento, San Diego, San Francisco, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Solano, Sonoma, and Ventura Counties.	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	No Potential	No suitable habitat occurs within the project site for this species. Not expected to occur.
<i>Vireo bellii pusillus</i> least Bell's vireo	FE/SE --	Imperial, Inyo, Kern, Los Angeles, Monterey, Orange, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Joaquin, San Luis Obispo, Santa Barbara, Santa Clara, Santa Cruz, Stanislaus, Tulare, Ventura, and Yolo Counties.	Inhabits structurally diverse woodlands along watercourse, including cottonwood-willow forests, oak woodlands, and mule fat scrub.	No Potential	Species is not known to occur in this area and there are no documented occurrences by CNDDB within 5 miles of the project site. No suitable nesting habitat present within the project site.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
Mammals					
<i>Antrozous pallidus</i> pallid bat	--/-- SSC	Throughout California except for the high Sierra Nevada from Shasta to Kern Cos., and the northwestern corner of the state from Del Norte and western Siskiyou Cos. to northern Mendocino Co.	Rock crevices, tree hollow, mines, caves, structures. Open, lowland areas. Year Round	High Potential	Not detected in project site. However, appropriate old buildings are present on site for habitat.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	--/SCT SSC	Extensive range throughout California. Known to occur in San Luis Obispo.	Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. Year Round	High Potential	Not detected in project site. However, appropriate old buildings are present on site for habitat.
<i>Dipodomys heermanni morroensis</i> Morro Bay kangaroo rat	FE/SE FP	Coast range along Morro Bay and between Spooner Cover and Hazards Canyon in Montano de Oro in San Luis Obispo County.	Commonly associated with stabilized sand dune, coastal dune, and coastal sage scrub, and maritime chaparral communities. Year Round	No Potential	Not detected in project site. Appropriate dune habitat is not present on site.
<i>Dipodomys ingens</i> giant kangaroo rat	FE / SE --	Fresno, Kern, Kings, Madera, Merced, Monterey, San Benito, San Luis Obispo, Tulare, and Ventura Counties.	Occur in annual grassland communities with few or no shrubs, well drained, sandy-loam soils located on gentle slopes (less than 11 percent) in areas with about 6.3 inches or less of annual precipitation.	No Potential	Not expected to occur on site. No suitable habitat occurs on site and no observations were made during the survey.
<i>Eumops perotis californicus</i> western mastiff bat	--/-- SSC	Coast ranges from Monterey County southward through Southern California, from the coast eastward to the Colorado desert.	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels. Year Round	No Potential	Not detected in project site. Appropriate roosting habitat is not present on site.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	--/-- SSC	Found throughout central and southern California from San Luis Obispo south through the Transverse and Peninsula Ranges in Baja California.	Commonly inhabit Joshua tree woodlands, pinyon-juniper woodlands, mixed chaparral, sagebrush, and desert habitats. Known to construct dens in the cracks between boulders using sticks, yucca leaves, and tin cans.	No Potential	Not detected in project site. Appropriate habitat is not present on site.
<i>Nyctinomops macrotis</i> big free-tailed bat	--/-- SSC	Rare in California, from urban areas of San Diego and Alameda County.	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	No Potential	Not detected in project site. Appropriate habitat is not present on site.
<i>Taxidea taxus</i> American badger	--/-- SSC	Extensive range throughout California. Known to occur in San Luis Obispo.	Requires open, arid habitats, but are most commonly associated with grasslands, savannahs, mountain meadows, and open areas of desert scrub. Soils must be friable for burrow excavation. Year Round	No Potential	Not detected in project site. Soils in the Study Area are not ideal for badger and grassland habitat onsite is highly disturbed and not suitable for burrowing.
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	FE/ST --	Extensive range throughout California. Known to occur in San Luis Obispo County.	Occurs in annual grasslands or open stages with scattered shrubby vegetation. Requires loose sandy textured soils for burrowing.	No Potential	No CNDDDB documented occurrences within 5 miles of the project site., no SJKF or associated burrows were observed within the project site during the survey. Not expected to occur.

Table 4.4-3 Special Status Animal Species in the Regional Vicinity of the Project Site

Scientific Name/ Common Name	Status Federal/State ESA CDFW Status-	Distribution	Habitat Requirements; Detection Periods	Potential to Occur	Rationale
Insects					
<i>Danaus plexippus</i> * Monarch butterfly	--/-- SSA (overwintering)	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Roosts located in wind protected tree groves with nectar and water nearby.	High Potential	Overwintering individuals were observed on-site by Althouse and Meade during the winter of 2016.
<i>Euproserpinus euterpe</i> Kern primrose sphinx moth	FT/-- --	Kern, Kings, San Luis Obispo, Santa Barbara, and Ventura Counties.	Occurs in gently sloping sandy washes consisting of coarse to fine textured, decomposed granite soil, and dominant vegetation that includes red-stemmed stork's beak (<i>Erodium cicutarium</i>), baby blue-eyes (<i>Nemophila menziesii</i>), rabbit brush (<i>Chrysothamnus nauseosus</i>), gold fields (<i>Lasthenia chrysostoma</i>), and brome grass (<i>Bromus arenarius</i>). Essential to the survival of the Kern primrose sphinx moth is the presence of its primary food plant, the sun cup or evening primrose <i>Camissonia contorta</i>	No Potential	Not expected to occur on site. No suitable habitat occurs on site and no observations were made during the survey. Host plant (<i>Camissonia contorta epilobiodes</i>) was not detected on the site.

Sources: CNDDDB (CDFW, 2016); USFWS IPaC (2016), CDFW Special Animals List (2016).

FT = Federally Threatened
 FC = Federal Candidate Species
 FE = Federally Endangered
 FS = Federally Sensitive
 WL=Watch List
 DL = Delisted

SE = State Endangered
 ST = State Threatened
 SR = State Rare
 SS = State Sensitive
 SSA = State Special Animal
 SCT = State Candidate Threatened

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDDB RareFind3.
 SCC = CDFW Species of Special Concern
 FP = Fully Protected

Special Status Plant Species. Based on the database and literature review of records from the San Luis Obispo, California USGS 7.5-minute topographic quadrangle and surrounding eight quadrangles as well as the USFWS IPaC list of federally listed species, seventy-two (72) special status plant species are known to or have the potential to occur within the vicinity of the project site (Table 4.4-2). A number of special status plant species were eliminated based on known restrictions in range and/or known extirpation. None of the special status plant species with potential to occur were detected during the field surveys. Surveys were seasonally timed to correspond with the blooming periods for the sensitive plant species that have potential to occur onsite. Based on the negative survey results or lack of suitable habitat, no special status plant species are expected to occur within the project site.

Special Status Animal Species. Forty-three special status animal species were identified within the San Luis Obispo, California USGS 7.5-minute topographic quadrangle and surrounding eight quadrangles as well as the USFWS IPaC list of federally listed species. Five additional special status species were added to the list because they were either directly observed onsite or have the potential occur based on our knowledge of the area. These five species have been marked with an asterisk (*). Potential habitat for sixteen (16) special status animal species occurs within the project site based on the presence of their general habitat requirements and each species geographic range. These species include:

- Western Pond Turtle (*Emys marmorata*), State Species of Special Concern (SSC)
- California Red-legged Frog (*Rana draytonii*), Federally Threatened (FT), SSC
- Western Spadefoot (*Spea hammondi*), SSC
- Coast Range Newt (*Taricha torosa torosa*), SSC
- Two-striped Garter Snake* (*Thamnophis hammondi*), SSC
- Steelhead - South/Central California Coast DPS (*Oncorhynchus mykiss*), FT
- Pallid Bat (*Antrozous pallidus*), SSC
- Townsend's Big-eared Bat (*Corynorhinus townsendii*) - State Candidate Threatened (SCT), SSC
- Cooper's Hawk (*Accipiter cooperii*), Watch List (WL)
- Merlin (*Falco columbarius*), WL
- White-tailed Kite (*Elanus leucurus*), Fully Protected (FP)
- Yellow Warbler* (*Setophaga petechial brewsteri*), SSC
- Olive-sided Flycatcher* (*Contopus cooperi*), SSC
- Loggerhead Shrike (*Lanius ludovicianus*), SSC
- Great Blue Heron* (*Ardea herodias*), State Special Animal (SSA), (rookery site)
- Monarch Butterfly* (*Danaus plexippus*), SSA, (overwintering)

The special status animal species listed above are all those that are known to occur in the habitats previously described within the project site. Some of the species listed above can also be found in association with human development, such as the pallid bat and Townsend's big-eared bat, which can utilize structures as roosting areas. Structures that occur within the project site that can be utilized by special status bats include abandoned barns, sheds, and small outbuildings. Prefumo Creek within the project site is also designated Critical Habitat for steelhead, a federal Threatened and state Species of Special Concern.



Special Status Plant Communities. Nine special status plant communities were identified by the CNDDDB as occurring in the vicinity of the project site (Table 4.4-4). None of these communities occur within the project site.

Table 4.4-4 Sensitive Plant Communities within the Regional Vicinity of the Project Site

Plant Community	Global/State Rank	Habitat Presence/Absence
Central dune scrub	G2/S2.2	Not present
Central foredunes	G1/S1.2	Not present
Central maritime chaparral	G2/S2.2	Not present
Coastal and valley freshwater marsh	G3/S2.1	Not present
Coastal brackish marsh	G2/S2.1	Not present
Northern coastal salt marsh	G3/S3.2	Not present
Northern interior cypress forest	G2/S2.2	Not present
Serpentine bunchgrass	G2/S2.2	Not present
Valley needlegrass grassland	G3/S2.1	Not present

Source: CDFW's CNDDDB RareFind5

d. Wildlife Corridors. Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

Wildlife movement corridors can be both large and small scale. Regionally, the project site is not located within an Essential Connectivity Area (ECA) as mapped in the report *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* (2010). ECAs represent principle connections between Natural Landscape Blocks. ECAs are regions in which land conservation and management actions should be prioritized to maintain and enhance ecological connectivity. ECAs are mapped based on coarse ecological condition indicators, rather than the needs of particular species and thus serve the majority of species in each region.

Small-scale habitat corridors are present on site and include drainages and other topographic features that facilitate movement. Prefumo Creek and its associated riparian vegetation border



the western boundary of the project site. The creek and ephemeral drainage provide a suitable small-scale corridor for sensitive and common wildlife to travel locally. Riparian corridors found within the project site may serve as movement corridors particularly where upland habitat occurs adjacent to them.

e. Jurisdictional Features. All potentially jurisdictional features within the project site were inspected to record existing conditions and determine limits of U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW jurisdictions. A summary of potentially jurisdictional features identified within the project site is presented in Table 4.4-5 and Figure 4.4-1 provides a map of these features. Based upon the analysis of Althouse and Meade's jurisdictional delineation, the site contains Prefumo Creek and Cerro San Luis Channel, which are subject to CDFW, RWQCB, and USACE jurisdictions.

Prefumo Creek and Cerro San Luis Channel within the project site contain federal Waters of the U.S. which include wetlands that meet the three criteria of hydrology, hydric soils, and hydrophytic vegetation within and adjacent to the OHWM boundary. However, both features are primarily categorized as "Other Waters", which include areas within the OHWM lacking either hydric soils and/or hydrophytic vegetation. Within the project site, Prefumo Creek and Cerro San Luis Channel consist of approximately 0.14 acre of wetlands and 0.69 acre of other waters.

In addition, both features exhibit defined bed and banks in portions of their extents within the project site and are hydrologically connected San Luis Obispo Creek and the Pacific Ocean, which is a Traditional Navigable Water (TNW). Furthermore, both features are of value to special status wildlife species such as CRLF and steelhead. Therefore, these waterways would likely be considered Waters of U.S. as well as Waters of the State pursuant to the Porter-Cologne Water Quality Control Act and would be subject to regulation by the USACE as well as the SWRCB and Central Coast RWQCB. The riparian and eucalyptus grove habitats within the top of bank and immediately adjacent to the top of bank bordering these waterways would likely fall under the jurisdiction of the Central Coast RWQCB. In addition, both features and their associated riparian and eucalyptus grove habitats would likely fall under the jurisdiction of the CDFW. Within the project site, both waterways and supporting riparian and eucalyptus grove habitat account for 2.17 acres of RWQCB and CDFW jurisdiction.

The final jurisdictional determinations of the boundaries of wetlands, waters, and riparian habitat are made by each agency, typically at the time that authorizations to impact such features are requested.

Table 4.4-5 Summary of Potentially Jurisdictional Wetlands, Waters and Riparian Habitats

Jurisdictional Features	Jurisdictional Type	Area (acres)	Length (feet)
Prefumo Creek and Cerro San Luis Channel	CWA Sections 404/401 (USACE/RWQCB) Other Waters of the U.S.	0.69	1,748
Prefumo Creek and Cerro San Luis Channel	CWA Sections 404/401 (USACE/RWQCB) Wetland Waters of the U.S.	0.14	629
Prefumo Creek and Cerro San Luis Channel	Porter-Cologne (RWQCB) & CFGC Section 1602 (CDFW) Waters of the State	2.17	2,487

f. Regulatory Setting. The following is a summary of the regulatory context under which biological resources are managed at the federal, state, and local level. Agencies with responsibility for protection of biological resources within the project site include:

- *U.S. Fish and Wildlife Service and National Marine Fisheries Service (federally listed species, candidate and proposed species for federal listing, and migratory birds);*
- *U.S. Army Corps of Engineers (waters of the United States, including wetlands);*
- *California Department Fish and Wildlife (state listed and fully-protected species, and other special status plants, wildlife and habitats, including streams, rivers, lakes and riparian vegetation);*
- *Central Coast Regional Water Quality Control Board (waters of the State); and*
- *County of San Luis Obispo (special status plants, wildlife, and habitats).*

A number of federal and/or State statutes provide a regulatory structure that guides the protection of biological resources. The following discussion provides a summary of those laws that are most relevant to biological resources in the project site.

Federal. Federal agencies with jurisdiction within the project site include the USFWS, NMFS, and USACE.

United States Fish and Wildlife Service and National Marine Fisheries Service. The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and NMFS share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in take of any federally listed threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species.



“Take” under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

U.S. Army Corps of Engineers. Under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act (RHA), the USACE has authority to regulate activities resulting in the discharge of dredged or fill material into waters of the United States, including wetlands. The USACE administers the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no-net-loss of wetland functions, values or area. In achieving the goals of the CWA and RHA, the USACE seeks to avoid adverse impacts and to offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of waters of the U.S. and/or associated wetlands would require a permit from the USACE prior to the start of work. Typically, permits issued by the USACE include as a condition of the project prescribed mitigation to offset unavoidable impacts to wetlands in a manner that achieves the goal of no-net-loss of wetlands.

State. State agencies with jurisdiction within the project site include the RWQCB and CDFW.

Regional Water Quality Control Board. The SWRCB and the local Central Coast RWQCB have jurisdiction over “waters of the State,” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The Central Coast RWQCB enforces actions under this general order for isolated waters not subject to Federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to Federal jurisdiction.

California Department of Fish and Wildlife. The CDFW derives its authority from the Fish and Game Code of California and the California Endangered Species Act (CESA; Fish and Game Code Section 2050 et seq.), which prohibits take of state listed as threatened or endangered species. Take under CESA is restricted to the direct killing of a listed species and does not prohibit indirect harm by way of habitat modification.

California Fish and Game Code Sections 3503, 3503.5, and 3511 describe unlawful take, possession, or needless destruction of birds, nests, and eggs. Fully protected birds (Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

Species of Special Concern (SSC) is a category used by the CDFW for those species that are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is



intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands.

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 *et seq.*). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant.

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 *et seq.* of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

Local. Local agencies with jurisdiction within the project site include the City of San Luis Obispo (City) and County of San Luis Obispo.

City of San Luis Obispo General Plan. The City of San Luis Obispo General Plan addresses biological resources and compatibility with urban development through implementation of adopted policies and programs in the City's updated General Plan Land Use Element and Conservation and Open Space Element (COSE). The Land Use Element and COSE include policies require protection of special-status plant and animal species and associated habitat and biological resources, including open spaces, creeks and wetlands, trees, ecotones, and wildlife corridors. These local policy requirements pertaining to biological resources will be implemented in the San Luis Ranch Specific Plan Area through incorporation of the mitigation measures presented in this document.

Land Use Element. The following Land Use Element policies define the local regulatory setting for biological resources in the San Luis Ranch Specific Plan Area:

Policy 1.8.6. Wildlife Habitat. *The City shall ensure that continuous wildlife habitat - including corridors free of human disruption - are preserved, and, where necessary, created.*

Policy 1.8.7. Trees Outside City Limits. *The City shall preserve significant trees, particularly native species, outside its limits and in the greenbelt on lands owned or leased by the City or for which the City has an easement. For other areas in the greenbelt, the City will work with the County, Cal Poly, and other public agencies to protect these trees.*

Policy 2.3.7. Natural Features. *The City shall require residential developments to preserve and incorporate as amenities natural site features, such as land forms, views, creeks, wetlands, wildlife habitats, wildlife corridors, and plants.*

Policy 6.3.1. Open Space and Greenbelt Designations. *The City shall designate the following types of land as open space:*

- A Upland and valley sensitive habitats or unique resources, as defined in the Conservation and Open Space Element, including corridors which connect habitats.



- B Undeveloped prime agricultural soils which are to remain in agricultural use as provided in Policy 1.9.2.*
- C Those areas which are best suited to non-urban uses due to: infeasibility of providing proper access or utilities; excessive slope or slope instability; wildland fire hazard; noise exposure; flood hazard; scenic value; wildlife habitat value, including sensitive habitats or unique resources as defined in the Conservation and Open Space Element; agricultural value; and value for passive recreation.*
- D A greenbelt, outside the urban reserve, that surrounds the ultimate boundaries of the urban area, and which should connect with wildlife corridors that cross the urbanized area.*
- E Sufficient area of each habitat type to ensure the ecological integrity of that habitat type within the urban reserve and the greenbelt, including connections between habitats for wildlife movement and dispersal; these habitat types will be as identified in the natural resource inventory, as discussed in the "Background to this Land Use Element Update" and in Community Goal #8.*

Public lands suited for active recreation will be designated Park on the General Plan Land Use Element Map. The City may establish an agricultural designation. (See the Conservation and Open Space Element for refinements of these policies.)

Policy 6.3.2. Open Space Uses. *Lands designated Open Space should be used for purposes which do not need urban services, major structures, or extensive landform changes. Such uses include: watershed protection; wildlife and native plant habitat; grazing; cultivated crops; and passive recreation. The City shall require that buildings, lighting, paving, use of vehicles, and alterations to the landforms and native or cultural landscapes on open space lands are minimized, so rural character and resources are maintained. Buildings and paved surfaces, such as parking or roads, shall not exceed the following: where a parcel smaller than ten acres already exists, five percent of the site area; on a parcel of ten acres or more, three percent. (As explained in the Conservation and Open Space Element, the characteristics of an open space area may result in it being suitable for some open space uses, but not the full range.) Parcels within Open Space areas should not be further subdivided.*

Policy 6.4.3: Amenities and Access. *New public or private developments adjacent to the lake, creeks, and wetlands must respect the natural environment and incorporate the natural features as project amenities, provided doing so does not diminish natural values. Developments along creeks should include public access across the development site to the creek and along the creek, provided that wildlife habitat, public safety, and reasonable privacy and security of the development can be maintained, consistent with the Conservation and Open Space Element.*

Policy 6.6.1. Creek and Wetlands Management Objectives. *The City should manage its lake, creeks, wetlands, floodplains, and associated wetlands to achieve the multiple objectives of:*

- A Maintaining and restoring natural conditions, and fish and wildlife habitat;*
- B Preventing loss of life and minimizing property damage from flooding;*
- C Providing recreational opportunities which are compatible with fish and wildlife habitat, flood protection and use of adjacent private properties; and*
- D Recognizing and distinguishing between those sections of creeks and Laguna Lake which are in previously urbanized areas, such as the downtown core and sections which are in largely natural areas. Those sections already heavily impacted by urban*



development and activity may be appropriate for multiple use whereas creeks and lakeshore in a more natural state shall be managed for maximized ecological value.

Policy 6.6.2. Citywide Network. *The City shall include the lake, creeks, and wetlands as part of a citywide and regional network of open space, parks, and – where appropriate – trails, all fostering understanding, enjoyment, and protection of the natural landscape and wildlife.*

Policy 6.6.3. Amenities and Access. *New public or private developments adjacent to the lake, creeks and wetlands must respect the natural environment and incorporate the natural features as project amenities, provided doing so does not diminish natural values. Developments along creeks should include public access across the development site to the creek and along the creek, provided that wildlife habitat, public safety, and reasonable privacy and security of the development can be maintained, consistent with the Conservation and Open Space Element.*

Conservation and Open Space Element. The COSE includes goals that address biological resources, including Goal 7.2 Sustainable Natural Populations which includes Policies 7.3.1 through 7.3.3, Goal 7.4 Trees and other Plants which includes Policies 7.5.1 through 7.5.6, and Goal 7.7 Program which includes policies 7.7.1 through 7.7.9. The following COSE policies define the local regulatory setting for biological resources in the San Luis Ranch Specific Plan Area:

Policy 7.3.1.A-D. Protect Listed Species. *The City will comply with state and federal requirements; the City will protect listed species through its actions on: land-use designations; development standards; development applications; location, design, construction and maintenance of creeks, City roads and facilities; and on land that the City owns or manages. Additionally, the City may approve a project where mitigation requires relocation of a species if there is no practicable alternative.*

Policy 7.3.2. Species of Local Concern. *The City will:*

- *Maintain healthy populations of native species in the long term, even though they are not listed for protection under State or Federal laws. These “species of local concern” are at the limit of their range in San Luis Obispo, or threats to their habitat are increasing.*
- *Identify the location, habitat and buffer needs of species of local concern. This information will be developed by qualified people early in the planning and development review process.*
- *Protect species of local concern through: its actions on land use designations, development standards, development applications; the location, design, construction and maintenance of City facilities; land that the City owns or manages.*
- *Encourage individuals, organizations and other agencies to protect species of local concern within their areas of responsibility and jurisdiction.*
- *Protect sensitive habitat, including creeks, from encroachment by livestock and human activities*

Policy 7.3.3. Wildlife Habitat and Corridors. *Continuous wildlife habitat, including corridors free of human disruption, shall be preserved and where necessary, created by interconnecting open spaces, wildlife habitat and corridors. To accomplish this, the City will:*



- *Require public and private developments, including public works projects, to evaluate animal species and their movements within and through development sites and create habitats and corridors appropriate for wildlife.*
- *Plan for connectivity of open spaces and wildlife habitat and corridors using specific area plans, neighborhood plans, subdivision maps or other applicable planning processes, consistent with Open Space Guidelines.*
- *Coordinate with San Luis Obispo County and adjoining jurisdictions, federal and state agencies such as Caltrans to assure regional connectivity of open space and wildlife corridors.*
- *Preserve and expand links between open spaces and creek corridors.*

Policy 7.5.1. Protection of Significant Trees. *Significant trees, as determined by the City Council upon the recommendation of the Tree Committee, Planning or Architectural Review Committee, are those making substantial contributions to natural habitat or to the urban landscape due to their species, size, or rarity. Significant trees, particularly native species, shall be protected. Removal of significant trees shall be subject to the criteria and mitigation requirements in Chapter 8.6.3. Oak Woodland communities in the Greenbelt and in open space areas shall be protected.*

Policy 7.5.2. Use of Native California Plants in Urban Landscaping. *Landscaping should incorporate native plant species, with selection appropriate for location*

Policy 7.5.3. Heritage Tree Program. *The City will continue a program to designate and help protect “heritage trees.”*

Policy 7.5.4. Preservation of grassland communities and other habitat types. *Grassland communities and other habitat types in the Greenbelt and in designated open space areas shall be preserved.*

Policy 7.5.5. Soil Conservation and Landform modification. *Public and private development projects shall be designed to prevent soil erosion, minimize landform modifications to avoid habitat disturbance and conserve and reuse onsite soils.*

Policy 7.7.6. Replace Invasive, Non-Native Vegetation with Native Vegetation. *The City and private development will protect and enhance habitat by removing invasive, non-native vegetation that detracts from habitat values and by replanting it with native California plant species. The Natural Resources Manager will prioritize projects and enlist the help of properly trained volunteers to assist in non-native vegetation removal and replanting when appropriate.*

Policy 7.7.7. Preserve Ecotones. *Condition or modify development approvals to ensure that “ecotones,” or natural transitions along the edges of different habitat types, are preserved and enhanced because of their importance to wildlife. Natural ecotones of particular concern include those along the margins of riparian corridors, marshlands, vernal pools and oak woodlands where they transition to grasslands and other habitat types.*

Policy 7.7.8. Protect Wildlife Corridors. *Condition development permits in accordance with applicable mitigation measures to ensure that important corridors for wildlife movement and dispersal are protected. Features of particular importance to wildlife include*

riparian corridors, wetlands, lake shorelines, and protected natural areas with cover and water. Linkages and corridors shall be provided to maintain connections between habitat areas.

Policy 7.7.9. Creek Setbacks. *As further described in the zoning regulations (Section 17.16.025), the City will maintain creek setbacks to include: an appropriate separation from the physical top of bank, the appropriate floodway as identified in the Flood Management Policy, native riparian plants or wildlife habitat and space for paths called for by any city-adopted plan. In addition, creek setbacks should be consistent with the following:*

- *The following items should be no closer to the wetland or creek than the setback line: buildings, streets, driveways, parking lots, aboveground utilities, and outdoor commercial storage or work areas.*
- *Development approvals should respect the separation from creek banks and protection of floodways and natural features identified in Part A above, whether or not the setback line has been established.*
- *Features which normally would be outside the creek setback may be permitted to encroach where there is no practical alternative, to allow reasonable development of a parcel, consistent with the Conservation and Open Space Element.*
- *Existing bridges may be replaced or widened, consistent with policies in this Element. Removal of any existing bridge or restoration of a channel to more natural conditions will provide for wildlife corridors, traffic circulation, access, utilities and reasonable use of adjacent properties.*

Policy 8.3.1. Open Space within an Urban Area. *The City will preserve the areas listed in Goal 8.2.2 (creek corridors, including open channel with natural banks and vegetation, wetlands and vernal pools, grassland communities and woodlands, wildlife habitat corridors, habitat of listed species, and unique plant and animal communities including “species of local concern”) and will encourage individuals, organizations, and other agencies to do likewise. The City will designate these areas as Open Space or Agriculture in the General Plan.*

Policy 8.3.2. Open Space Buffers. *When activities close to open space resources within or outside the urban area could harm them, the City will require buffers between the activities and the resources. The City will actively encourage individuals, organizations and other agencies to follow this policy. Buffers associated with new development shall be on the site of the development, rather than on neighboring land containing the open space resource. Buffers provide distance in the form of setbacks, within which certain features or activities are not allowed or conditionally allowed. Buffers shall also use techniques such as planting and wildlife-compatible fencing. Buffers shall be adequate for the most sensitive species in the protected area, as determined by a qualified professional and shall complement the protected area’s habitat values. Buffers shall be required in the following situations (one of the five noted here, see COS Policy 8.3.2 for the remainder):*

- *Between urban development -- including parks and public facilities-- and natural habitats such as creeks, wetlands, hillsides and ridgelines, Morros, scenic rock outcrops and other significant geological features, and grassland communities, to address noise, lighting, storm runoff, spread of invasive, non-native species, and access by people and pets (see also the Safety Element for “defensible space” next to wildland fire areas).*



Policy 8.6.3.G. Required Mitigation. *Any development that is allowed on a site designated as Open Space or Agriculture, or containing open-space resources, shall be designed to minimize its impacts on open space values on the site and on neighboring land.*

- *Creek corridors, wetlands, grassland communities, other valuable habitat areas, archaeological resources, agricultural land, and necessary buffers should be within their own parcel, rather than divided among newly created parcels. Where creation of a separate parcel is not practical, the resources shall be within an easement. The easement must clearly establish allowed uses and maintenance responsibilities in furtherance of resource protection.*

Policy 8.7.2.C. Enhance and Restore Open Space. *Remove invasive, non-native species in natural habitat areas, and prevent the introduction or spread of invasive, non-native species and pathogens.*

City of San Luis Obispo Zoning Regulations.

Section 17.16.025. Creek Setbacks. *As stated in the zoning regulations, creek setbacks apply to all creeks defined in the COSE (refer to Figure 9 of the COSE), and are measured from the existing top of bank or from the outside edge of the predominant riparian vegetation, whichever is farther from the creek flow line. The zoning regulations specify different setback dimensions for different classes of covered waterways such as whether the creek was within the 1996 City limits or annexed after 1996. Tank Farm Creek qualifies under the zoning regulations for a twenty-foot setback from the top of the bank or outside edge of riparian vegetation; however, the City may require larger setbacks for discretionary projects in order to avoid environmental impacts.*

4.4.2 Previous Program-Level Environmental Review

In 2014, the update of the City's Land Use and Circulation Elements included some minor revisions to the COSE. The City's 2014 Land Use and Circulation Element Update EIR (LUCE Update EIR) provided a programmatic assessment of City-wide biological resource impacts related to the Land Use and Circulation Element update, including a brief discussion of those related to development of the San Luis Ranch Specific Plan Area. The LUCE Update EIR noted that implementation of a Specific Plan on the site could result in impacts to: Coastal and Valley Freshwater Marsh habitat associated in particular with Prefumo Creek; special-status plant species associated with Prefumo Creek and associated riparian habitats; and special-status wildlife species associated with Prefumo Creek and with the existing on-site eucalyptus groves. However, the LUCE Update EIR concluded that implementation of the proposed Land Use Element policies and amendments to existing City policies would reduce program-level impacts to a less than significant level. In particular, incorporation of COSE Policies 7.3.1 through 7.3.3, which require protection of species and sensitive habitats and also require areas containing sensitive resources to undergo individual project environmental review, and Land Use Element Policies 6.6.1 and 6.6.2, which provide management guidelines for the protection of creeks, wetlands, and other open spaces, were found to reduce program-level impacts associated with the development of the San Luis Ranch Specific Plan Area to a less than significant level.



4.4.3 Impact Analysis

a. Methodology and Significance Thresholds. This impact analysis is based on site reconnaissance conducted in April, May, and June 2014 by Althouse and Meade, and in April and May 2016 by Rincon, as well as review of aerial photography and topographic maps and available literature regarding the existing biological resources within the project site in the *Biological Constraints Report, California Red-legged Frog Protocol Survey Site Assessment and Delineation of Potential Jurisdictional Wetlands and Waters* prepared by Althouse and Meade (refer to Appendix F).

Construction impacts are assessed based on information provided within the Specific Plan and preliminary development plan, which include the approximate size, location, and grade of building pads, location and area of disturbance associated with roadways, bicycle and pedestrian paths, culvert crossing proposed over the Cerro San Luis Drainage Swale, Froom Ranch Way bridge crossing, and location and size of utility and drainage infrastructure (refer to Section 2.0, *Project Description*). This was used to determine the area of disturbance to vegetative communities and associated species.

CEQA, Chapter 1, Section 21001(c) states that it is the policy of the State of California to “prevent the elimination of fish and wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.” Environmental impacts relative to biological resources may be assessed using impact significance criteria encompassing CEQA guidelines and federal, state and local plans, regulations, and ordinances.

The following thresholds are based on the City’s Initial Study and Appendix G of the State CEQA Guidelines. Impacts would be significant if the San Luis Ranch Project would result in any of the following:

1. *A substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;*
2. *A substantial adverse effect, on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;*
3. *A substantial adverse effect on federally protected wetlands as defined in Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;*
4. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;*
5. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or*
6. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

The project is not reasonably expected to conflict with local policies or ordinances protecting biological resources. Refer to Section 4.10, *Land Use and Policy Consistency*, for detailed discussions of the Specific Plan’s compliance with applicable local policies. In addition, as



described in the project Initial Study (refer to Appendix A), the San Luis Ranch Specific Plan Area is not part of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Refer to Section 4.14, *Issues Addressed in the Initial Study*, for a discussion of these issues. Therefore, Thresholds 5 and 6 are not discussed further in this section.

b. Impact Statements and Mitigation.

<p><i>Threshold 1: Would the project have a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.</i></p>
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Impact BIO-1 Implementation of the project could have a substantial adverse effect on candidate, sensitive, or special status species that may occur on the project site. Impacts would be Class II, potentially significant but mitigable.

The San Luis Ranch Specific Plan Area would be developed over six phases, beginning in 2017. Construction is planned to be completed in 2023. Project construction would entail the clearing of approximately 69.2 acres of development (including area for residential and commercial development, parks, and roadways) as well as within much of the planned 7.6 acres of open space bike paths, utilities, drainage facilities, culvert crossing proposed over the Cerro San Luis Drainage Swale, and habitat restoration. As a project requirement, construction would also occur offsite at the proposed Froom Ranch Way bridge crossing location in the southwest corner of the project site (depicted on the western side of the site in Figure 4.4-1).

Project construction would include the ongoing operation of heavy construction equipment, vehicles, and presence of construction crews within or near sensitive biological habitats, such as wetland and riparian corridors within Prefumo Creek and Cerro San Luis Channel, and would have the potential to affect sensitive species within those habitats. Construction crews and heavy equipment would potentially be operating within and adjacent to riparian corridors in order to conduct site preparation, grading, tree removal, trenching, and paving activities for bicycle paths, roadway infrastructure, the Froom Ranch Way bridge crossing, and utilities over several phases extended over several years. Construction work within riparian corridors would consist of activities associated with the Froom Ranch Way bridge crossing, bench widening along Prefumo Creek, and channel improvements to the eastern portion of Cerro San Luis Channel (refer to Impact BIO-2 for a specific discussion of impacts to riparian habitat).

Construction activity could temporarily impact habitat by generating noise, dust, petrochemical pollutants, liquid sediments, and other waste that contaminate wildlife habitat. Contamination of water sources and food supplies, and the related reduction in available forage would cause direct effects to sensitive wildlife. Prolonged construction activities and exposure of large areas of disturbed soils in the vicinity of Prefumo Creek and Cerro San Luis Channel could result in potential for substantial erosion and sediment flows into these waterways and downstream habitats during grading and site preparation activities. Potential for large volumes of sediment input could compromise aquatic habitat in Prefumo Creek and San Luis Obispo Creek downstream. Changes to the creek flow and hydrology as well as

potential for release of contaminants into aquatic habitats could directly affect species within these creeks by reducing the quality of existing habitat and causing mortality of individuals.

Based on the CNDDDB query and review of the USFWS and CNPS species lists, several special status species and habitats occur within the region. Because the plant and animal lists are regional, an analysis of the range and habitat preferences of those species was conducted to identify which sensitive plant and wildlife species have the potential to occur within the project site. In addition, as noted above, wildlife and botanical surveys were conducted on the project site in April, May, and June 2014 by Althouse and Meade, and in April and May 2016 by Rincon.

Special Status Plants. No State or federally listed, proposed, candidate or other special status plant species were observed within the project site during the botanical inventories that were conducted for the project. The surveys were seasonally timed to correspond with the blooming periods for the sensitive plant species that have potential to occur onsite.

State Special Status Animals (Species of Special Concern, Special Animal, Watch List).

Pallid Bat. No pallid bats were detected and no evidence of bats (e.g., guano) was observed within the project site during the field surveys. The CNDDDB records pallid bat in the San Luis Obispo area, the nearest documented occurrence of which was less than two miles northeast of the project site (CNDDDB #77). The barns, sheds, and small outbuildings onsite are marginally suitable habitat for the pallid bat to roost during the day. The project site does, however, provide suitable foraging habitat and there are water sources within the project site. Potential direct impacts to pallid bats within the project site include removal of roosting habitat and harassment or injury if they are foraging within the project area during implementation.

Townsend's Big-eared Bat. No Townsend's big-eared bats were detected and no evidence of bat guano was observed within the project site during the field surveys. There are two records of Townsend's big-eared bat in the CNDDDB, the nearest of which is approximately 10 miles northeast of the project site (CNDDDB #119). Townsend's big-eared bat has potential to roost during the day in the barns, sheds, and small outbuildings onsite. Potential direct impacts to Townsend's big-eared within the site include removal of roosting habitat and harassment or injury if they are foraging within the project area during implementation.

Monarch Butterfly (overwintering). The project site contains a historic monarch butterfly overwintering site located in the large stand of eucalyptus trees east of Prefumo Creek and south of the farm buildings. Records in the CNDDDB indicate that this site has not been occupied by overwintering monarchs since 1998, when only 100 monarchs were observed in clusters. However, surveys conducted by Althouse and Meade in the winter of 2016 documented monarch butterflies overwintering on the project site in the stand of eucalyptus east of Prefumo Creek. Nine trees were identified as monarch aggregation trees within the project site. Direct impacts to this species may occur due to removal of eucalyptus trees if the species are present at the time of removal. Construction within the project site may result in indirect impacts should this species be present in the vicinity of areas of disturbance at the time of construction.

Great Blue Heron (roosting). Great blue herons have been nesting in the project site 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 northern end of the site, located in the stand of blue gum eucalyptus between the U.S. Post Office and the farm



buildings. The rookery consists of six nests, at least three of which contained nestlings during the April 2016 survey. The nearby cropland and adjacent Laguna Lake may provide foraging habitat for this species. Direct impacts to this species may occur due to removal of eucalyptus trees that may contain active nests. Construction within the project site may result in indirect impacts should this species be present in the vicinity of areas of disturbance at the time of construction. Ongoing, increased human presence may also result in indirect impacts once construction is complete.

Olive-sided Flycatcher. Olive-sided flycatcher has been known to nest in tall trees (including eucalyptus), near the coast in California. The blue gum eucalyptus trees within the project site contain moderately suitable nesting habitat for this species. One olive-sided flycatcher was detected during the April 29, 2014 survey, most likely a migratory individual. No other individuals were detected during later surveys. Direct impacts to this species may occur due to removal of trees and shrubs that may contain active nests. Construction within the project site may result in indirect impacts should this species be present in the vicinity of areas of disturbance at the time of construction.

Yellow Warbler. There are no breeding records in the CNDDDB for yellow warbler in San Luis Obispo County; however, yellow warbler is a regular spring and fall migrant that has been known to breed in the vicinity. The riparian habitat in Prefumo Creek is moderately suitable nesting habitat for this species. Multiple yellow warblers were seen foraging in the willows south of the U.S. Post Office in Cerro San Luis Channel during spring 2014 surveys. The habitat surrounding Cerro San Luis Channel is not suitable nesting habitat for yellow warbler. Direct impacts to this species may occur due to removal of trees and shrubs that may contain active nests. Construction within the project site may result in indirect impacts should this species be present in the vicinity of areas of disturbance at the time of construction.

Loggerhead Shrike. Loggerhead shrike has been documented by the CNDDDB within five miles of the project site and is known to occur within the general vicinity. The annual grassland and ornamental trees and shrubs within the ruderal/developed habitats provide suitable nesting and foraging habitat for this species. Direct impacts to this species may occur due to removal of trees and shrubs that may contain active nests. Construction within the project site may result in indirect impacts should this species be present in the vicinity of areas of disturbance at the time of construction.

Merlin. Merlin has been known to winter in various habitats in San Luis Obispo County. Appropriate roosting habitat is present in the eucalyptus grove within the project site. There is low quality foraging habitat in the site; however, appropriate foraging habitat is present nearby at Laguna Lake. Merlin may use habitats on the property seasonally for roosting; however, they are not known to breed on site. No merlins were detected in the project site during the surveys. Direct impacts to this species may occur due to removal of eucalyptus trees that may contain roosting habitat. Construction within the project site may result in indirect impacts should this species be present in the vicinity of areas of disturbance at the time of construction.

Cooper's Hawk. Cooper's hawk has been documented by the CNDDDB within five miles of the project site and is known to occur regularly in San Luis Obispo County during the winter months and during spring and fall migration. Cooper's hawks frequent oak and riparian woodland habitats, and increasingly urban areas, where they prey primarily upon small birds. The red willow thicket and eucalyptus grove habitat communities within the project site



contain suitable nesting habitat for this species. In addition, the site contains suitable foraging habitat in the form of small passerines. A Cooper's hawk was observed within the project site during the April 29, 2014 survey. The bird was flushed from its perch in a large eucalyptus tree next to Prefumo Creek. Direct impacts to this species may occur due to removal of trees and shrubs that may contain nesting habitat. Construction within the project site may result in indirect impacts should this species be present in the vicinity of areas of disturbance at the time of construction.

Two-striped Garter Snake. This species has not been previously documented within the San Luis Obispo area in the CNDDDB; however, suitable riparian habitat exists in San Luis Obispo Creek half a mile south of the project site, and moderate quality riparian habitat exists in Prefumo Creek. No two-striped garter snakes were observed within the site during the field surveys. Although two-striped garter snakes were not observed during the field surveys, if present during construction potential direct impacts to this species include harassment, injury, as well as destruction of nocturnal retreats.

Western Pond Turtle. CNDDDB 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 project site (CNDDDB #1162). Pond turtles have a low to moderate potential to occur in upland habitat adjacent to Prefumo Creek; however, the potential to occur is high where the Froom Ranch Way crossing is proposed across Prefumo Creek due to sufficient pooling. No pond turtles were detected during the field surveys. Potential direct impacts to western pond turtle include harassment or injury of active as well as overwintering individuals and potential destruction of nests located in upland habitat if they are present within the project area during implementation.

Western spadefoot. This species is reported from the general vicinity but has not been documented by the CNDDDB within 5-miles of the project site. Therefore, there is low potential for this species to occur onsite. Spadefoots are almost completely terrestrial as adults, but require water to breed. Spadefoots inhabit hot dry environments by burrowing underground using hardened spades on its hind feet. This species spends most of its life underground in earth-filled burrows, and is active above ground typically between October and May, depending on rainfall. Spadefoots typically breed in ephemeral to seasonal pools and ponds with limited vegetation cover. Potentially suitable ephemeral ponding was observed within the Prefumo Creek channel. Implementation of the project may result in loss and/or fragmentation of western spadefoot habitat or breeding habitat. Potential direct impacts to this species may occur if it is foraging or burrowing onsite during construction activities.

Coast Range Newt. No evidence of Coast Range newt was found on site; however, suitable habitat is located within portions of the project site. The Prefumo Creek riparian corridor provides suitable habitat for this species and the pooling at the proposed Froom Ranch Way crossing may provide suitable breeding habitat for this species. There are three records in the CNDDDB of occurrences within five miles of the project site (northeast of project site). Implementation of the project may result in loss and/or fragmentation of Coast Range newt habitat or breeding sites. Direct impacts to this species could occur if it is foraging or aestivating onsite during construction activities.



Special Status Animals (Fully Protected and Federal/State Listed Species).

White-tailed Kite. White-tailed kite has been recorded by the CNDDDB within five miles of the project site (Figure 4.4-2) at El Chorro Regional Park (CNDDDB #103). The habitats onsite provide poor foraging habitat for this species; however, suitable foraging habitat is present across Madonna Road and around Laguna Lake. The eucalyptus trees bordering Prefumo Creek may provide suitable nest sites for white-tailed kite. No white-tailed kites were detected during surveys. Direct impacts to this species may occur due to removal of trees that may contain active nests. Construction within the project site may result in indirect impacts should this species be present in the vicinity of areas of disturbance at the time of construction.

California Red-legged Frog. Implementation of the project will not result in loss or fragmentation of any federally designated critical habitat for CRLF. The majority of the upland habitat within the project site is poor habitat for CRLF; however, the wetland and riparian corridor surrounding Prefumo Creek and Cerro San Luis Channel is suitable dispersal and foraging habitat for this species. The majority of dispersing individuals through the site are expected to occur within and around these two features.

Potential direct impacts to CRLF individuals include harassment or injury if they are present within the project area during implementation. Direct permanent impacts to upland habitat that could be used by CRLF are expected to occur within the riparian corridor and wetland habitat surrounding Prefumo Creek and Cerro San Luis Channel. Direct permanent impacts to aquatic habitat within the Prefumo Creek streambed may occur as a result of the construction associated with the Froom Ranch Way bridge crossing and bench widening along Prefumo Creek. Indirect impacts to CRLF could result from general project-related disturbance and noise if individuals are foraging or aestivating within the project site. Indirect impacts may also occur as a result of water quality issues associated with the construction of the Froom Ranch Way crossing and bench widening along Prefumo Creek.

Steelhead. Construction of the proposed Froom Ranch Way bridge crossing and bench widening along Prefumo Creek may result in direct impacts to in-stream steelhead critical habitat. Potential direct impacts to individuals include harassment or injury if they are present within the project area during implementation. Indirect impacts may also occur as a result of water quality issues associated with the construction of the bridge and bench widening along Prefumo Creek, and other site runoff.

Mitigative Components of the Specific Plan and Impact Conclusion. No special status plant species were observed within the project site during the botanical inventories that were conducted for the project. Therefore, no impacts to sensitive botanical resources are expected to occur and avoidance, minimization, or mitigation measures are not required for project implementation.

Special status animal species, including nesting birds and roosting bats, have potential to occur in the habitats on the project site. COSE Policies 7.3.1, Protect Listed Species, and 7.3.2, Species of Local Concern, describe state and federal requirements for the protection of special status species and additional City commitments to protecting species of local concern. Additionally, the San Luis Ranch Specific Plan includes requirements intended to protect and enhance the natural habitats and species onsite. Specific Plan Policy 5.3 and Program 5.3.1 require attention be given to the preservation of biological and habitat resources through the identification of



sensitive habitats and species early in the development process. Nevertheless, impacts to special status animal species would be potentially significant; therefore, project-specific mitigation is required. Implementation of Mitigation Measures BIO-1(a) through BIO-1(h) would reduce these impacts to a less than significant level.

Mitigation Measures. The following measures would reduce impacts to special status animal species to a less than significant level.

- BIO-1(a) Best Management Practices.** The applicant shall ensure the following general wildlife Best Management Practices (BMPs) are required for construction activity within the San Luis Ranch Specific Plan Area:
- No pets or firearms shall be allowed at the project site during construction activities.
 - All trash that may attract predators must be properly contained and removed from the work site. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site.
 - All refueling, maintenance, and staging of equipment and vehicles shall occur at least 100 feet from Prefumo Creek and in a location where a spill would not drain toward aquatic habitat. A plan must be in place for prompt and effective response to any accidental spills prior to the onset of work activities. All workers shall be informed of the appropriate measures to take should an accidental spill occur.
 - Pallets or secondary containment areas for chemicals, drums, or bagged materials shall be provided. Should material spills occur, materials and/or contaminants shall be cleaned from the project site and recycled or disposed of to the satisfaction of the Regional Water Quality Control Board (RWQCB).
 - Prior to construction activities in areas adjacent to Prefumo Creek and Cerro San Luis Channel, the drainage features shall be fenced with orange construction fencing and signed to prohibit entry of construction equipment and personnel unless authorized by the City. Fencing should be located a minimum of 20 feet from the edge of the riparian canopy or top of bank and shall be maintained throughout the construction period for each phase of development. Once all phases of construction in this area are complete, the fencing may be removed.
 - To control sedimentation during and after project implementation, appropriate erosion control BMPs (e.g., use of coir rolls, jute netting, etc.) shall be implemented to minimize adverse effects on Prefumo Creek. No plastic monofilament netting shall be utilized on site.
 - Construction equipment shall be inspected at the beginning of each day to ensure that wildlife species have not climbed into wheel wells or under tracks since the equipment was last parked.



Any sensitive wildlife species found during inspections shall be gently encouraged to leave the area by a qualified biological monitor or otherwise trained personnel.

- All vehicles and equipment shall be in good working condition and free of leaks.
- Environmentally Sensitive Areas shall be delineated by a qualified biologist prior to construction to confine access routes and construction areas.
- Construction work shall be restricted to daylight hours (7:00 AM to 7:00 PM) to avoid impacts to nocturnal and crepuscular (dawn and dusk activity period) species. No construction night lighting shall be permitted within 100 yards of the top of the Prefumo Creek bank.
- Concrete truck and tool washout shall be limited to locations designated by a qualified biologist such that no runoff will reach Prefumo Creek or Cerro San Luis Channel.
- All open trenches shall be constructed with appropriate exit ramps to allow species that accidentally fall into a trench to escape. Trenches will remain open for the shortest period necessary to complete required work.
- Existing facilities and disturbed areas shall be used to the extent possible to minimize the amount of disturbance and all new access roads other than the Froom Ranch Way Bridge shall be cited to avoid high quality habitat and minimize habitat fragmentation.
- In the event that construction must occur within the creek or creek setback, a biological monitor shall be present during all such activities with the authority to stop or redirect work as needed to protect biological resources.

BIO-1(b) Worker Environmental Awareness Program Training. Prior to the initiation of construction activities (including staging and mobilization), the applicant shall ensure all personnel associated with project construction attend a Worker Environmental Awareness Program (WEAP) training.

- The training shall be conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the project area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and avoidance measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with construction of the project. All employees shall sign a form



provided by the trainer documenting they have attended the WEAP and understand the information presented to them.

- BIO-1(c) Western Pond Turtle and Two-Striped Garter Snake Impact Avoidance and Minimization.** The applicant shall ensure the following actions are implemented to avoid and minimize potential impacts to western pond turtle and two-striped garter snake (these reptiles utilize similar habitats; therefore, implementation of the proposed measures for western pond turtle are also suitable and appropriate for two-striped garter snake):
- A qualified biologist(s) shall conduct a pre-construction survey within 24 hours prior to the onset of work activities within and around areas that may serve as potential western pond turtle habitat. If this species is found and the individuals are likely to be injured or killed by work activities, the approved biologist shall be allowed sufficient time to move them from the project site before work activities begin. The biologist(s) must relocate the any western pond turtle the shortest distance possible to a location that contains suitable habitat that is not likely to be affected by activities associated with the project.
 - Access routes, staging, and construction areas shall be limited to the minimum area necessary to achieve the project goal and minimize potential impacts to western pond turtle habitat including locating access routes and construction staging areas outside of wetlands and riparian areas to the maximum extent practicable.
- BIO-1(d) California Red-legged Frog, Western spadefoot, and Coast Range Newt Impact Avoidance and Minimization.** The applicant shall implement the following to avoid and minimize potential impacts to CRLF. Because coast range newt and western spadefoot are amphibians that utilize similar habitats to CRLF, implementation of the following measures provided for CRLF shall be implemented for these species as well.
- Only USFWS-approved biologists shall participate in activities associated with the capture, handling, and monitoring of CRLF.
 - Ground disturbance shall not begin until written approval is received from the USFWS that the biologist is qualified to conduct the work. If the USFWS does not authorize the relocation of CRLF occurring within the project site, CRLF found within the project site shall be avoided with a 100-foot buffer and no activities shall occur within that buffer until the CRLF has left the project site on its own.
 - Areas of the project site that lie within 100 feet upland from riparian or jurisdictional areas shall be surrounded by a solid temporary exclusion fence (such as silt fencing) that shall extend at least three feet above the ground and be buried into the ground



at least 6 inches to exclude CRLF from the project site. Plastic monofilament netting or other similar material will not be used. The location of the fencing shall be determined by a qualified biologist. The fence shall remain in place throughout construction activities. Installation of the exclusion fencing shall be monitored by a qualified biologist to ensure that it is installed correctly.

- During new grading activities in habitats within 100 feet upland from riparian or jurisdictional areas, a qualified biologist shall be on-site to recover any spadefoot toads that may be excavated/unearthed with native material or found under vegetation. If the animals are in good health, they shall be immediately relocated to a designated release area. If they are injured, the animals shall be turned over to an approved wildlife rehabilitator until they are in a condition to be released into the designated release area.
- To ensure that diseases are not conveyed between work sites by the approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force shall be followed at all times.

BIO-1(e) Steelhead Impact Avoidance and Minimization. The applicant shall ensure the following actions are undertaken to avoid and minimize potential impacts to steelhead:

- Before any activities begin on the project, a qualified biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the steelhead and its habitat, the specific measures that are being implemented to conserve this species for the project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
- During the duration of project activities, all trash that may attract predators will be properly contained and secured, promptly removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from the work areas.
- All refueling, maintenance, and staging of equipment and vehicles will occur at least 100 feet from riparian habitat or bodies of water and in a location where a potential spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water source). The monitor shall ensure that contamination of suitable habitat does not occur during such operations. Prior to the onset of work activities, a plan must be in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should an accidental spill occur.



- The number of access routes, size of staging areas, and the total area used for construction activities shall be limited to the minimum area necessary to achieve the project goals.
- The City will only permit work within the immediate vicinity of Prefumo Creek for times of the year when potential impacts to steelhead would be minimal. Work shall be restricted during the wet season (October 15 through April 30) and should ideally occur during the late summer and early fall during the driest portion of the year; however, water may still be present during construction. If work is proposed in the streambed and water is present during construction, a diversion will be required to dewater the work area and the following avoidance and minimization measures will apply:
 1. Upstream and downstream passage for fish, including juvenile steelhead, shall be provided through or around the construction site at all times construction is occurring within the Prefumo Creek streambed.
 2. A qualified biologist shall conduct a pre-construction survey and be present onsite during the diversion installation and dewatering process to capture and relocate any trapped steelhead and/or other fish. Upon approval from the NMFS, the biologist(s) must relocate these individuals the shortest distance possible to a location that contains suitable habitat that is not likely to be affected by activities associated with the project.
 3. Dewatering operations shall employ a five millimeter mesh screen fastened to the intake hose to exclude fish and other wildlife species from the pump.
 4. Steelhead shall be excluded from the construction zone with block nets installed upstream and downstream of the bridge construction zone. The distance upstream and downstream for block net installation will depend on the type of construction activities occurring in the streambed.
- To control sedimentation during and after project implementation, the following BMPs shall be implemented. If the BMPs are somehow ineffective, consultation with the City and appropriate resource agencies will be undertaken, and all attempts to remedy the situation will commence immediately.
 1. It shall be the owner's/contractor's responsibility to maintain control of the entire construction operations and to keep the entire site in compliance.
 2. The owner/contractor shall be responsible for monitoring erosion and sediment control measures (including but not limited to fiber rolls, inlet protections, silt fences, and gravel bags) prior, during and after storm events, monitoring includes maintaining a file documenting onsite inspections, problems encountered, corrective actions, and notes and a map of remedial implementation measures.



3. All earth stockpiles over 2.0 cubic yards shall be covered with a tarp and ringed with straw bales or silt fencing. The site shall be maintained to minimize sediment-laden runoff to any storm drainage system including existing drainage swales and/or sand watercourses.
 - a. Construction operations shall be carried out in such a manner that erosion and water pollution will be minimized.
 - b. State and local laws concerning pollution abatement shall be complied with.
 - c. If grading operations are expected to denude slopes, the slopes shall be protected with erosion control measures immediately following grading on the slopes.
 4. Specifically, in order to prevent sedimentation and debris from entering Prefumo Creek during construction, silt fencing shall be installed along the top of the banks on the west side of the channel prior to the onset of construction activities.
- The project biologist will monitor construction activities, in stream habitat, and overall performance of BMPs and sediment controls for the purpose of identifying and reconciling any condition that could adversely affect steelhead or their habitat. The biologist will halt work if necessary and will recommend site-specific measures to avoid adverse effects to steelhead and their habitat.
 - Equipment will be checked daily for leaks prior to the initiation of construction activities. A spill kit will be placed near the creek and will remain readily available during construction in the event that any contaminant is accidentally released.
 - In addition to these avoidance and minimization measures, Mitigation Measure BIO-2(a) would also ensure that potential temporary and permanent indirect impacts to steelhead from the project are reduced as much as practicable.

BIO-1(f)

Great Blue Heron and Monarch Butterfly Impact Avoidance and Minimization. The applicant shall ensure the following actions are undertaken to avoid and minimize potential impacts to overwintering monarch butterflies and nesting great blue herons.

- Tree trimming/removal and construction activities that affect eucalyptus trees near or within the monarch overwintering grove or active great blue heron nests identified in the *San Luis Ranch Monarch Trees Inspection Memo, Results of 2015 and 2016 San Luis Ranch Heron Rookery Surveys Memo, and San Luis Ranch – Prefumo Creek Widening Biological Constraints Memo* prepared by Althouse and Meade (Appendix F), shall not be conducted during the monarch butterfly overwintering season from October 1 through March 31 if monarch butterflies are present, or while great blue



heron nests are active from February 1 to August 31. If construction activities must be conducted during these periods, a qualified biologist shall conduct overwintering monarch surveys and/or nesting great blue heron surveys within one week of habitat disturbance. If surveys do not locate clustering monarchs or nesting great blue herons, construction activities may be conducted. If clustering monarchs and/or nesting great blue herons are located, no construction activities shall occur within 100 feet of the edge of the overwintering grove and/or active nest(s) until the qualified biologist determines that no more monarchs are overwintering in the grove or the nest(s) are no longer active.

- A qualified biologist shall prepare and implement a habitat enhancement plan prior to issuance of grading permits to enhance and restore overwintering and nesting habitat that is to be preserved. The habitat enhancement plan shall include native shrubs and trees such as Monterey Cypress (*Hesperocyparis macrocarpa*) that may support heron roosting and monarch butterfly overwintering. As eucalyptus trees senesce, they shall be replaced with native species. Native trees and shrubs shall also be used to supplement gaps in canopy or act as windbreaks.
- Create new offsite nesting habitat for great blue herons to mitigate for removal of onsite nesting habitat. With a qualified biologist present, the current rookery may be moved to a suitable offsite location where the same great blue herons can resume nesting, following methods detailed in Crouch et al. (2002). It should be noted that creating offsite nesting habitat for great blue herons is experimental and that the relocation techniques described in Crouch et al. (2002) were used to relocate black-crowned night heron (*Nycticorax nycticorax*). In addition, an agreement with the City will be required prior to implementation of the offsite strategy on their property. The methods detailed in Crouch et al. (2002) include:
 - a. 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.
 - b. 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.
 - c. 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 by a qualified biologist for the following three breeding seasons.

BIO-1(g) Nesting Birds Impact Avoidance and Minimization. The applicant shall ensure the following actions are undertaken to avoid and minimize potential impacts to nesting birds:

- For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the California Fish and Game Code and the Migratory Bird Treaty Act shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal. The surveys shall include the disturbance area plus a 500-foot buffer around the site. If active nests are located, all construction work shall be conducted outside a buffer zone from the nest to be determined by the qualified biologist. The buffer shall be a minimum of 50 feet for non-raptor bird species and at least 300 feet for raptor species. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The buffer area(s) shall be closed to all construction personnel and equipment until the adults and young are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removal of the buffer.
- If feasible, removal of vegetation within suitable nesting bird habitats will be scheduled to occur in the fall and winter (between September 1 and February 14), after fledging and before the initiation of the nesting season.

BIO-1(h) Roosting Bats Impact Avoidance and Minimization. The applicant shall ensure the following actions are undertaken to avoid and minimize potential impacts to roosting bats:

- Prior to issuance of grading permits, a qualified biologist shall conduct a survey of existing structures within the project site to determine if roosting bats are present. 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 in close coordination with CDFW. These exclusion measures must include one-way valves that allow bats to exit the structure but are designed so that the bats may not re-enter the structure.
- If a bat colony is excluded from the project site, appropriate alternate bat habitat as determined by a qualified biologist shall be installed on the project site or at an approved location offsite.



- Prior to removal of any trees over 20 inches diameter-at-breast-height (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, in close coordination with CDFW shall 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.

Plan Requirements and Timing. Special status species protection plans and surveys shall be prepared by the applicant and shall be submitted to for review and approval by the City prior to the approval of grading and construction permits. Any required permits shall be obtained from the state and federal agencies prior to issuance of grading permits.

Monitoring. The Environmental Monitor shall monitor environmental compliance of the construction activities throughout the construction period or as stipulated in the species- or resource-specific mitigation measure and provide monitoring reports to the City.

Residual Impacts. Implementation of BIO-1(a) through BIO-1(h) would reduce impacts to listed, candidate or special-status plant and wildlife species to a less than significant level and ensure that the project would comply with COSE Policies 7.3.1, Protect Listed Species, and 7.3.2, Species of Local Concern.

<i>Threshold 2: Would the project have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.</i>
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Impact BIO-2 Implementation of the project would have a substantial adverse effect on sensitive habitats, including riparian areas. Impacts would be Class II, potentially significant but mitigable.

Development of the San Luis Ranch Specific Plan area would impact suitable nesting and foraging habitat for migratory birds, including raptors, in riparian, wetland, and agricultural habitats as well as habitat for sensitive amphibians, reptiles, roosting bats and for rare plants (refer to Section 4.4.1(c), *Special Status Species and Plan Communities*). Potentially impacted riparian habitat would include the banks of Prefumo Creek and the associated riparian habitat, as well as Cerro San Luis Channel and associated riparian habitat, which may be under CDFW jurisdiction pursuant to Section 1600 et seq. of the California Fish and Game Code. Project implementation would result in the permanent removal of approximately 0.6 acre of willow riparian habitat, and 0.1 acre of riverine habitat (refer to Table 4.4-1 and Table 2-3 in Section 2.0, *Project Description*). Removal of habitat occupied by sensitive species would create potentially significant adverse impacts to the species, regardless of whether direct mortality or harm to



individual plants or animals occurs. In addition, the Specific Plan would dedicate approximately 7.6 acres of internal open space, primarily along the Prefumo Creek and Cerro San Luis Channel, which would reduce permanent adverse impacts to riparian habitat along these corridors.

Those impacts occurring within Prefumo Creek's riparian corridor would include activities associated with the Froom Ranch Way bridge crossing and bench widening along Prefumo Creek. Several red willows are expected to be trimmed and/or removed as a result of the project. Proposed channel improvements to the eastern portion of Cerro San Luis Channel may entail removal of native willows and riparian vegetation.

Land Use Element Policies 1.8.6, Wildlife Habitat; 1.8.7, Trees Outside City Limits; 2.3.7, Natural Features; and 6.6.1, Creek and Wetlands Management Objectives describe the City's commitments to protecting and managing significant habitat and other biological resources, including creeks, wetlands, and trees. COSE Policies 7.5.1, Protection of Significant Trees; 7.7.9, Creek Setbacks; 8.6.3, Required Mitigation; and 8.7.2 Enhance and Restore Open Space, describe the City's commitments to protecting natural habitat areas, such as creek corridors, wetlands, and trees.

Mitigative Components of the Specific Plan and Impact Conclusion. Indirect impacts which may occur as a result of implementation of the project would include impacts to water quality from earth moving activities and operational site runoff. Direct impacts which may occur as a result of the project would include permanent removal of riparian habitat. As discussed under Impact BIO-1, San Luis Ranch Specific Plan Policy 5.3 and Program 5.3.1 would be required for the project and are intended to protect and enhances the natural habitats onsite. In addition, Specific Plan Policy 5.1 would require support of restoration efforts for the creek and associated habitat. Nevertheless, project related impacts to sensitive habitats would be potentially significant and would require a Streambed Alteration Agreement from the CDFW.

Mitigation Measures. The following mitigation measure would be required to address impacts related to sensitive habitats.

- BIO-2(a) Habitat Mitigation and Monitoring Plan.** A Habitat Mitigation and Monitoring Plan (HMMP) shall be prepared which will provide a minimum 2:1 ratio (replaced: removed) for temporary and permanent impacts to riparian habitat. The HMMP will identify the specific mitigation sites and it will be implemented immediately following project completion. The HMMP shall include, at a minimum, the following components:
- Description of the project/impact site (i.e. location, responsible parties, areas to be impacted by habitat type);
 - Goal(s) of the compensatory mitigation project [type(s) and area(s) of habitat to be established, restored, enhanced, and/or preserved; specific functions and values of habitat type(s) to be established, restored, enhanced, and/or preserved];
 - Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values of the compensatory mitigation site);



- Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan [including plant species to be used, container sizes, seeding rates, etc.]);
- Maintenance activities during the monitoring period, including weed removal and irrigation as appropriate (activities, responsible parties, schedule);
- Monitoring plan for the compensatory mitigation site, including no less than quarterly monitoring for the first year (performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports);
- Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 80 percent relative cover by vegetation type;
- An adaptive management program and remedial measures to address negative impacts to restoration efforts;
- Notification of completion of compensatory mitigation and agency confirmation; and
- Contingency measures (initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism).

BIO-2(b)

Tree Replacement. Riparian trees four inches or greater measured at diameter-at-breast-height (DBH) shall be replaced in-kind at a minimum ratio of 3:1 (replaced: removed). Trees 24 inches or greater inches DBH shall be replaced in-kind at a minimum ratio of 10:1. Willows and cottonwoods may be planted from live stakes following guidelines provided in the California Salmonid Stream Habitat Restoration Manual for planting dormant cuttings and container stock (CDFW 2010).

- Replacement trees may be planted in the fall or winter of the year in which trees were removed. All replacement trees will be planted no more than one year following the date upon which the native trees were removed.

BIO-2(c)

Froom Ranch Way Bridge Design to Avoid Riparian Areas. The Froom Ranch Way Bridge crossing footings shall be placed outside mapped riparian areas. The placement of the bridge and footings shall be indicated on the Development Plan, VTM, and HMMP, and shall show the bridge's placement in relation to existing vegetation and the bed and bank of Prefumo Creek.

Plan Requirements and Timing. The HMMP required by Mitigation Measure BIO-2(a) shall specify the location, timing, species composition, and maintenance of all restored, enhanced, and newly established riparian and wetland areas, and tree replacement. The applicant shall submit the HMMP to the City for approval prior to recordation of the



VTM, and shall update and resubmit to the City prior to each phase of construction. Tree and vegetation replacement shall occur within the same construction phase as tree and vegetation removal. Tree and vegetation removal associated with the construction of the Froom Ranch Way Bridge crossing shall be replaced during or immediately subsequent to completion of that project component.

Monitoring. The City shall review and approve the HMMP (and associated tree replacement requirements) for compliance prior to issuance of grading permits and the onset of construction for each phase, as well as the onset of construction of the Froom Ranch Way Bridge crossing. The applicant shall submit annual documentation to the City and appropriate agencies demonstrating compliance with HMMP requirements. The City shall review and approve the final Froom Ranch Way Bridge crossing design for compliance prior to issuance of grading permits. Replacement plants shall be monitored by a qualified biologist for 5 years with a goal of at least 70 percent survival at the end of the 5-year period. Supplemental irrigation may be provided during years 1 to 3; however, supplemental watering shall not be provided during the final two years of monitoring.

Furthermore, Mitigation Measure BIO-1(a) requires implementation of construction best management practices that would reduce impact to riparian habitat during construction activity. Mitigation Measure BIO-3, below, for Jurisdictional Waters and Wetlands would also be required to ensure that project impacts to red willow thicket/riparian habitat would be minimized to the maximum extent feasible.

Residual Impacts. Implementation of Mitigation Measures BIO-1(a), BIO-2(a), BIO-2(b), BIO-2(c), and BIO-3 would reduce direct impacts to sensitive habitats, including riparian areas, by implementing construction BMPs, including containing construction activities, debris, and sediment in appropriate locations outside of sensitive habitat to the maximum extent practicable, and by providing compensatory mitigation for permanently impacted riparian habitat. In addition Mitigation Measures HWQ-1(a) and HWQ-1(b) include construction management practices that would reduce construction related impacts to water quality. When combined with standard regulatory measures (including required permitting from USACE, CDFW, and RWQCB), and regulatory oversight during construction by the Environmental Monitor, implementation of required mitigation measures would reduce impacts to a less than significant level and ensure that the project would comply with applicable General Plan policies for the protection of habitat and other biological resources.

<p><i>Threshold 3: Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.</i></p>
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Impact BIO-3 Construction of the project could have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act. Impacts would be Class II, potentially significant but mitigable.



Development under the San Luis Ranch Specific Plan would have the potential to result in direct impacts to jurisdictional areas, including wetlands, other waters and riparian habitats. Approximately 0.14 acre of wetlands, 0.69 acre of other waters and 2.17 acres of streambed/riparian/associated eucalyptus grove habitat were delineated onsite. Approximately 0.05 acre of wetlands, 0.1 acre of other waters, and 0.3 acres of streambed/riparian/associated eucalyptus grove habitats would be impacted as a result of construction activities associated with the Froom Ranch Way bridge crossing, bench widening along Prefumo Creek, and channel improvements to the eastern portion of Cerro San Luis Channel. Note the final jurisdictional determinations of the boundaries of wetlands, waters, and riparian habitat are made by each agency, typically at the time that authorizations to impact such features are requested. The Specific Plan would dedicate approximately 7.6 acres of internal open space, primarily along the Prefumo Creek and Cerro San Luis Channel, which would reduce permanent adverse impacts to wetlands along these corridors.

The project site contains features that would fall under jurisdiction of the SWRCB and Central Coast RWQCB, which has jurisdiction over “Waters of the State” pursuant to the Porter-Cologne Water Quality Control Act. Therefore, a Waste Discharge Requirements permit may also be required. In addition, the project is anticipated to require a Section 404 Nationwide Permit from the USACE and a Section 401 Water Quality Certification from the RWQCB, under the Clean Water Act.

COSE Policy 7.5.5, Soil Conservation and Landform modification, describes the City’s requirement that private development projects be designed to prevent soil erosion and minimize landform modifications to avoid habitat disturbance.

Mitigative Components of the Specific Plan and Impact Conclusion. San Luis Ranch Specific Plan Goal 5 establishes a goal to provide a community that protects and enhances the adjacent creek and habitat. Specific Plan Policy 5.1 and Program 5.3.1, as described in Impact BIO-1 and BIO-2 above, would be required of the project and are intended to help achieve this goal through protection of the creek. However, project-level impacts to jurisdictional areas would remain potentially significant, and Mitigation Measures BIO-1(a) and BIO-2(a) are required to reduce this impact and ensure consistency with COSE Policy 7.5.5.

Mitigation Measures. Implementation of Mitigation Measures BIO-1(a) and BIO-2(a) would reduce impacts to a less than significant level. No additional mitigation is required.

Residual Impacts. Implementation of Mitigation Measures BIO-1(a) and BIO-2(a) would reduce potential impacts to federally protected wetlands, any riparian habitat, or other sensitive natural communities to a less than significant level and ensure that the project would be consistent with COSE Policy 7.5.5.



Threshold 4: Would the project interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.

Impact BIO-4 Development of the San Luis Ranch Specific Plan Area would not permanently interfere with the movement of resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors along Prefumo Creek and through open agricultural lands on the project site. This impact would be Class II, *potentially significant but mitigable.*

Extensive site alteration and construction of new homes, roadways, pedestrian and bicycle pathways, utility and drainage infrastructure, and increased noise, lighting, and glare along Prefumo Creek could disrupt the movement of special status birds, great blue heron rookeries, amphibians, and reptiles such as the western pond turtle, and potentially California red-legged frog, coast range newt, and steelhead trout, nesting birds, as well as more common wildlife species.

Temporary Disturbances to Wildlife Corridors. Direct construction-related disturbances within and adjacent to Prefumo Creek, including removal of and damage to habitat, increased noise, activity, sedimentation and potential for releases of toxic materials to be introduced to the Creek would occur for several years over multiple project phases. Disturbance of the Creek and open land movement areas during construction could interfere with wildlife movement through the site. These disruptions could temporarily affect both common and sensitive species that use Prefumo Creek for movement, including migratory birds and raptors. Over the long term, such species would return to the migratory corridor after completion of restoration.

Implementation of the Froom Ranch Way bridge crossing may result in a temporary barrier during potential dewatering; however, upon completion of construction activities, any diversions or barriers to flow would be removed in a manner that would allow flow to resume. Cerro San Luis Channel would be widened to improve form and function, and the majority of the construction would occur on agricultural land. Due to constant maintenance activities, the function of the agricultural land within the project site as a wildlife corridor is extremely limited. None of these activities are expected to permanently interfere with the movement of resident or migratory wildlife.

Permanent Disturbances to Wildlife Corridors. Development of the San Luis Ranch Specific Plan Area would result in residential development in proximity to riparian areas along Prefumo Creek, including an open space corridor along the Creek. In a number of locations pedestrian and bicycle pathways within the open space corridor would be located in closely proximity to the creek, with the potential to be located near the top of the creek bank and within existing riparian canopy. Thus, while the planned open space corridor would help preserve the habitat value and wildlife corridor function of Prefumo Creek, inadequate development setbacks could adversely affect this wildlife utilization and movement along this corridor.

Long-term impacts to wildlife movement and special status species could occur due to increased human presence onsite including lighting located on buildings and along residential



streets, increased noise from automobiles, human activity, domesticated pets, and other similar activities. Solid waste and polluted runoff from parks, residential streets, and roads could enter Prefumo Creek through wind or the drainage system during storm events.

Outdoor night lighting and noise associated with development of new residential units could create glare offsite and light spillage, degrading the quality of Prefumo Creek and the associated riparian area. Project impacts associated with nighttime lighting and daytime glare are discussed in detail in Section 4.1, *Aesthetics* (refer to Impact AES-3), and were found to be less than significant based on compliance with applicable City General Plan policies pertaining to lighting and glare. The proximity of bicycle and pedestrian pathways to Prefumo Creek would lead to increased human interaction within the riparian area. This includes increased foot traffic in and around Prefumo Creek and more post-consumer waste entering the sensitive habitat. Increased runoff from paved surfaces and buildings could lead to increased long-term sedimentation, water turbidity, and water quality degradation. Collectively, these planned improvements could reduce the habitat value of Prefumo Creek and the associated riparian habitat and restrict or inhibit wildlife movement and utilization.

The project would be required to comply with Section 17.16.025 of the City Zoning Regulations, Creek Setbacks, which establishes setback distances for different classes of creeks. For creeks in areas annexed after 1996, including Prefumo Creek, the required setback is 35 feet. Zoning Regulations setbacks are defined in terms of the distances from the top of bank or edge of riparian drip line, whichever is farther from the creek, that development is permitted to occur. The City Zoning Regulations prohibits the following activities from occurring within a set-back area: paving, parking lots; and, in nonresidential zones, areas used for storing or working on vehicles, equipment, or materials. Compliance with the creek setback requirements in the Zoning Regulations would ensure consistency with the intent of COSE Policy 7.7.9, Creek Setbacks. Overall, long-term impacts to the habitat value of Prefumo Creek and its functioning as a wildlife corridor would be less than significant.

Because the open agricultural lands on the project site do not provide a connection or corridor between other non-disturbed habitat, and because impacts to Prefumo Creek would be temporary in nature, and this existing wildlife corridor would not be removed or narrowed, no permanent impacts to wildlife movement are expected. As a result, the project would be consistent with the applicable Land Use Element Policies 1.8.6, Wildlife Habitat, and 6.6.2, Citywide Network, and COSE Policies 7.3.3, Wildlife Habitat and Corridors, 7.7.8, Protect Wildlife Corridors, and 7.7.9, Creek Setbacks, which require the City to preserve and maintain continuous stretches of wildlife habitat consisting of open space, lakes, creeks, and wetlands. In addition, the project would be consistent with Section 17.16.025 of the City Zoning Regulations, Creek Setbacks. Prefumo Creek is not defined in the City's COSE as a wildlife corridor (refer to COSE Figure 3, Wildlife Corridors); however, Prefumo creek is defined as a "perennial creek with good riparian corridor (refer to COSE Figure 9, Creeks and Wetlands).

Mitigative Components of the Specific Plan and Impact Conclusion. As discussed under Impacts BIO-1 through BIO-3 above, the San Luis Ranch Specific Plan contains various goals, policies, and programs intended to protect biological and habitat resources on the project site. However, because the project would result in temporary impacts to species that use Prefumo Creek for movement, including migratory birds and raptors, this impact would be potentially significant.



Mitigation Measures. Implementation of BIO-1(a) requires construction BMPs that would reduce potential impacts to riparian habitat within the Prefumo Creek corridor. Implementation of Mitigation Measures BIO-1(c), BIO-1(d), and BIO-1(e), would reduce impacts to western pond turtle, CRLF, coast range newt, and steelhead by requiring pre-construction surveys by qualified biological staff and construction worker training to ensure individuals of these species are not impacted during project construction activity within or adjacent to riparian and riverine habitat. Implementation of Mitigation Measure BIO-1(f) would reduce impacts to heron rookeries by requiring preconstruction surveys, mapping, exclusionary fencing, and offsite compensatory mitigation. Implementation of Mitigation Measure BIO-1(h) would reduce impacts to birds by requiring construction monitoring for nesting birds, and requiring appropriate buffers for construction activity in proximity to active nests. Implementation of Mitigation Measure BIO-1(h) would reduce impacts to bats roosting in trees by requiring trees that may provide habitat for roosting bats to be surveyed by a qualified biologist prior to removal. Implementation of Mitigation Measures BIO-2(a) would reduce potential impacts to federally protected wetlands, any riparian habitat, or other sensitive natural community to a less than significant level.

Residual Impacts. Implementation of Mitigation Measures BIO-1(a), BIO-1(c), BIO-1(d), BIO-1(e), BIO-1(f), BIO-1(h), and BIO-2(a) would reduce potential impacts to wildlife species, wildlife nursery sites, riparian corridors, and other sensitive natural communities to a less than significant level.

c. Cumulative Impacts. Planned buildout of the City of San Luis Obispo under the General Plan, including buildout of previously approved (Margarita and Orcutt) or proposed (San Luis Ranch, Avila Ranch, Madonna) specific plans, would incrementally contribute to the trend of conversion of the City from undeveloped to developed uses, with resultant loss of open space and habitat, and City-wide increases in impervious surfaces and pollutant loading in the San Luis Obispo Creek watershed, night light, noise, and traffic associated with such development. These changes would both directly and indirectly affect sensitive habitats and wildlife species. However, as described in the LUCE Update EIR, incorporation of required project-level mitigation measures to implement program-level mitigation and compliance with applicable General Plan policies and applicable state and federal regulatory requirements, cumulative impacts to biological resources resulting from buildout of the City under the General Plan, including buildout of the San Luis Ranch Specific Plan, would be significant but mitigable. Buildout of the General Plan would retain Prefumo Creek and associated areas of sensitive wetlands, and would minimize habitat fragmentation and protect wildlife corridors, consistent with City policy.

Consistent with the LUCE Update EIR, the project would implement mitigation measures to ensure compliance with the applicable goals and policies of the General Plan. As with the project, other cumulative development within the City that would result in potential impacts to biological resources would be subject to applicable General Plan goals and policies, and would be required to incorporate project-specific mitigation measures to implement these policies. As a result, the project's contribution to this cumulative impact would be potentially significant but mitigable.



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