Biological Report

for

Brynildson Residence APN 046-031-033

Old Creek Road

PRE2018-00056
San Luis Obispo County

Prepared for

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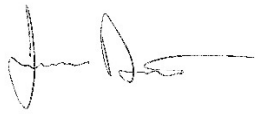
I hereby certify that this Biological Report was prepared according to the Guidelines established by the County of San Luis Obispo Department of Planning and Building and that the statements furnished in the report and associated maps are true and correct to the best of my knowledge and belief.



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SYNOPSIS

- This biological report examines a 56-acre Study Area located in San Luis Obispo County, California. The Study Area encompasses a portion of Assessor's Parcel Number (APN) 046-031-033 on Old Creek Road.
- The proposed project entails construction of a single-family residence and associated utilities, as well as improvements to an approximately 3,900-foot driveway (Phase 1). A guest house, pool, and barn are also proposed (Phase 2).
- Habitat types identified and mapped in the Study Area consist of California bay forest alliance, coast live oak woodland alliance, Mediterranean California naturalized annual and perennial grassland group, and anthropogenic.
- The survey conducted in September 2018 identified 31 species, subspecies, and varieties of vascular plants in the Study Area. A spring botanical survey will be conducted in 2019 and an addendum to this report will be prepared. Based on habitat types in the Study Area, there is moderate potential for four (4) special status plants to occur in the Study Area. No special status plant species were observed in the Study Area during the September 2018 survey.
- The survey conducted in September 2018 identified 1 reptile, 6 avian, and 5 mammal species. Based on habitat types in the Study Area, there is potential for seven (7) special status animal species to occur. No state or federally listed animals were detected or are expected to occur in the Study Area.
- Mitigation recommendations are provided to reduce potential impacts to sensitive biological resources.

1 INTRODUCTION

1.1 Purpose

This report provides information regarding biological resources associated with an approximately 56-acre site (Study Area) in San Luis Obispo County, California. Wildlife and botanical results are reported for a survey of the Study Area conducted in September 2018. A habitat inventory and results of database and literature searches of special status species reports within a nine 7.5-minute quadrangle search area of the Study Area are also included. Special status species that could occur in the Study Area or be affected by the proposed project are discussed and lists of plant and animal species that were identified or are expected in the Study Area are provided. An evaluation of the effect of the proposed project on biological resources is included, and mitigation recommendations are outlined.

1.2 Location

The Study Area is a 56-acre portion of an approximately 162-acre parcel (APN 046-031-033) located in western San Luis Obispo County, approximately 1.8 miles south of the intersection of Highway 46 and Old Creek Road. Approximate coordinates for the center of the Study Area are 35.508611, -120.847828 (WGS84) in the United States Geological Survey (USGS) 7.5-minute topographic quadrangle (see Figures1 and 2 in Section 7).

1.3 Project Description

The proposed project would be constructed in two phases. A copy of the site plans reviewed for this report are included as Appendix A. Phase 1 includes improvements to an existing 3,900-foot dirt access road to meet CalFire standards (including widening, paving, and curbing the road), replacing and upgrading an 8-inch culvert along the road, construction of a single-family residence with a semi-detached garage, installation of domestic and fire water storage tanks, and installation of septic and electric utilities. Phase 1 is anticipated to begin construction in 2020.

Phase 2 of the project includes construction of a two-bedroom guest house, swimming pool and terrace, and an approximately 1600-square-foot barn. Construction of Phase 2 is not scheduled at this time.

1.4 Regulatory Framework

1.4.1 Federal Law and Regulations

Endangered Species Act. The federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a 'take' under the ESA. Take of a federally listed threatened or endangered species is prohibited without a special permit. The ESA allows for take of a threatened or endangered species incidental to development activities once a habitat conservation plan has been prepared to the satisfaction of the U.S.F Fish and Wildlife Service (USFWS) and an incidental take permit has been issued. The ESA also allows for the take of

threatened or endangered species after consultation has deemed that development activities will not jeopardize the continued existence of the species. The federal ESA also provides for a Section 7 Consultation when a federal permit is required, such as a Clean Water Act (CWA) Section 404 permit.

"Critical Habitat" is a term within the federal ESA designed to guide actions by federal agencies (as opposed to state, local, or other agency actions) and defined as "an area occupied by a species listed as threatened or endangered within which are found physical or geographical features essential to the conservation of the species, or an area not currently occupied by the species which is itself essential to the conservation of the species."

Clean Water Act. The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting is required for filling waters of the U.S. (including wetlands). Permits may be issued on an individual basis or may be covered under approved nationwide permits.

Migratory Bird Treaty Act. All migratory bird species that are native to the U.S. or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004. The MBTA is makes it illegal to take (pursue, hunt, shoot, wound, kill, trap, capture, or collect) any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid Federal permit.

Bald and Golden Eagle Protection Act. The Bald and Golden Eagle Protection Act prohibits anyone, without a permit issued by the Secretary of the Interior, from taking (pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb) bald or golden eagles, including their parts, nests, or eggs. This includes substantially interfering with normal breeding, feeding, or sheltering behavior.

1.4.2 State Law and Regulations

California Environmental Quality Act (CEQA). CEQA requires that biological resources be considered when assessing the environmental impacts that are the result of proposed actions. The lead agencies determine the scope of what is considered an impact and what constitutes an "adverse effect" on a biological resource.

California Endangered Species Act. The California Endangered Species Act (CESA), similar to the federal ESA, contains a process for listing of species and regulating potential impacts to listed species. State threatened and endangered species include both plants and wildlife, but do not include invertebrates. The designation "rare species" applies only to California native plants. State threatened and endangered plant species are regulated largely under the Native Plant Preservation Act in conjunction with the CESA. State threatened and endangered animal species are legally protected against "take." The CESA authorizes the California Department of Fish and Wildlife (CDFW) to enter into a memorandum of agreement for take of listed species to issue an incidental take permit for a state-listed threatened and endangered species only if specific criteria are met. Section 2080 of the CESA prohibits the take of species listed as threatened or endangered pursuant to the Act. Section 2081 allows CDFW to authorize take prohibited under Section 2080 provided that: 1) the taking is incidental to an otherwise lawful activity; 2) the taking will be minimized and

fully mitigated; 3) the applicant ensures adequate funding for minimization and mitigation; and 4) the authorization will not jeopardize the continued existence of the listed species.

Nesting Birds. Fish and Game Code, Section 3503, states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto," and "unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird" unless authorized.

Lake and Streambed Alteration. Section 1602 of the California Fish and Game Code requires any person, state, or local governmental agency to provide advance written notification to CDFW prior to initiating any activity that would: 1) divert or obstruct the natural flow of, or substantially change or remove material from the bed, channel, or bank of any river, stream, or lake; or 2) result in the disposal or deposition of debris, waste, or other material into any river, stream, or lake. The state definition of "lakes, rivers, and streams" includes all rivers or streams that flow at least periodically or permanently through a well-defined bed or channel with banks that support fish or other aquatic life, and watercourses with surface or subsurface flows that support or have supported riparian vegetation.

California Native Plant Protection Act. Section 1900-1913 of the California Fish and Game Code contains the regulations of the Native Plant Protection Act of 1977. The intent of this act is to help conserve and protect rare and endangered plants in the state.

Sensitive Natural Communities. Sensitive Natural Communities rarity and ranking involves the knowledge of range and distribution of a given type of vegetation, and the proportion of occurrences that are of good ecological integrity. Evaluation is conducted at both the Global and State levels resulting in a single G (global) and S (state) rank ranging from 1 for very rare and threatened to 5 for demonstrably secure (see rankings above). Natural Communities with ranks of S1-S3 are considered Sensitive Natural Communities and may need to be addressed in the environmental review processes of CEQA and its equivalents. A question mark ("?") denotes an inexact numeric rank because of insufficient data over the full expected range of the Sensitive Natural Community, but that the existing information points to this rank. CDFW defines Sensitive Natural Communities as habitats with ranks of S1 through S3 (CDFW 2018e).

Regional Water Quality Control Board. The Regional Water Quality Control Board (RWQCB) not only regulates impacts to water quality in federal waters of the U.S. under Section 401 of the Clean Water Act, but they also regulate any isolated waters that are impacted under the state Porter Cologne Act utilizing a Waste Discharge Requirement. Discharge of fill material into waters of the State not subject to the jurisdiction of the USACE pursuant to Section 401 of the Clean Water Act may require authorization pursuant to the Porter Cologne Act through application for waste discharge requirements or through waiver of waste discharge requirements.

California Public Resources Code Section 21083.4 (2005) Oak Woodlands Conservation. A county shall determine whether a project within its jurisdiction may result in conversion of oak woodlands (i.e., *Quercus* sp. with a minimum of 5 inches diameter-at-breast-height) that will have a significant effect on the environment. If a county determines that there may be a significant effect

on oak woodlands, the county shall require one or more of the following oak woodlands mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands:

1) Conserve oak woodlands, through the use of conservation easements.
2) (A) Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees.

   (B) The requirement to maintain trees pursuant to this paragraph terminates seven years after the trees are planted.

   (C) Mitigation pursuant to this paragraph shall not fulfill more than one-half of the mitigation requirement for the project.

   (D) The requirements imposed pursuant to this paragraph also may be used to restore former oak woodlands.
3) Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project.
4) Other mitigation measures developed by the county.

1.4.3 Local Policies and Regulations

County of San Luis Obispo Oak Woodland Ordinance. Chapter 22.58 of the County of San Luis Obispo Land Use Ordinance establishes the Oak Woodland Ordinance, which applies to inland portions of the unincorporated areas of San Luis Obispo County. Under this ordinance a Minor Use Permit is required to remove between 1-3 acres of oak woodland habitat over a ten-year period, and a Conditional Use Permit is required to remove more than 3 acres over a ten-year period. Additionally, a Minor Use Permit is required to remove Heritage Oaks, defined as oak trees with a 48-inch or greater diameter at breast height (DBH) separated from other stands of oak woodland by at least 500 feet. This ordinance does not apply to land uses that otherwise require a ministerial (non-discretionary) land use permit. Discretionary land use permits and land division applications are subject to the California Environmental Quality Act (CEQA), where potential impacts associated with tree removal may be evaluated and mitigated.

County of San Luis Obispo County Conservation and Open Space Element Policy BR 1.4. Policy BR 1.4 No Net Loss requires that development projects are approved with conditions and mitigation measures to ensure the protection of sensitive resources and to achieve "no net loss" of sensitive habitat acreage, values, and function. It gives the highest priority to avoidance of sensitive habitat. When avoidance is not feasible, it requires provision of replacement habitat onsite through restoration and/or habitat creation. When onsite mitigation is not feasible, provide for offsite mitigation that reflects no net loss. Implementation Strategy BR 3.2.1, Tree Replacement in New Development states "If avoidance of damage to native specimen trees is not feasible in discretionary land use permits and land divisions, require mitigation measures such as tree replacement using native stock at specified ratios, replanting plans, reseeding disturbed open areas with native, drought, and fire-resistant species. A long-term monitoring plan will also be required."

2 METHODS

2.1 Literature Review

Literature, including relevant plans, policies, and biological information, was reviewed to determine what biological resources may occur near or in the project area. Research included queries of special-status species occurrence records and a review of literature on sensitive species and biological resources in the Study Area and region.

We conducted a search of the California Natural Diversity Database (CNDDB 2018) and the California Native Plant Society (CNPS) On-line Inventory of Rare and Endangered Plants of California for special status species known to occur in the nine USGS 7.5-minute quadrangles surrounding the Study Area: Lime Mountain, Adelaida, Paso Robles, Cypress Mountain, York Mountain, Templeton, Cayucos, Morro Bay North, and Atascadero.

Additional special status species research consisted of reviewing previous biological reports for the area and searching online museum and herbarium specimen records for locality data within San Luis Obispo County.

Special status species lists produced by database and literature searches were cross-referenced with the described habitat types in the Study Area to identify all potential special status species that could occur on or near the Study Area. After review of the literature, the following criteria were used to determine the potential for special-status species to occur within the project area:

- ***Present:*** the species was observed in the project area during field surveys.
- ***High Potential:*** high quality suitable habitat is present in the Study Area and there are recent known occurrence records and/or observations in the immediate vicinity. Individuals may not have been observed during field surveys; however, the species likely occurs in the project vicinity and could move into the project site in the future.
- ***Moderate Potential:*** Suitable habitat is present in the Study Area and CNDDB occurrences or surveys have recorded the species within 10 miles of the project. Individuals were not observed during surveys, but the species could be present, at least seasonally or as a transient.
- ***Low Potential:*** Marginally suitable habitat is present in the project area, but there are no occurrence records or only historical (i.e., 50 years or older) records within 10 miles of the project area. Individuals were not observed during surveys and are not expected to be present.
- ***No Potential:*** Species or sign of species were not observed on the site during surveys and suitable habitat is not present.

2.2 Mapping

Mapping efforts utilized Samsung Galaxy Tab 4 tablets equipped with Garmin GLO GPS Receivers and a third-party mapping application. Biological resource constraints were mapped in the field on site. Hand notation of habitats on high resolution aerials were digitized into polygon layers. Maps were created using aerial photo interpretation, field notation, and spatial data imported to Esri ArcGIS, a Geographic Information System (GIS) software program. Data were

overlaid on a 2016 National Agriculture Imagery Program (NAIP) aerial of San Luis Obispo County (NAIP 2016).

2.3 Surveys

The Study Area was surveyed on September 27, 2018 by Senior Biologists Lisa Gadsby and Mike Hill. The survey focused on potential impact areas shown on the April 23, 2018 site plans (Appendix A), including the access road and proposed structure locations. They survey was conducted on foot utilizing meandering transects to compile species lists, search for special status plants and animals, map habitats, and to photograph the Study Area.

TABLE 1. BIOLOGICAL SURVEYS

Survey Date	Biologists	Weather Observations	Activities
September 27, 2018	Lisa Gadsby Mike Hill	63 to 80 °F, clear skies, calm winds	Wildlife, botanical and habitat survey

2.3.1 Botanical

Each habitat type occurring in the Study Area was inspected, described, and identified using A Manual of California Vegetation Online (CNPS 2018a) hierarchical classification as applicable. Natural habitat types were identified to the alliance level when possible or to group level, if a habitat did not conform to a described alliance. Habitats comprised primarily of introduced, naturalized vegetation are classified as semi-natural stands. Mapped habitats utilize a minimum mapping unit of 0.5-acre.

All vascular plant species observed in the Study Area were identified and recorded. Transects were meandering with an emphasis on locating habitat appropriate for special status plants. Transects were utilized to map approximate boundaries of different vegetation types, describe general conditions and dominant species, compile species lists, and evaluate potential habitat for special status species. Identification of botanical resources included field observations and laboratory analysis of collected material. Botanical nomenclature used in this document follows the Jepson Flora Project (Regents of the University of California 2018). An appropriately-timed (spring) botanical survey will also be conducted in 2019 and the results will be compiled in an addendum to this report.

2.3.2 Wildlife

Wildlife documentation included observations of animal presence and wildlife sign such as nests, tracks, and scat. Observations of wildlife were recorded during field surveys in all areas of the Study Area. Birds were identified by sight, using 10-power binoculars, or by vocalizations. Reptiles were identified by sight. Mammals recorded in the Study Area were identified by sight, tracks, and sign such as the presence of woodrat nests.

2.4 Soils

A custom soil report was created by importing the Study Area as an Area of Interest (AOI) into the Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database

(SSURGRO) via their online portal (Soil Survey Staff 2018). The exported custom soil report, provided in Appendix B, includes a map showing an overlay of the soil map units within the AOI as well as a description of each. A general description of the soil map units present in the Study Area is provided in Section 3.3.

3 RESULTS

3.1 Regional Context

The Study Area is located in the Santa Lucia Mountain Range of the California central coast. The landscape in the region is a mosaic of oak woodland, scrubland and grasslands in a rural setting. The Study Area is approximately 5.5 miles east of the Pacific Ocean, 5.1 miles northeast of the community of Cayucos and 8.5 miles west-southwest of the community of Templeton.

3.2 Existing Conditions

The Study Area is an undeveloped parcel of land dominated by non-native grassland, mixed woodland, and oak woodland habitats. Entrance to the site is from an existing gate and dirt access road on the southwest side of Old Creek Road. The access road is approximately 20 feet wide and winds uphill and through the property. The road is used to access a neighboring property and vineyard to the west. A small drainage feature crosses the road approximately 360 feet west of the entrance. It appears to be ephemeral in nature and was dry at the time of our September 2018 survey. An approximately 8-inch culvert conveys storm flow under the access road. The site gains steeply in elevation from east to west, with elevations ranging from approximately1400 to 1760 feet above mean sea level. Approximately 3 acres of grassland habitat on the property was recently burned in the weeks prior to the September survey.

3.3 Soils

During the site visit soils in the survey area were noted to be very fine and powdery. Two individual soil map units occur in the Study Area according to the NRC) Soil Survey Geographic Database (SSURGO). Los Osos-Lodo complex (30 to 75 percent slopes) occurs in the eastern portion and Lompico-McMullin loams (30 to 75 percent slopes) occurs in the western portion (Soil Survey Staff 2018). A custom soil report for the Study Area is provided in Appendix B. A general description of each soil map unit is provided from the Soil Survey of San Luis Obispo County, California: Coastal Part (Ernstrom 1984).

Los Osos-Lodo complex, 30 to 75 percent slopes (167) are steep soils occurring on foothills and mountains. This complex is approximately 50 percent Los Osos soil and 30 percent Lodo soil. Los Osos soil is moderately deep and well-drained with slow permeability and low to moderate water capacity. The Lodo soil is shallow, somewhat excessively drained with moderate permeability and low to very low water capacity. This soil complex supports annual vegetation habitats with occasional shrublands and woodlands in drainages.

Lompico-McMullin loams, 30 to 75 percent slopes (154) are steep and very steep soils found on foothills and mountains. This complex is approximately 45 percent Lompico soil and 20 percent McMullin soil. The Lompico soil is moderately deep and well drained with a surface layer of brown loam approximately 17 inches thick. Permeability of Lompico soil is moderate and the available water capacity is low to moderate. The McMullin soil is shallow and somewhat excessively drained with moderate permeability water capacity is low to very low. This soil supports woodland habitats with occasional inclusions of annual vegetation or shrubs.

The habitats of the Study Area are consistent with the vegetation types reported for each soil map unit. Herbaceous vegetation occurs primarily on the Los Osos-Lodo complex and woodland habitat occurs primarily on the Lompico-Mc Mullin loams.

3.4 Habitat Types

Four habitat types occur in the Study Area: California bay forest alliance, coast live oak woodland alliance, Mediterranean California naturalized annual and perennial grassland group, and anthropogenic. The California bay forest alliance and coast live oak woodland alliance habitats are high quality intact habitats that extend outside of the Study Area along the mountain slopes. The herbaceous habitat in the Study Area does not conform to a described alliance and is instead identified to the group level as Mediterranean California naturalized annual and perennial grassland group. This group is comprised of annual and perennial naturalized herbaceous species and is of low quality and biodiversity. The dirt road in the Study Area is described as anthropogenic habitat.

TABLE 2. HABITAT TYPES

Habitat Type	Global/State Rank	Location	Approximate Acreage in Study Area
California Bay Forest Alliance	G4/S3	North and center portion of the Study Area	11.9
Coast Live Oak Woodland Alliance	G5/S4	Western portion of the Study Area	20.9
Mediterranean California Naturalized Annual and Perennial Grassland Group	None	Eastern portion of the Study Area	21.3
Anthropogenic	None	Unpaved dirt access road through middle of Study Area	1.8
Total			**55.9**

3.4.1 California Bay Forest Alliance

The steep north facing slope of the Study Area supports a dense mature forest dominated by California bay (*Umbellularia californica*) with California buckeye *(Aesculus californicus*), big leaf maple (*Acer macrophyllum*) and coast live oak trees. Understory species include poison oak (*Toxicodendron diversilobum*), Italian thistle (*Carduus pycnocephalus*), and stinging nettle (*Urtica dioica*). California bay forest alliance has a State Rarity rank of S3 and a Global Rarity rank of G4 is considered a Sensitive Natural Community by CDFW.

3.4.2 Coast Live Oak Woodland Alliance

A dense woodland dominated by coast live oak (*Quercus agrifolia* var. *agrifolia*) occurs in the western portion of the Study Area along the top of the ridge and on the south facing slopes. The

high-quality woodland habitat includes large mature coast live oak trees and occasional shrub species such as madrone (*Arbutus menziesii*) and patches of poison oak. The understory is sparse and variable with species composition similar to the adjacent grassland habitat. Coast live oak woodland alliance has a State Rarity rank of S4 and a Global Rarity rank of G5. It is not considered a Sensitive Natural Community by CDFW.

3.4.3 Mediterranean California Naturalized Annual and Perennial Grassland Group

The herbaceous habitat in the Study Area is dominated by dense Italian thistle with occasional patches of coyote brush (*Baccharis pilularis*) shrubs. Other annual grasses and forbs scattered throughout in low abundance include doveweed (*Croton setigerus*), black mustard (*Brassica nigra*) and ripgut brome (*Bromus diandrus*). The dirt road adjacent to the grassland habitat has occasional exposed rock outcrops due to the road cut. Approximately three acres of the grassland habitat in the Study Area was recently burned and was un-vegetated during the time of the survey. Soils appeared to be lightly charred with most of the fuels consumed. Mediterranean California naturalized annual and perennial grassland is not a sensitive habitat type.

3.4.4 Anthropogenic

Approximately 1.8 acres of the Study Area is considered anthropogenic and consists of a dirt road that is primarily unvegetated. Anthropogenic areas are not a sensitive habitat type.

3.5 Potential Jurisdictional Wetlands and Waters

Potentially jurisdictional wetlands and waters may be present in the Study Area. A small ephemeral drainage occurs in the northern portion of the Study Area that supports riparian tree species such as California bay and big leaf maple. The drainage was dry at the time of the September 2018 survey but appears to convey water, when present, northeast out of the Study Area to a culvert under Old Creek Road, which then flows approximately 120 feet to its confluence with Santa Rita Creek.

A formal wetland delineation will be necessary if future Project activities are proposed that may result in the fill of aquatic features. Wetland delineations should be conducted according to state and federal standards to determine the extent of Clean Water Act (CWA) Section 404 wetlands and waters under jurisdiction of the United States Army Corps of Engineers and Section 401 waters and wetlands under jurisdiction of the State Water Resource Control Board. A formal wetland delineation for the Project is planned to occur in early 2019.

3.6 Habitat Connectivity and Wildlife Movement

Wildlife corridors and habitat connectivity are important for the movement of wildlife between different populations and habitats. The Study Area is undeveloped and is surrounded by large tracts of undeveloped land, allowing wildlife to move freely through the area. The Study Area is located within the Santa Lucia Mountain Range, which acts as a natural north-south corridor for wildlife movement between southern Monterey County and northern San Luis Obispo County.

3.7 Special Status Plant Species

Research on special status plant occurrences conducted within the designated search area resulted in a list of 66 special status plant species known to occur in the region (see Appendix C). Figure 3 in Section 7 depicts the current GIS data for special status plant species mapped within a 5-mile radius of the Study Area by the CNDDB. The USFWS does not have any mapped critical habitat for listed plants near the Study Area.

3.7.1 Introduction to California Rare Plant Ranks

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

3.7.2 Introduction to CNDDB Definitions

"Special Plants" is a broad term used to refer to all the plant taxa inventoried by the CNDDB, regardless of their legal or protection status (CNDDB 2018b). Special plants include vascular plants, high priority bryophytes (mosses, liverworts, and hornworts), and lichens.

3.7.3 Potential Special Status Plant List

Table 3 lists four (4) special status plant species that have potential to occur in the Study Area. Federal and California State status, global and State rank, and CNPS rank status for each species are given. Also included are typical blooming periods, habitat preference, potential to occur on site, whether the species was detected in the Study Area, and effect of proposed activity. A comprehensive list of special status plant species reviewed is included as Appendix C.

TABLE 3. SPECIAL STATUS PLANT LIST

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?	Effect of Proposed Activity
1.	**Umbrella Larkspur** *Delphinium umbraculorum*	None/None G3/S3 1B.3	April - June	Moist oak forest; 400-1600 m. SCoRO, WTR.	Moderate. Moist oak forest habitat is present in the Study Area.	No	Unknown. Appropriately time seasonal botanical surveys required.
2.	**Ojai Fritillary** *Fritillaria ojaiensis*	None/None G3/S3 1B.2	February - May	Rocky slopes, river basins, woodland and forest habitats; 300-500 m. SCoRO, WTR.	Moderate. Forest and woodland habitats are present in the Study Area.	No	Unknown. Appropriately time seasonal botanical surveys required.
3.	**Oregon meconella** *Meconella oregana*	None/None G2G3/S2 1B.1	March-April	Shaded canyons, coastal prairie and scrub, open moist sites; 250-620 m. CCo, SnFrB.	Low. Suitable shaded moist forest habitat is present in the Study Area. Nearby record is historical (1956).	No	Unknown. Appropriately time seasonal botanical surveys required.
4.	**Hooked Popcorn Flower** *Plagiobothrys uncinatus*	None/None G2/S2 1B.2	April - May	Canyon sides, chaparral; on sandstone, fire follower, 300-600 m. n SCoR (Gabilan Range, Santa Lucia Mountains).	Low. Suitable habitat and post-fire conditions could be present in the Study Area. Nearest occurrence is 10.8 miles northwest (CNDDB #1).	No	Unknown. Appropriately time seasonal botanical surveys required.

California Geographic Subregion Abbreviations:

CCo: Central Coast
SnFrB: San Francisco Bay
SCoR: South Coast Range
SCoRO: Outer South Coast Ranges
WTR: Western Transverse Ranges

State/Rank Abbreviations:

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

California Rare Plant Ranks (CRPR):

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California, but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 4: Plants of limited distribution - a watch list

CRPR Threat Ranks:

0.1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 - Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3 - Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Global/State Ranks:

G1/S1 – Critically Imperiled
G2/S2 – Imperiled
G3/S3 – Vulnerable
G4/S4 – Apparently Secure
G5/S5 – Secure
Q – Element is very rare but there are taxonomic questions associated with it.
Range rank – (e.g., S2S3 means rank is somewhere between S2 and S3)
? – (e.g., S2? means rank is more certain than S2S3 but less certain than S2)

California Geographic Subregion Abbreviations:

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

California Rare Plant Ranks:

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California, but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 4: Plants of limited distribution - a watch list

CRPR Threat Ranks:

0.1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 - Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3 - Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

3.7.4 Discussion

Of the 66 special status plant species evaluated, it was determined that two species have a moderate potential to occur in the Study Area and two species have a low potential to occur based on an analysis of their known ecological requirements and available habitats in the Study Area. The individual special status species with potential to occur is described below. Refer to Appendix C for the complete list of special status plant species reported from the region.

A. Hooked Popcorn Flower (*Plagiobothrys uncinatus)* is a CRPR 1B.2 species endemic to central California. It is known to occur on sandy or sandstone substrates in grassland, chaparral and cismontane woodland habitats between 300- and 760-meters elevation, often on burned or disturbed sites. It is an annual herb that typically blooms between April and May. The closest known record is approximately 10.8 miles northwest of the Study Area (CNDDB #1). The grassland habitat and post-fire conditions are potentially suitable for hooked popcorn flower, however because it is very uncommon in the county and has not been collected in the vicinity of the Study Area it has a low potential to occur. Appropriately timed seasonal botanical surveys are required to determine whether hooked popcorn flower occurs in the Study Area.

B. Ojai Fritillary (*Fritillaria ojaiensis*) is a CRPR 1B.2 species endemic to Monterey, San Luis Obispo, Santa Barbara, and Ventura Counties. It is known to occur on rocky substrates in mesic broadleaf forest, cismontane woodland, lower montane coniferous forest, and chaparral habitats at elevations between 225- and 998-meters. It is a bulbiferous perennial herb that typically blooms between February and May. The closest known record is approximately 6.6 miles southeast of the Study Area (CNDDB #1). The moist forest and woodland habitats in the Study Area are suitable for this species, and it has a moderate potential to occur on site. Appropriately timed seasonal botanical surveys are required to determine whether Ojai fritillary occurs in the Study Area.

C. Umbrella Larkspur (*Delphinium umbraculorum*) is a CRPR 1B.3 species endemic to Kern, Monterey, San Luis Obispo, Santa Barbara, and Ventura Counties. It is known to occur in chaparral, cismontane, and moist oak forest habitats at elevations between 400- and 1600-meters.. It is a perennial herb that typically blooms between April and June. The closest known record is approximately 2.6 miles southeast of the Study Area (CNDDB #64). The moist forest and woodland habitats in the Study Area are suitable for this species, and it has a moderate potential to occur on site. Appropriately timed seasonal botanical surveys are required to determine whether umbrella larkspur occurs in the Study Area.

D. Oregon Meconella *(Meconella oregana)* is a CRPR 1B.1 species that is known to occur in shaded canyons below 1000 meters elevation. It is an annual herb that typically blooms between March and April. The closest known record is approximately 0.3 miles north of the Study Area (CNDDB #6), although the exact location is not known for this historic collection record, which dates to 1956. The mesic California bay forest in the Study Area is suitable for this species. Appropriately timed seasonal botanical surveys are required to determine whether Oregon meconella occurs in the Study Area.

The remaining 62 special status plant species that were evaluated were determined to have no potential to occur in the Study Area due to lack of suitable habitat present and/or the Study Area

being outside of the species range. There are no State or Federal listed plant species with records of occurrence within 5 miles of the Study Area; therefore, none are discussed.

3.8 Special Status Animal Species

Research on special status animal occurrences conducted within the designated search area resulted in a list of 35 special status animal species known to occur in the region (see Appendix D). Figures 4 and 5 in Section 7 depict the current GIS data for special status species and critical habitat mapped within a 5-mile radius of the Study Area by the CNDDB and the USFWS.

3.8.1 Introduction to CNDDB Definitions

"Special Animals" is a general term that refers to all animal taxa inventoried by the CNDDB, regardless of their legal or protection status (CDFW October 2018). The Special Animals list is also referred to by CDFW as the list of "species at risk" or "special status species." These taxa may be listed or proposed for listing under the California and/or Federal Endangered Species Acts, but they may also be species deemed biologically rare, restricted in range, declining in abundance, or otherwise vulnerable.

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

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

3.8.2 Potential Special Status Animals List

Table 4 lists the seven (7) special status animal species that have potential to occur in the Study Area. Federal and California State status, global and State rank, and CDFW listing status for each species are given. Typical nesting or breeding period, habitat preference, potential habitat on site, whether the species was detected in the Study Area, and effect of proposed activity are also provided. A comprehensive list of special status animal species reviewed is included as Appendix D.

TABLE 4. SPECIAL STATUS ANIMAL LIST

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential to Occur	Detected Within Study Area?	Effect of Proposed Activity
1.	**Northern California Legless Lizard** *Anniella pulchra*	None/None G3/S3 SSC	May - September	Sandy or loose loamy soils under coastal scrub or oak trees. Soil moisture essential.	Moderate. Suitable habitat is available in Study Area. Nearest occurrence record 9.7 miles west (CNDDB #66).	No	Potential Adverse Effects can be Mitigated
2.	**Pallid Bat** *Antrozous pallidus*	None/None G5/S3 SSC	Spring - Summer	Rock crevices, caves, tree hollows, mines, old buildings, and bridges.	Moderate. Suitable roosting and foraging habitat is present in Study Area. Nearest occurrence record is 7.5 miles west (CNDDB #38).	No	Potential Adverse Effects can be Mitigated
3.	**Golden Eagle** *Aquila chrysaetos*	None/None G5/S3 WL/Fully Protected	March 15 - August 15	Nests in large, prominent trees in valley and foothill woodland. Requires adjacent food source.	Low. Habitat is suitable for foraging; moderately suitable for nesting, however species is known to re-use nests and none have been documented within 15 miles. Nearest nesting occurrences is 15.5 miles northeast (CNDDB #122).	No	No Effect
4.	**Lesser Slender Salamander** *Batrachoseps minor*	None/None G1/S1 SSC	Late fall to Early Winter	Wooded habitats and semi-mesic areas (e.g., swales, drainages, etc.) with an overstory of trees or shrubs and abundant rocks, litter, or woody debris.	High. Suitable habitat is present in Study Area and multiple records within 3 miles.	No	Potential Adverse Effects can be Mitigated

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting/ Breeding Period	Habitat Preference	Potential to Occur	Detected Within Study Area?	Effect of Proposed Activity
5.	**Monterey Dusky-footed Woodrat** *Neotoma macrotis luciana*	None/None G5T1Q/S1 SSC	N/A	Variety of habitats with moderate to dense understory vegetation	Moderate. Suitable habitat available in Study Area and woodrat nests observed; however, subspecies range is not well known, and nearest record is 11.5 miles north (CNDDB #1)	Possibly. Unidentified *Neotoma* sp. nests present.	Potential Adverse Effects can be Mitigated
6.	**Coast Horned Lizard** *Phrynosoma blainvillii*	None/None G3G4/S3S4 SSC	May - September	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	Low. Marginally suitable habitat available in Study Area. Nearest occurrence 8.5 miles south.	No	Potential Adverse Effects can be Mitigated
7.	**California Spotted Owl** *Strix occidentalis occidentalis*	Petitioned/None G3G4T2T3/S3 SSC	February - September	Older forests, high canopy cover, multi-layered canopy.	Moderate. Suitable habitat is present in Study Area and the species is documented within 2 miles.	No	Potential Adverse Effects can be Mitigated

Habitat characteristics are from the Jepson Manual and the CNNDB.

Abbreviations:

FE: Federally Endangered
FT: Federally Threatened
PE: Proposed Federally Endangered
PT: Proposed Federally Threatened

CE: California Endangered
CT: California Threatened
Cand. CE: Candidate for California Endangered
Cand. CT: Candidate for California Threatened

SSC: CDFW Species of Special Concern
FP: CDFW Fully-Protected
WL: Watch List

Global/State Ranks:

G1/S1 – Critically Imperiled
G2/S2 – Imperiled
G3/S3 – Vulnerable
G4/S4 – Apparently Secure
G5/S5 – Secure

Q – Element is very rare but there are taxonomic questions associated with it.
Range rank – (e.g., S2S3 means rank is somewhere between S2 and S3)
? – (e.g., S2? means rank is more certain than S2S3 but less certain than S2)

3.8.3 Discussion

Based on an analysis of known ecological requirements for the 35 special-status wildlife species reported or known from the region, and the habitat conditions that were observed in the Study Area, it was determined that two species have a high potential to occur, four species have a moderate potential to occur, and three species have a low potential to occur in the Study Area. We discuss these eight species below and describe habitat, range restrictions, known occurrences, and survey results for the Study Area.

A. Northern California Legless Lizard (*Anniella pulchra*) is a California Species of Special Concern that occurs from Contra Costa to Santa Barbara County. It has a Global Rank of G3 and a State Rank of S3, both of which indicate that this species is considered Vulnerable. Northern California legless lizard inhabits friable soils in a variety of habitats from coastal dunes to oak woodlands and chaparral. Adapted to subterranean life, the legless lizard thrives near native coastal shrubs that produce an abundance of leaf litter and have strong roots systems (Kuhnz et al. 2005). Unlike other reptiles that bask in the sun, legless lizards are difficult to detect because of their obscure activity under leaf litter and in animal burrows. Areas of exotic vegetation and open grassland do not provide suitable habitat for legless lizards since these plant communities support smaller populations of insect prey and offer little protection from higher ground temperatures and soil desiccation (Slobodchikoff and Doyen 1977; Jennings and Hayes 1994). The closest reported occurrence of the northern California legless lizard is located approximately 9.7 miles west of the Study Area in Atascadero within a residential area with scattered mature oak trees (CNDDB #66). Suitable habitat for northern California legless lizard is present in the coast live oak woodland and California bay forest habitats within the Study Area. Legless lizards were not observed in the Study Area during the September 2018 survey; however focused surveys were not conducted. There is a moderate potential for the species to occur within the Study Area.

B. Pallid Bat (*Antrozous pallidus*) is a California Species of Special Concern. The pallid bat is a large long-eared bat that occurs throughout the state and occupies a wide variety of habitats. Although most common in open, dry areas ideal for foraging with rocky outcrops for roosting, pallid bats are also found regularly in oak and pine woodlands where they roost in caves, mines, rock crevices, hollow trees and buildings (Nowak et al. 1994) . Bridges are also frequently used by pallid bats, often as night roosts between foraging periods (Pierson et al. 1996). The closest reported occurrence of the pallid bat is approximately 7.5 miles west of the Study Area in Cayucos, where the species was observed roosting under a bridge (CNDDB #38). Suitable roosting and foraging habitat for the species are present within the Study Area. Pallid bats were not observed during the September 2018; however focused bat surveys were not conducted. There is a moderate potential for pallid bats to forage and roost within the Study Area.

C. Golden Eagle (*Aquila chrysaetos*) is designated a Fully Protected species by CDFW and is federally protected by the Bald and Golden Eagle Protection Act. The species range extends throughout much of North America and in California is found in broadleaved upland and montane coniferous forests, cismontane, pinon and juniper woodlands, coastal prairie, great basin scrub and great basin, valley and foothill grassland habitat types (CDFW 2018a). Most golden eagles in California are residents year-round, but in the winter months this population

will be augmented with individuals from other nearby western states. The breeding season in California is generally from late January through August. The golden eagle prefers open habitat and in California it extensively utilizes grazed grasslands and open shrublands for preying on its main food source of hares or rabbits and marmots or ground squirrels (Hunt 1995; Watson 2010). In California, the golden eagle nests almost exclusively in trees (82% trees in central California) but in montane regions it also has a preference for cliffs and will avoid nesting in densely forested habitat (Hunt 1995; Pagel et al. 2010). Golden eagles have strong nest site fidelity and will return to the same nesting territory, and often re-use the same nest, year after year. The golden eagle is highly sensitive to anthropogenic presences and will avoid nesting near urban areas (Pagel et al. 2010). Golden eagles will even abandon nests when human activity and development increases in their territory (Driscoll 2010). Golden eagles are known to occur along the Central Coast and there are numerous records of observations of the species flying and foraging in the general area surrounding the Study Area (eBird 2018). The nearest known occurrence of nesting golden eagles is approximately 15.5 miles northeast along Huer Huero Creek in Paso Robles (CNDDB #122). Suitable foraging and roosting habitat are present within the Study Area, however nesting potential is low. No golden eagles or large stick nests were observed within the Survey Area during the September 2018 site survey.

D. Lesser Slender Salamander (*Batrachoseps minor*) is designated as a Species of Special Concern by CDFW and has a Global Rank of G1 (Critically Imperiled) and a State Rank of S1 (Critically Imperiled). To be ranked as Critically Imperiled means that this species is at a very high risk of extinction due to extreme rarity, very steep declines, and/or other factors. The range of this species is restricted to South Santa Lucia Mountains where it inhabits shaded slopes with abundant leaf litter in broadleaved upland forests consisting of tanbark oak, coast like oak, blue oak, sycamore and laurel. There are multiple occurrence records for lesser slender salamander within 3 miles of the Study Area, with the closest reported occurrence 2.3 miles north (CNDDB #2). The CNDDB notes that DNA analysis would be needed to definitively confirm the observations, as the species is found sympatrically with the very similar black-bellied salamander (*B. nigriventris*). Lesser slender salamanders were not observed during site surveys however high-quality suitable habitat is present in the Study Area and surveys during the wet season were not conducted. Due to the presence of suitable habitat and nearby records, there is a high potential for the site to support the lesser slender salamander.

E. Monterey Dusky-footed Woodrat (*Neotoma macrotis luciana*) is a California Species of Special Concern and has a Global Rank of G5T3 (rounded status of T3 – Vulnerable) and a State Rank of S3 (Vulnerable) (NatureServe 2018). This Monterey dusky-footed woodrat is a subspecies of the big eared woodrat (*N. macrotis*). Big-eared woodrats occur from the Salinas Valley south to Baja California, Mexico. They are common to abundant in forest habitats of moderate canopy and moderate to dense understory and construct stick houses, or middens, at the base of trees or shrubs (CDFW 2008). Although the subspecies Monterey dusky footed woodrat is known to be present in northern San Luis Obispo County, its exact range is not known. The nearest occurrence of Monterey dusky-footed woodrat to the Study Area is approximately 11.7 miles north at Camp Roberts (CNDDB #1). This is the southernmost record of the species. Appropriate habitat for this subspecies of woodrat is present throughout the Study Area, and woodrat middens were observed, however trapping would be required to identify the exact species or subspecies of woodrat at the project site. Figure 6 shows the locations of woodrat nests detected during the site September 2018 visit. Since the Study Area

is located approximately 11.7 miles south of the southern-most documented occurrence of the subspecies, we consider the potential for the Monterey dusky-footed woodrat to be moderate.

F. Coast Horned Lizard (*Phrynosoma blainvillii*) is a California Species of Special Concern. The coast horned lizard is distributed from northern Baja California through Northern California occurring in open areas of valley foothill hardwood, conifer, riparian, pine-cypress, juniper and annual grassland habitats (Laudenslayer 2007). The horned lizard needs friable sandy soil with rocks and logs essential for burrows and reproduction (Laudenslayer 2007, Gerson 2011). Appropriate habitat for the horned lizard must include an abundance of the native harvester ant (*Pogonomyrmex* and *Messor*). The non-native Argentine ant (*Linepithema humile*) is detrimental to horned lizard food resources as it is out competing the native harvester ant, and the lizard will not eat the Argentine ant (CNDDB 2017, Gerson 2011). Very little data exists on the habitat requirement for reproduction of the coast horned lizard; however, it has been reported that in southern California the egg laying season is from late May through June (CDFW 2014). The closest reported occurrence of the coast horned lizard is located approximately 8.5 miles south of the Study Area in Morro Bay. The annual grassland habitat within the Study Area provides marginally suitable habitat for the species. Most of the grassland vegetation was too dense and lacked open patches to be considered good quality habitat. Nonetheless, the species could still occur. If present, the species would most likely be found along the dirt road. There is a low potential for the species to occur in the Study Area.

G. California Spotted Owl (*Strix occidentalis occidentalis*) is currently under review by the USFWS for listing under the ESA and is a California Species of Special Concern. It is a medium-sized owl with a mottled appearance. California spotted owls occur in the southern Cascade Range in northern California, through the Sierra Nevada, across the Transverse and Peninsular Ranges in southern California, and up the Coast Range through Monterey County (CDFW 2018d). California spotted owls are primarily found in mature, multi-layered and structurally complex forests (USFWS 2017). Large trees and high canopy cover are important habitat factors. In central and southern California they are known to occur in riparian/hardwood forests and woodlands, live oak/big cone-fir forest, and redwood/California laurel forest (USFWS 2017). California spotted owls have a monogamous mating system and a high nest site fidelity rate. They are also central place foragers, meaning they concentrate most of their foraging and activity around a nest or roost. At upper elevations (above 4000 feet) in the Sierra Nevada mountains flying squirrels are their primary prey, while in southern California woodrats make up most of the diet. According to the CDFW Spotted Owl Database, there is one documented activity center located approximately 2.7 miles west of the Study Area (Observation 97760). Recent observations (in 2017 and 2018) of a pair of California spotted owls have also been documented approximately 2 miles north Study Area along Dover Canyon Road (pers comm Guttilla 2018; pers comm Knowlton 2018). The California bay forest and coast live oak woodland within the Study Area provide suitable habitat with large, old growth trees, and preferred prey (woodrats). Based on the suitable habitat and known nearby occurrences, there is a moderate potential for the California spotted owl to occur within the Study Area.

The remaining 28 special status animal species that were evaluated were determined to have no potential to occur in the Study Area due to lack of suitable habitat present. However, three of these species are either listed or are candidates for listing as threatened or endangered under the Federal

ESA and/or CESA and have records of occurrence within five (5) miles of the Study Area. Therefore, although they are not expected to occur, these species also warrant further discussion:

H. California Red-legged Frog (*Rana draytonii*) is a federally listed threatened species and a California Species of Special Concern. It occurs in California in the Coast Range, Sierras, the Transverse Range and south below 1,200 meters elevation (CDFW 2014; Sousa 2008). The main habitat types for the California red-legged frog (CRLF) are deep, still or slow-moving sources of water in lowlands and foothills with shrubby, riparian, or vegetative shorelines for cover (CDFW 2014; CNDDB 2018; Jennings and Hayes 1994). The most suitable vegetation types for cover are cattails (*Typha* sp.), arroyo willow (*Salix lasiolepis*) and bulrushes (*Scirpus* sp.) (Jennings and Hayes 1994). Along with its aquatic habitat, CRLF also utilizes upland habitat for seeking food and shelter and as migration corridors between breeding and non-breeding sites. Bulger et al. (2003) found that during dry summer months, CRLF were nearly always within 5 meters of a pond; however, during summer rain events and early winter rains, frogs moved up to 130 meters from their ponds, and some frogs even traveled up to 2800 meters to migrate to a different pond. When out of the water the CRLF will shelter under natural or manmade debris and burrow into moist leaf litter or small animal burrows (USFWS 2010). The breeding season for the CRLF is from January to July with a peak in February (CDFW 2014). One major cause of CRLF population decline is the introduction of the bullfrog (*Rana catesbeiana*) which can consume and exhaust CRLF resources (Sousa 2008).

The closest reported occurrence of CRLF to the Study Area is approximately 2.4 miles northwest (CNDDB #861), where frogs were observed in a run-off and spring-fed pool adjacent to Highway 46. At least 5 additional occurrences of CRLF are known within a five-mile radius of the Study Area. The Study Area is located within the northern limits of mapped USFWS designated critical habitat Unit SLO-3. No potential aquatic breeding habitat or appropriate upland habitat for CRLF was observed within the Study Area during the September 2018 site visit. An ephemeral drainage is present; however, it appears to flow only seasonally during rain events. No pools or indications of seasonal ponding was observed. The drainage lacks dense riparian vegetation that would provide suitable moist cover for upland habitat. The drainage converges with the headwaters of Santa Rita Creek approximately 130 feet northwest of the study area. This portion of Santa Rita Creek was also dry during the survey. CRLF is not expected to occur within the Study Area based on the lack of suitable aquatic or upland habitat within or adjacent to the survey area.

I. Steelhead (*Oncorhynchus mykiss irideus*) is the anadromous form of rainbow trout. Adults spawn in freshwater, while juveniles remain in freshwater before migrating to the ocean to grow and become sexually mature prior to returning as adults to spawn in freshwater. Steelhead in the South/Central California Coast Distinct Population Segment (SCCCDPS) include naturally-spawned *O. mykiss* occurring downstream from natural and manmade barriers from the Pajaro River, south to but not including the Santa Maria River. A Distinct Population Segment (DPS) is a group of steelhead that is genetically distinct from other California steelhead populations. Steelhead are known to occur in coastal streams and rivers in San Luis Obispo County, including but not limited to Arroyo Grande Creek, Pismo Creek, San Luis Obispo Creek, Chorro Creek, San Simeon Creek, and other coastal streams. Steelhead are known to occur in the Salinas River and its tributaries from Monterey south to the vicinity of Santa Margarita. The Salinas River and coastal streams in San Luis Obispo County are considered critical habitat for migrating steelhead. Steelhead generally require

cool, fast-flowing streams with rock and cobble substrate for spawning and rearing. There are no suitable streams or rivers within the Study Area that could support steelhead; therefore, the species has no potential to occur in the Study Area.

J. Tidewater goby (*Eucyclogobius newberryi*) is a federally listed endangered species and is a California Species of Special Concern. It requires slow moving (but not still) waters with high oxygen levels in estuaries, lagoons, and the lower reaches of streams before they enter the sea. The tidewater goby is found in isolated populations along the California coast from the Smith River near the Oregon border to Agua Hedionda Lagoon in San Diego County (CDFW 2018a). The breeding season for the tidewater goby starts in April and can continue on into December depending on local temperatures and rainfall amount (USFWS 2008). Sandy bottom habitats are needed for the male to burrow into the sand and spawn (Swenson 1999). This goby feeds on benthic invertebrates and is an opportunistic feeder that can adapt to different food sources depending on the habitat it is in (Swenson and McCray 1996). The closest reported occurrence of tidewater goby is approximately 4.7 miles southwest of the Study Area (CNDDB #50) along Old Creek in Cayucos. Due to a lack of suitable habitat the Tidewater goby has no potential to occur in the Study Area.

3.9 Botanical Survey Results

The survey conducted on September 27, 2018 identified 31 species, subspecies, and varieties of vascular plant taxa in the Study Area (Table 5). The list includes 19 species native to California and 12 introduced (naturalized or planted) species. Native plant species account for approximately 61 percent of the Study Area flora; introduced species account for approximately 39 percent. No special status plant species were identified in the Study Area during the September 2018 survey; however, the survey was outside of the blooming period for most plant species. Appropriately timed spring botanical surveys will be conducted in 2019 to determine if special status plant species occur in the Study Area.

TABLE 5. VASCULAR PLANT LIST

Common Name	Scientific Name	Special Status	Origin
Trees - 6 Species			
Big-leaf maple	*Acer macrophyllum*	None	Native
California bay	*Umbellularia californica*	None	Native
California buckeye	*Aesculus californica*	None	Native
Coast live oak	*Quercus agrifolia* var. *agrifolia*	None	Native
Madrone	*Arbutus menziesii*	None	Native
Cypress	*Hesperocyparis* sp.	None	Native
Shrubs - 5 Species			
Blue elderberry	*Sambucus nigra* ssp. *caerulea*	None	Native
California fuchsia	*Epilobium canum*	None	Native

Common Name	Scientific Name	Special Status	Origin
Coyote brush	*Baccharis pilularis*	None	Native
Sticky monkeyflower	*Mimulus aurantiacus*	None	Native
Poison oak	*Toxicodendron diversilobum*	None	Native
Forbs - 16 Species			
Black mustard	*Brassica nigra*	None	Introduced
Bull thistle	*Cirsium vulgare*	None	Introduced
Common tansyaster	*Corethrogyne filaginifolia*	None	Native
Common verbena	*Verbena lasiostachys*	None	Native
Glandular big tarweed	*Blepharizonia laxa*	None	Native
Knotweed	*Polygonum aviculare*	None	Introduced
Ladies' tobacco	*Pseudognaphalium californicum*	None	Native
Milk thistle	*Silybum marianum*	None	Introduced
Mugwort	*Artemisia douglasiana*	None	Native
Rose clover	*Trifolium hirtum*	None	Introduced
Roughleaf aster	*Eurybia radulina*	None	Native
Stinging nettle	*Urtica dioica*	None	Native
Tocalote	*Centaurea melitensis*	None	Introduced
Wild mustard	*Hirschfeldia incana*	None	Introduced
Willow lettuce	*Lactuca saligna*	None	Introduced
Yellow star-thistle	*Centaurea solstitialis*	None	Introduced
Grasses - 3 Species			
Wild oat	*Avena fatua*	None	Introduced
Annual beard grass	*Polypogon monspeliensis*	None	Introduced
Ripgut brome	*Bromus diandrus*	None	Introduced
Ferns - 1 Species			
California wood fern	*Dryopteris arguta*	None	Native

3.10 Wildlife Survey Results

Wildlife detected in the Study Area during the September 2018 site visit included California scrub jay (*Aphelocoma californica*), California towhee (*Pipilo crissalis*), Nuttall's woodpecker (*Picoides nuttallii*), red-tailed hawk (*Buteo jamaicensis*), Steller's jay (*Cyanocitta stelleri*), turkey vulture (*Cathartes aura*), Virginia opossum (*Didelphis virginiana*), California ground squirrel (*Spermophilus beecheyi*), mule deer (*Odocoileus hemionus*), racoon (*Procyon lotor*), and western fence lizard (*Sceloporus occidentalis bocourtii*). One snakeskin and several snake trails were observed along the dirt driveway. The landowner indicated that rattlesnakes are present. Woodrat

middens (stick nests) were observed in scattered locations among the understory of trees and shrubs. Two medium-sized inactive stick nests were also observed in California bay trees. Table 6 below provides a list of the species observed, as well as the species that may occur in the Study Area based on the habitats present. We provide this list as a guide to the wildlife observed in the Study Area and to the species that could potentially be present, at least seasonally. Other species could occur as transients, particularly avian fauna.

TABLE 6. WILDLIFE LIST

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Amphibians – 7 Species				
Arboreal Salamander	*Aneides lugubris*	None		Oak savanna
Lesser Slender Salamander	*Batrachoseps minor*	SSC		Mixed oak, sycamore, laurel forests
Black-bellied Slender Salamander	*Batrachoseps nigriventris*	None		Moist habitats
Sierran Treefrog [=Pacific Chorus Frog]	*Pseudacris sierra* [formerly *P. regilla*]	None		Many habitats near water
Reptiles – 8 Species				
Northern California Legless Lizard	*Anniella pulchra*	SSC		Moist warm loose soil with vegetative cover
Northern Pacific Rattlesnake	*Crotalus oreganus oreganus*	None	✓	Dry, rocky habitats
Monterey Ringneck Snake	*Diadophis punctatus vandenburgii*	None		Woodlands, grasslands, chaparral
California Alligator Lizard	*Elgaria multicarinata multicarinata*	None		Open grassland, woodland, chaparral
California Kingsnake	*Lampropeltis getula californiae*	None		Woodland, grassland, streams
Pacific Gopher Snake	*Pituophis catenifer catenifer*	None		Woodland, grassland, rural
Skilton's [=Western] Skink	*Plestiodon [=Eumeces] skiltonianus skiltonianus*	None		Woodland, grassland, chaparral, inland and coastal
Coast Range [=Western] Fence Lizard	*Sceloporus occidentalis bocourtii*	None	✓	Wide range; variety of habitats
Birds – 64 Species				
Cooper's Hawk	*Accipiter cooperii*	SA (Nesting)		Oak, riparian woodland
Sharp-shinned Hawk	*Accipiter striatus*	SA (Nesting)		Oak, riparian woodland
California Scrub-Jay	*Aphelocoma californica*	None	✓	Oak, riparian woodlands
Oak Titmouse	*Baeolophus inornatus*	SA (Nesting)		Oak woodland

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Great Horned Owl	*Bubo virginianus*	None		Woodland, grassland
Red-tailed Hawk	*Buteo jamaicensis*	None	✓	Open, semi-open country
Red-shouldered Hawk	*Buteo lineatus*	None		Oak, riparian woodlands
California Quail	*Callipepla californica*	None		Shrubby habitats
Anna's Hummingbird	*Calypte anna*	None		Many habitats
Lesser Goldfinch	*Carduelis psaltria*	None		Riparian, oak woodlands
American Goldfinch	*Carduelis tristis*	None		Weedy fields, woodlands
House Finch	*Carpodacus mexicanus*	None		Riparian, grasslands, chaparral, and woodlands
Purple Finch	*Carpodacus purpureus*	None		Riparian and woodlands
Turkey Vulture	*Cathartes aura*	None	✓	Open country
Hermit Thrush	*Catharus guttatus*	None		Woodland and brush
Swainson's Thrush	*Catharus ustulatus*	None		Mixed woodlands
Northern Flicker	*Colaptes auratus*	None		Woodlands
Band-tailed Pigeon	*Columba fasciata*	None		Woodlands, urban trees
Western Wood Pewee	*Contopus sordidulus*	None		Riparian woodlands
Steller's Jay	*Cyanocitta stelleri*	None	✓	Woodlands
Pacific-slope Flycatcher	*Empidonax difficilis*	None		Riparian, oak woodlands
Brewer's Blackbird	*Euphagus cyanocephalus*	None		Open habitats
American Kestrel	*Falco sparverius*	None		Open, semi-open country
Bullock's Oriole	*Icterus bullockii*	None		Oak, riparian woodlands
Hooded Oriole	*Icterus cucullatus*	None		Urban, mixed woodland
Varied Thrush	*Ixoreus naevius*	None		Woodlands
Dark-eyed Junco	*Junco hyemalis*	None		Oak woodland
Wild Turkey	*Meleagris gallopavo merriami*	None		Woodlands
Song Sparrow	*Melospiza melodia*	None		Oak, riparian woodland
Northern Mockingbird	*Mimus polyglottos*	None		Riparian, chaparral and woodlands. Also urban
MacGillivray's Warbler	*Oporornis tolmiei*	None		Oak, riparian woodlands
Western Screech Owl	*Otus kennicottii*	None		Oak woodland
Savannah Sparrow	*Passerculus sandwichensis*	None		Open habitats, marshes, grasslands
Fox Sparrow	*Passerella iliaca*	None		Woodland, chaparral
Lazuli Bunting	*Passerina amoena*	None		Mixed woodlands, chaparral

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Black-headed Grosbeak	*Pheucticus melanocephalus*	None		Woodlands
Nuttall's Woodpecker	*Picoides nuttallii*	None	✓	Oak, riparian woodlands
Downy Woodpecker	*Picoides pubescens*	None		Oak, riparian woodlands
Hairy Woodpecker	*Picoides villosus*	None		Oak, riparian woodlands
California Towhee	*Pipilo crissalis*	None	✓	Brushy habitats
Spotted Towhee	*Pipilo maculatus*	None		Dense brushy areas
Western Tanager	*Piranga ludoviciana*	None		Oak, riparian woodlands
Chestnut-backed Chickadee	*Poecile hudsonica*	None		Mixed woods
Bushtit	*Psaltriparus minimus*	None		Woodlands, chaparral
Ruby-crowned Kinglet	*Regulus calendula*	None		Oak, riparian woodlands
Yellow-rumped Warbler	*Setophaga coronata*	None		Woodlands, brush, open country
Black-throated Gray Warbler	*Setophaga nigrescens*	None		Oak, riparian woodlands
Townsend's Warbler	*Setophaga townsendii*	None		Riparian, oak woodlands
White-breasted Nuthatch	*Sitta carolinensis*	None		Oak savannah, woodland
California Spotted Owl	*Strix occidentalis occidentalis*	Federal review, SSC		Old growth forests
Tree Swallow	*Tachycineta bicolor*	None		Oak, riparian woodlands, open areas near water
Violet-green Swallow	*Tachycineta thalassina*	None		Oak, riparian woodlands, open areas near water
House Wren	*Troglodytes aedon*	None		Brushy woods
Orange-crowned Warbler	*Vermivora celata*	None		Oak, riparian woodlands
Warbling Vireo	*Vireo gilvus*	None		Oak, riparian woodlands
Hutton's Vireo	*Vireo huttonii*	None		Oak, riparian woodlands
Wilson's Warbler	*Wilsonia pusilla*	None		Oak, riparian woodlands
Mourning Dove	*Zenaida macroura*	None		Open and semi-open habitats
Golden-crowned Sparrow	*Zonotrichia atricapilla*	None		Dense woodlands, brushy areas
White-crowned Sparrow	*Zonotrichia leucophrys*	None		Oak, riparian woodlands
Mammals – 23 Species				
Pallid Bat	*Antrozous pallidus*	SSC		Riparian, woodland, urban
Coyote	*Canis latrans*	None		Open woodlands, brushy areas, wide ranging.

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Virginia Opossum	*Didelphis virginiana*	None	✓	Woodlands, streams
Bobcat	*Lynx rufus*	None		Chaparral and woodlands
Striped Skunk	*Mephitis mephitis*	None		Mixed woods, brush, semi-open country
Big-eared Woodrat*	*Neotoma macrotis*	None	**?**	Wooded habitats
Monterey Dusky-footed Woodrat*	*Neotoma macrotis luciana*	SSC	**?**	Riparian, oak woodlands
Mule Deer	*Odocoileus hemionus*	None	✓	Many habitats
Brush Mouse	*Peromyscus boylei*	None		Shrubby habitats
California Mouse	*Peromyscus californicus*	None		Oak woodland, chaparral
Deer Mouse	*Peromyscus maniculatus*	None		All dry land habitats
Raccoon	*Procyon lotor*	None	✓	Streams, lakes, rock cliffs, dens in trees
Mountain Lion	*Puma concolor*	Specially Protected Species		Mountains, woodlands, stream corridors
Broad-footed Mole	*Scapanus latimanus*	None		Grasslands, agricultural, in moist soils
Western Gray Squirrel	*Sciurus griseus*	None		Oak, conifer woodlands
Ornate Shrew	*Sorex ornatus*	None		Riparian, woodland, grassland, and shrubland
California Ground Squirrel	*Spermophilus beecheyi*	None	✓	Grasslands
Western Spotted Skunk	*Spilogale gracilis*	None		Woodlands
Feral Pig	*Sus scrofa*	None		Woodlands
Brush Rabbit	*Sylvilagus bachmani*	None		Brushy habitats
Valley Pocket Gopher	*Thomomys bottae*	None		Variety of habitats
Black Bear	*Ursus americanus*	None		Woodlands, forests
Red Fox	*Vulpes vulpes*	None		Forest and open country

*Woodrat nests were observed in the Study Area, woodrat species not determined.

4 POTENTIAL IMPACTS

4.1 Habitats

The final project design is not yet complete, however preliminary estimates of habitat impacts are provided in Table 7 below that are based on April 2018 preliminary plans (refer to Appendix A). Most impacts would be permanent in nature. Additional permanent and temporary impacts are likely to occur as a result of utility installation and staging of construction materials and equipment. Locations of utilities have not yet been finalized.

TABLE 7. POTENTIAL HABITAT IMPACTS

Habitat Type	Approximate Acreage in Study Area	Approximate Acreage of Impacts[1]
California Bay Forest Alliance	11.9	0.3
Coast Live Oak Woodland Alliance	20.9	0.2
Mediterranean California Naturalized Annual and Perennial Grassland Group	21.3	1.1
Anthropogenic	1.8	1.8
Total	55.9	3.4

4.1.1 California Bay Forest Alliance

Approximately 0.3 acre of California bay forest alliance habitat may be impacted by the proposed project. Most of the impacts would result from widening and improvements to the access road.

4.1.2 Coast Live Oak Woodland Alliance

Approximately 0.2 acre of coast live oak woodland alliance habitat may be impacted by the proposed project. Impacts would result from widening and improvements to the access road, construction of the single-family residence and detached garage, and construction of an agricultural barn.

4.1.3 Mediterranean California naturalized annual and perennial grassland

Approximately 1.1 acres of Mediterranean California naturalized annual and perennial grassland habitat may be impacted by the proposed project. Impacts would result from widening and improvements to the access road and construction of a guest house, pool, and water storage tanks.

[1] Based on April 2018 site plans

4.1.4 Anthropogenic

Approximately 1.8 acres of anthropogenic habitat may be impacted by the proposed project. The anthropogenic habitat consists of the existing dirt road, which would be widened and paved.

4.2 Potential Wetlands and Jurisdictional Waters

Approximately 30 linear feet of potentially jurisdictional waters, in the form of an ephemeral stream, may be impacted by the proposed project as a result of removing and upgrading a culverted crossing along the existing access road.

4.3 Nesting Birds

Construction of the proposed project could impact nesting birds if ground or vegetation disturbing activities take place during the bird nesting season (generally March 15 – September 15). Impacts to nesting birds may potentially occur if ground-nesting species are present during initial site preparation (i.e., mowing and grading), or if birds are nesting in trees or shrubs during vegetation removal or trimming. Additional impacts could result from abandonment of nests due to noise disturbance or ground vibration.

4.4 Special Status Species

4.4.1 Plants

As described in Section 3.7, there are four special status plant species with potential to occur in the Study Area. If present, impacts to special status plants could occur as a result of the project if habitat loss or loss of seed banks occurred. Surveys conducted in fall 2018 were not appropriately timed to detect special status plants and the potential for impacts could not be evaluated.

4.4.2 Amphibians and Reptiles

As described in Section 3.8, there are three special status reptile and amphibian species with potential to occur in the Study Area: northern California legless lizard, lesser slender salamander, and coast horned lizard. If present, impacts to special status reptiles could occur if animals are injured or killed during initial ground-disturbing activities such as clearing and grubbing. Coast horned lizards, if present, could also be killed or injured by construction traffic along the roadway. The potential for lesser slender salamanders to be present is high in moist bay and oak woodland areas and therefore clearance surveys should be conducted prior to ground or vegetation disturbing activities that affect suitable habitat areas. Legless lizards and horned lizards have low potential to occur onsite. The potential for the project to impact these species is very low.

4.4.3 Birds

As described in Section 4.3, impacts to nesting birds may potentially occur if ground-nesting species are present during initial site preparation (i.e., mowing and grading), or if birds are nesting in trees or shrubs during vegetation removal or trimming, or if nesting behaviors are impacted by noise or ground disturbance. One special status bird species, golden eagle has low potential to nest in the Study Area. One special status species, California spotted owl, has a moderate potential to

nest in the Study Area. Impacts to these species could potentially occur if they were to be nesting or roosting within or immediately adjacent to the project site. Golden eagle was confirmed not to be nesting on the site in 2018, but focused surveys required to determine presence of nesting spotted owls were not conducted.

4.4.4 Mammals

As described in Section 3.8.3, there are two special status mammal species with potential to occur in the Study Area: pallid bat and Monterey dusky-footed woodrat. Focused pallid bat surveys were not conducted in September 2018. Potential impacts would consist of construction effects to roost locations in large trees. Woodrat nests were observed onsite, however the subspecies of woodrat that occurs in this area was not identified. Construction impacts to woodrat nests could affect Monterey dusky-footed woodrat.

4.5 Habitat Connectivity and Wildlife Movement

Due to the relatively small-scale nature of the project and the large contiguous areas of open space surrounding the site, no impacts to habitat connectivity or wildlife movement are expected to result from construction of the proposed project.

5 MITIGATION RECOMMENDATIONS

The following biological resource (BR) mitigation measures are recommended to avoid and/or minimize impacts to sensitive biological resources that may occur as a result of the proposed project.

5.1 Sensitive Habitats

BR-1. Environmentally sensitive area signage. Signage shall be placed along the edge of work limits where they border California bay forest and oak woodland habitats. The signage shall state "Environmentally Sensitive Area - Do Not Enter".

BR-2. Impacts to California bay trees shall be mitigated by planting additional trees on site. Removal of individual California bay trees with a diameter breast height (DBH; 4.5 feet above ground level) of 5 inches or greater shall be mitigated at a 2:1 ratio (i.e., two replacement trees per one removed tree). Impacts to bays shall be mitigated by planting additional bay trees at a 1:1 ratio. Replacement trees shall be of minimum one-gallon size, of local origin, and of the same species as was impacted. Replacement trees shall be seasonally maintained (browse protection, weed reduction and irrigation, as needed) and monitored annually for at least seven years.

BR-3. Impacts to oaks trees shall be mitigated by planting additional trees on site. Any oak tree with a DBH of 5 inches or greater shall require mitigation. Oaks removed shall be replaced in kind at a 4:1 ratio. Impacts to oaks shall be mitigated by planting additional oak trees, in kind, at a 2:1 ratio. Replacement trees shall be of minimum one-gallon size, of local origin, and of the same species as was impacted. Replacement trees shall be seasonally maintained (browse protection, weed reduction and irrigation, as needed) and monitored annually for at least seven years.

BR-4. The canopy edge and trunk location of oak trees and California bays within 50 feet of proposed construction on the property shall be surveyed by a licensed land surveyor and placed on all plan sets. Tree assessments should be conducted by a certified arborist or qualified biologist. Data collected for each tree shall include DBH of each stem/trunk, canopy diameter, tree height, tree health, and habitat notes (cavities for birds or bats), raptor nests, wood rat nests, and unique features. The tree map shall be used to determine impacts to trees from the project.

BR-5. Impacts to the oak canopy and California bay critical root zones (CRZ) should be avoided where practicable. Impacts include pruning, ground disturbance within the CRZ, and trunk damage.

BR-6. Prior to ground disturbing construction activities, tree protection fencing shall be installed around oaks and California bays as close to the outer limit of the CRZ as practicable for construction operations. The fencing shall be in place throughout the duration of the project and removed only under the direction of the project arborist.

BR-7. Impacts to oak trees shall be assessed by a licensed arborist or qualified biologist prior to final inspection and reported to the County.

5.2 Potential Wetlands and Jurisdictional Waters

Where drainage crossings affect riparian and/or wetland habitats, the Applicant may need to obtain permits from Army Corps of Engineers, California Department of Fish and Wildlife, and certification from the Regional Water Quality Control Board. As part of this process we recommend a restoration and enhancement plan for offsetting temporary and permanent impacts to these habitat types. Project design should consider crossing designs with minimal impact to streams.

BR-8. Refueling, vehicle and equipment maintenance, and overnight parking shall be prohibited within 100 feet of any waterways.

5.3 Nesting Birds

BR-9. Preconstruction Nesting Bird Survey. If seasonal avoidance of nesting birds is not feasible and construction activities are scheduled to occur during the nesting season (March 15 to August 15 or as determined by the County), a qualified biologist shall conduct a preconstruction survey of the work area, including a 100-foot buffer around the project footprint, including denuded areas, within seven days prior to the start of ground-disturbing activities. A qualified biologist shall also conduct weekly surveys of the project site during the nesting season while vegetation clearing, tree trimming, and/or tree removal activities are continuing. If nesting birds are found within the survey area, an appropriate buffer around the nest shall be identified by the qualified biologist to ensure compliance with Fish and Game Code Sections 3503 and 3513. No new activities would be allowed within the buffer until the young have fledged from the nest, as determined by the qualified biologist, or until the nest fails for reasons unrelated to the project. Results of the preconstruction survey shall be submitted to the County.

5.4 Special Status Species

5.4.1 Plants

An appropriately-timed (spring) botanical survey should be conducted to search for special-status plant species that may be impacted by the proposed project, including umbrella larkspur, Ojai fritillary, Oregon meconella, and hooked popcorn flower. The survey report shall include mitigation measures to avoid or reduce impacts to any special status plant species, should they be present. A copy of the survey report shall be provided to the County.

5.4.2 Wildlife

BR-10. Preconstruction clearance surveys for lesser slender salamander and northern California legless lizard shall be conducted within 24 hours prior to initial ground-breaking activities (i.e., clearing, grubbing, or grading) within the bay forest and woodland habitat. The preconstruction surveys shall be conducted by a qualified

biologist with appropriate authorization from CDFW to relocate the animals out of harm's way, if found. Sufficient time shall be allocated for the biologist to thoroughly inspect the areas prior to impact. Due to the size of the site, initial ground disturbance will likely occur over multiple days. Therefore, surveys should be phased to match the construction schedule. If lesser slender salamander or legless lizards are found to be present in the proposed work areas, they shall be captured by hand by the project biologist and relocated to an appropriate location well outside the impact area. Additionally, if lesser slender salamander or legless lizards are found to be present during the clearance surveys, a biologist shall be present during initial ground-breaking activities to monitor for and relocate any additional animals that may be unearthed. A letter report shall be submitted to the County within 30 days of lesser slender salamander and legless lizard relocation, or as directed by CDFW.

BR-11. Conduct a focused survey for California spotted owls. The survey shall be conducted between March 15 and August 31, prior to the start of any tree or vegetation trimming or removal activities. There is no standard survey protocol for California spotted owl; therefore, survey methodology shall be conducted using the Nighttime Spot Calling method described in the USFWS 2012 Revision of the Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls. Surveys shall be conducted by a qualified ornithologist with experience in surveying for spotted owl. At least two night surveys shall be conducted and shall be spaced at least 7 days apart. If any California spotted owls are detected during the nighttime survey, a follow-up daytime survey shall be conducted to determine the bird's roosting location. If no spotted owls are detected during the two survey nights, no further action is required. If spotted owls are detected, a determination shall be made by the ornithologist whether project activities may impact the bird. If impacts may occur, such as pruning or removal or a nesting or roosting site, coordination with CDFW shall occur to determine best management practices.

BR-12. A preconstruction survey shall be conducted to locate potential Monterey dusky-footed woodrat nests within 50 feet of impact areas. The survey shall be conducted within 30 days of starting any grading, grubbing, or oak tree removal. Highly visible fencing and signage shall be installed under the direction of a project biologist in a manner sufficient to protect the nests from construction equipment. If a woodrat nest is located in a construction zone and is unavoidable, it shall be dismantled, or if feasible, relocated outside of the work area. Dismantling and/or relocation shall be done under supervision of a biologist. Due to the potential health hazards associated with woodrat nests, the careful use of mechanized equipment is permissible. Prior to removing or dismantling, the nest shall be nudged with long handled tools or equipment in an attempt to have animals flee the nest. If practical, the entire nest shall be picked up with a front loader or other equipment and placed outside of the impact area in a location determined by the biologist. Otherwise, the nest will be dismantled and the pieces placed in a pile outside of the work area. If young are encountered during the dismantling process, dismantling shall be paused for at least 24 hours to allow the adults to relocate the young. After that period, the nest dismantling process may begin again. A preconstruction survey letter report shall be submitted to the County within one week after completion of the survey.

BR-13. Within one week prior to trimming or removal of any trees over 20 inches DBH, a survey shall be conducted by a qualified biologist to determine if any of the trees proposed for removal or trimming harbor sensitive bat species or maternal bat colonies. If a non-maternal roost is found, the qualified biologist, with prior approval from California Department of Fish and Wildlife, will install one-way valves or other appropriate passive relocation method. For each occupied roost removed, one bat box shall be installed in similar habitat and should have similar cavity or crevices properties to those which are removed, including access, ventilation, dimensions, height above ground, and thermal conditions. Maternal bat colonies may not be disturbed.

6 PHOTOGRAPHS

Photo 1. Unpaved driveway entrance off Old Creek Road, view northwest. Cypress trees occur north and south of driveway at entrance. September 27, 2018.

Photo 2. Location where drainage feature crosses existing dirt driveway (via culvert), approximately 370 feet west of driveway entrance, view east. September 27, 2018.

Photo 3. View of drainage feature from dirt road, facing north (downstream). September 27, 2018.

Photo 4. View of drainage feature from dirt road, facing south (upstream). September 27, 2018.

Photo 5. View of typical California naturalized annual and perennial grassland habitat in Study Area (foreground) dominated by dense Italian thistle. View west. September 27, 2018.

Photo 6. Dirt access road, view northeast. September 27, 2018.

Photo 7. Recent burn area within grassland habitat (foreground). View northwest. September 27, 2018.

Photo 8. Dirt access road with surrounding coast live oak woodland habitat. View west. September 27, 2018.

Photo 9. Proposed turn-around location along dirt access road. View northwest. September 27, 2018.

Photo 10. Proposed location of primary residence. View south. September 27, 2018.

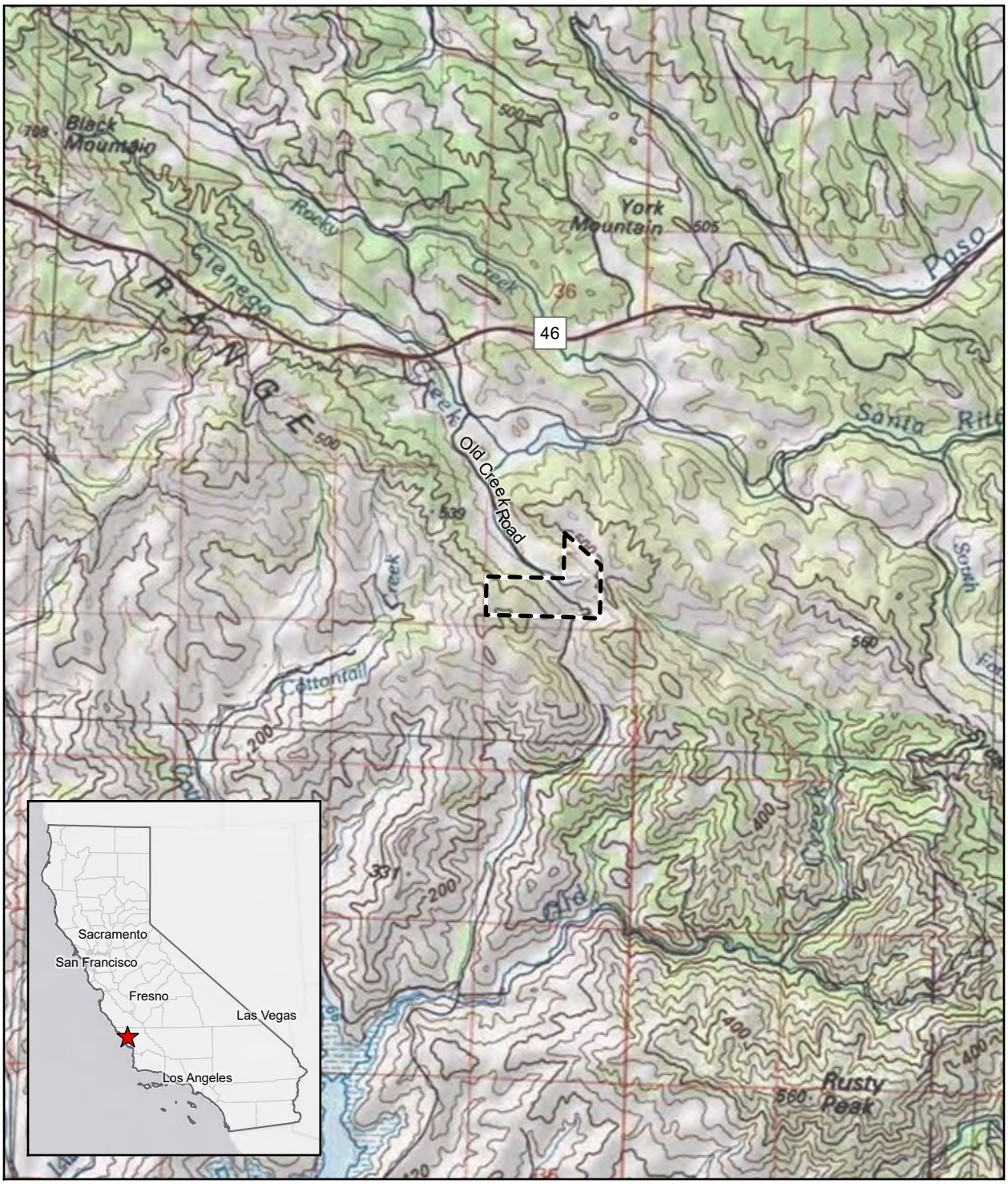
Photo 11. Proposed location of guest house and pool residence. View southeast. September 27, 2018.

Photo 12. Large, old growth oak tree within Study Area. September 27, 2018.

7 FIGURES

- **Figure 1. USGS Topographic Map**
- **Figure 2. Aerial Photograph**
- **Figure 3. Plants - CNDDB**
- **Figure 4. Animals - CNDDB**
- **Figure 5. USFWS Critical Habitat Map**
- **Figure 6. Biological Resource Map**

Figure 1. United States Geological Survey Topographic Map



Legend

Parcel Boundary

N

0 0.5 1 1.5 2 Miles

Brynildson
Map Center: 120.8529°W 35.51018°N
San Luis Obispo County

USGS Quadrangle: York Mountain

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
December 05, 2018 09:18 AM by JBB

Figure 2. Aerial Photograph

Legend

Parcel Boundary (142.2 acres)

Study Area (56.1 acres)

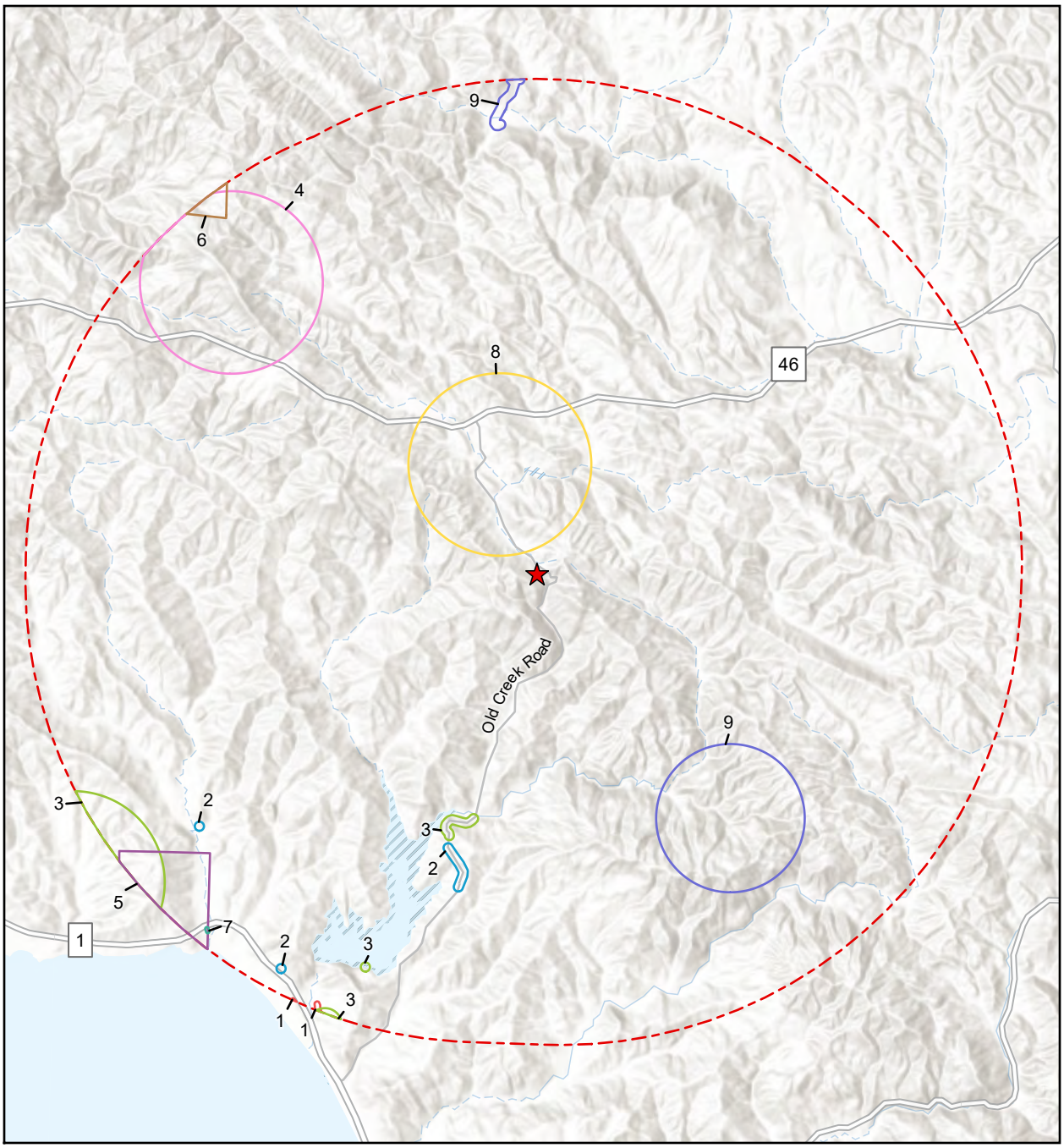
N

0 250 500 1,000 Feet

Brynildson
Map Center: 120.84906°W 35.51184°N
San Luis Obispo County

Imagery Date: 06/14/2017

Figure 3. California Natural Diversity Database Plant Records



Label	Common Name
1	Betty's dudleya
2	Blochman's dudleya
3	Jones' layia
4	Mesa horkelia
5	Miles' milk-vetch
6	Most beautiful jewelflower
7	Mouse-gray dudleya
8	Oregon meconella
9	Umbrella larkspur

Legend

Project Location

5-Mile Radius

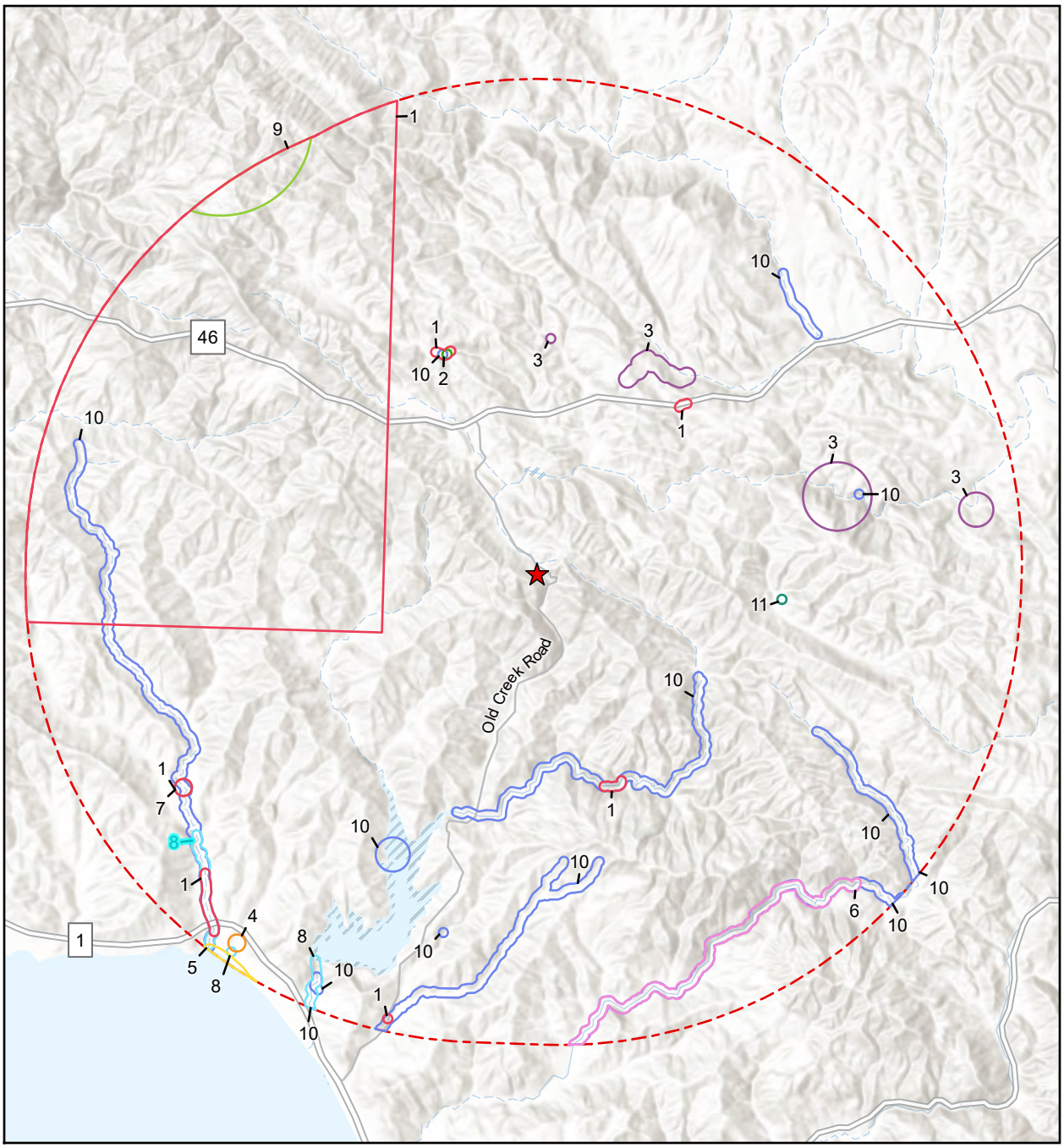
N

0 0.5 1 2 Miles

Brynildson
Map Center: 120.84739°W 35.5098°N
San Luis Obispo County

CNDDB GIS Data Last Updated: October 2018

Figure 4. California Natural Diversity Database Animal Records



Label	Common Name
1	California red-legged frog
2	Coast range newt
3	Lesser slender salamander
4	Monarch - California overwintering population
5	Sand beach tiger beetle
6	Steelhead - south-central CA coast DPS
7	Steelhead - southern California DPS
8	Tidewater goby
9	Townsend's big-eared bat
10	Western pond tutle
11	California spotted owl - activity center

Legend

Project Location

5-Mile Radius

N

0 0.5 1 2 Miles

Brynildson
Map Center: 120.84739°W 35.5098°N
San Luis Obispo County

CNDDB GIS Data Last Updated: October 2018

Figure 5. United States Fish and Wildlife Service Critical Habitat

Legend

- Project Location
- 5-Mile Radius
- Steelhead
- California red-legged frog

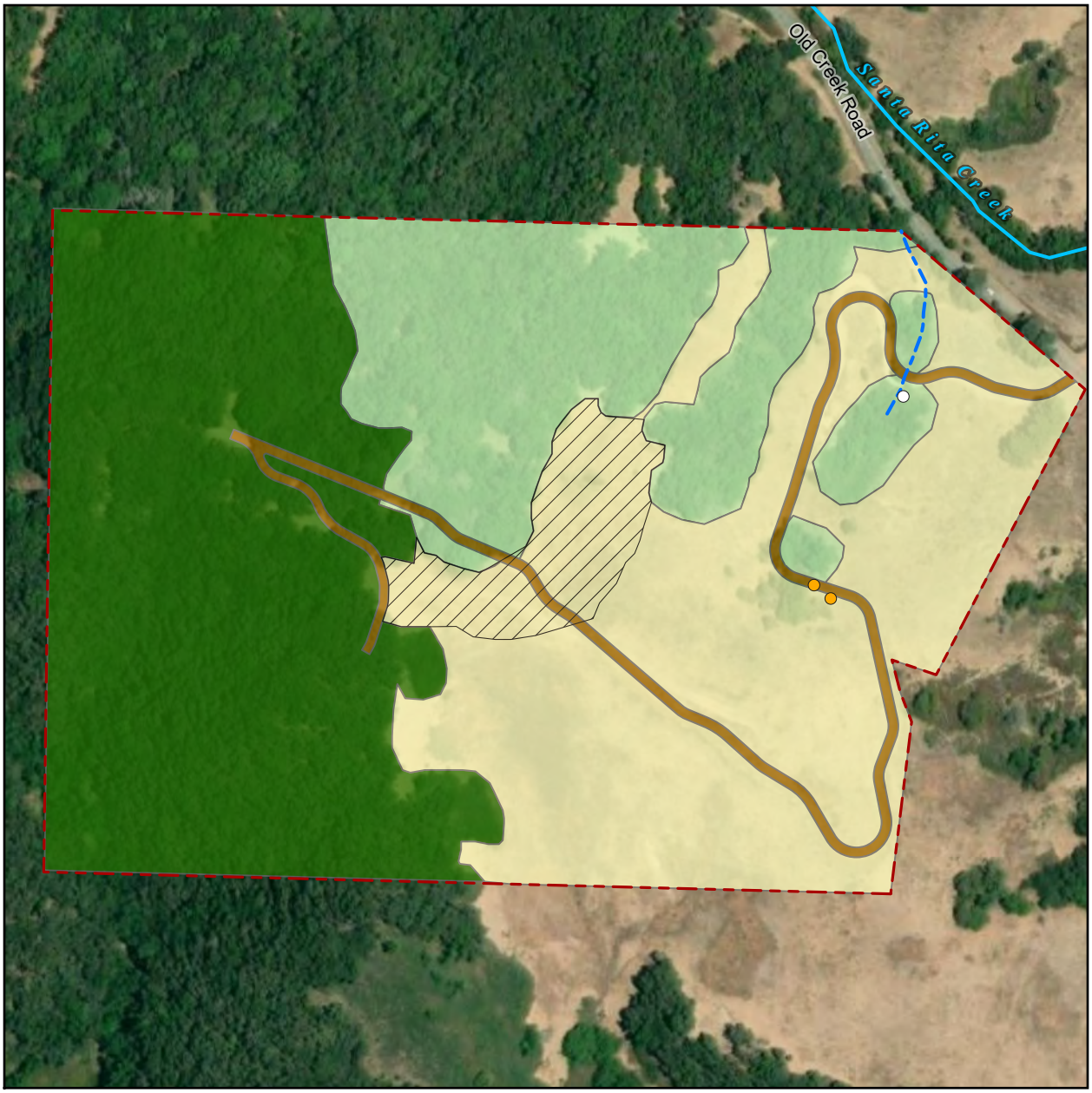
N

0 0.5 1 2 Miles

Brynildson
Map Center: 120.84739°W 35.5098°N
San Luis Obispo County

USFWS Critical Habitat Data Last Updated: January 2018

Figure 6. Biological Resources



Legend

Habitats

- Anthropogenic (1.8 acres)
- California Bay Forest Alliance (11.9 acres)
- Coast Live Oak Woodland Alliance (20.9 acres)
- Mediterranean California Naturalized Annual and Perennial Grassland (21.3 acres)
- Recent Burn Area (~3 acres)

- Stick Nest
- Woodrat Nest
- Ephemeral Drainage
- Study Area

N

0 100 200 300 400 500 Feet

Brynildson
Map Center: 120.84944°W 35.50987°N
San Luis Obispo County

Biological Survey Date: 09/27/2018

8 REFERENCES

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9 APPENDICES

- **Appendix A. Site Plans**
- **Appendix B. USDA Custom Soil Resource Report**
- **Appendix C. Special Status Plants Reported from the Region**
- **Appendix D. Special Status Animals Reported from the Region**

APPENDIX A. SITE PLANS

CLAYTON & LITTLE

OLD CREEK RANCH SITE PLAN | *1:120 scale*

OLD CREEK ROAD | CAYUCOS, CALIFORNIA

PRELIMINARY - NOT FOR CONSTRUCTION | APRIL 3, 2018 | 1 of 1

APPENDIX B. USDA CUSTOM SOILS RESOURCE REPORT

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Luis Obispo County, California, Coastal Part; and San Luis Obispo County, California, Paso Robles Area

Brynildson Property

October 24, 2018

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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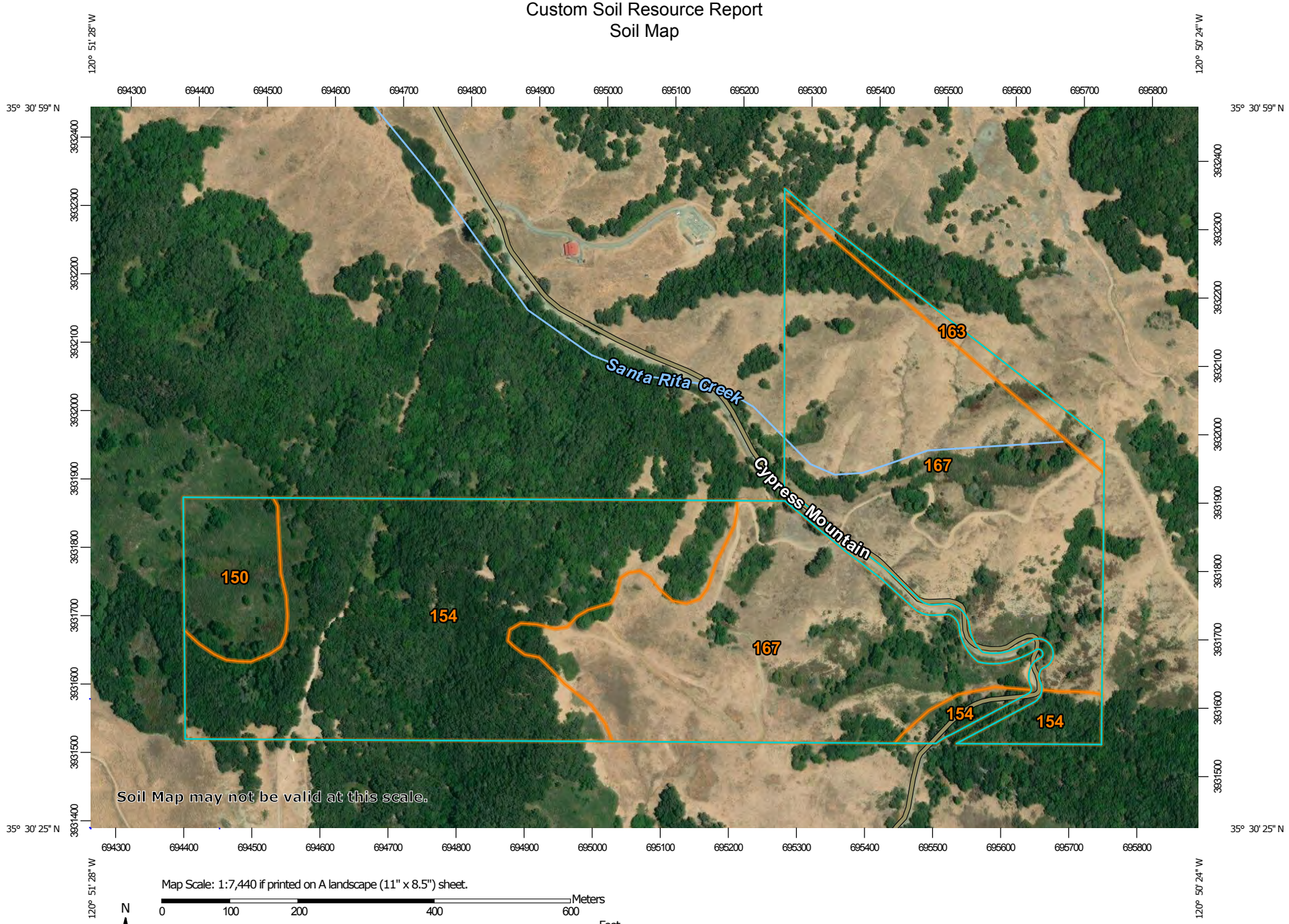
Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:7,440 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Luis Obispo County, California, Coastal Part
Survey Area Data: Version 11, Sep 12, 2018

Soil Survey Area: San Luis Obispo County, California, Paso Robles Area
Survey Area Data: Version 12, Sep 14, 2018

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil

MAP LEGEND

MAP INFORMATION

properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 17, 2016—Oct 1, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
150	Lodo clay loam, 50 to 75 percent slopes, MLRA 15	8.1	5.5%
154	Lompico-McMullin loams, 30 to 75 percent slopes	53.4	36.2%
167	Los Osos-Lodo complex, 30 to 75 percent slopes	82.5	56.0%
Subtotals for Soil Survey Area		**144.0**	**97.7%**
Totals for Area of Interest		**147.3**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
163	Los Osos-Lodo complex, 50 to 75 percent slopes	3.3	2.3%
Subtotals for Soil Survey Area		**3.3**	**2.3%**
Totals for Area of Interest		**147.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit

descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Luis Obispo County, California, Coastal Part

150—Lodo clay loam, 50 to 75 percent slopes, MLRA 15

Map Unit Setting

National map unit symbol: 2tb7q
Elevation: 0 to 2,710 feet
Mean annual precipitation: 16 to 38 inches
Mean annual air temperature: 56 to 59 degrees F
Frost-free period: 240 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Lodo and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lodo

Setting

Landform: Mountain slopes, ridges, hillslopes
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 12 inches: clay loam
H2 - 12 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 50 to 75 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.9 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: SHALLOW FINE LOAMY (R015XD070CA), VERY STEEP SHALLOW FINE LOAMY (R015XD120CA)
Hydric soil rating: No

Minor Components

Diablo

Percent of map unit: 4 percent
Hydric soil rating: No

Gazos

Percent of map unit: 4 percent

Hydric soil rating: No

Los osos

Percent of map unit: 4 percent
Hydric soil rating: No

Cibo

Percent of map unit: 3 percent
Hydric soil rating: No

154—Lompico-McMullin loams, 30 to 75 percent slopes

Map Unit Setting

National map unit symbol: hbp0
Elevation: 50 to 4,200 feet
Mean annual precipitation: 25 to 45 inches
Mean annual air temperature: 54 to 57 degrees F
Frost-free period: 250 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Lompico and similar soils: 45 percent
Mcmullin and similar soils: 20 percent
Minor components: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lompico

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Mountainflank, crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 17 inches: loam
H2 - 17 to 32 inches: loam
H3 - 32 to 59 inches: weathered bedrock

Properties and qualities

Slope: 30 to 75 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Mcmullin

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Mountainflank, crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 15 inches: gravelly loam
H2 - 15 to 25 inches: unweathered bedrock

Properties and qualities

Slope: 30 to 75 percent
Depth to restrictive feature: 12 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.9 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: SHALLOW LOAMY (R015XD093CA)
Hydric soil rating: No

Minor Components

Gazos, clay loam

Percent of map unit: 5 percent
Hydric soil rating: No

Los osos, loam

Percent of map unit: 5 percent
Hydric soil rating: No

Lodo, clay loam

Percent of map unit: 5 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 5 percent

Hydric soil rating: No

Unnamed

Percent of map unit: 5 percent
Hydric soil rating: No

Very gravelly lompico and mcmullin

Percent of map unit: 5 percent
Hydric soil rating: No

167—Los Osos-Lodo complex, 30 to 75 percent slopes

Map Unit Setting

National map unit symbol: hbpf
Elevation: 300 to 3,000 feet
Mean annual precipitation: 15 to 35 inches
Mean annual air temperature: 59 degrees F
Frost-free period: 275 to 350 days
Farmland classification: Not prime farmland

Map Unit Composition

Los osos and similar soils: 50 percent
Lodo and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Los Osos

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Mountainflank, crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 14 inches: loam
H2 - 14 to 32 inches: clay
H3 - 32 to 39 inches: sandy loam
H4 - 39 to 59 inches: weathered bedrock

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Available water storage in profile: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: LOAMY CLAYPAN (R015XD049CA)
Hydric soil rating: No

Description of Lodo

Setting

Landform: Mountains, hills
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Mountainflank, crest, side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 12 inches: clay loam
H2 - 12 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.9 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: SHALLOW FINE LOAMY (R015XD070CA)
Hydric soil rating: No

Minor Components

Cibo, clay

Percent of map unit: 2 percent
Hydric soil rating: No

Diablo, clay

Percent of map unit: 2 percent
Hydric soil rating: No

Creneba, loam

Percent of map unit: 2 percent
Hydric soil rating: No

Millsap, loam

Percent of map unit: 2 percent
Hydric soil rating: No

Gazos, clay loam

Percent of map unit: 2 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent
Hydric soil rating: No

Lompico

Percent of map unit: 2 percent
Hydric soil rating: No

Mcmullin

Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 2 percent
Hydric soil rating: No

San Luis Obispo County, California, Paso Robles Area

163—Los Osos-Lodo complex, 50 to 75 percent slopes

Map Unit Setting

National map unit symbol: hbtj
Elevation: 1,000 to 3,400 feet
Mean annual precipitation: 12 to 30 inches
Mean annual air temperature: 60 degrees F
Frost-free period: 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Los osos and similar soils: 40 percent
Lodo and similar soils: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Los Osos

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum weathered from shale and/or sandstone

Typical profile

H1 - 0 to 14 inches: clay loam
H2 - 14 to 24 inches: clay
H3 - 24 to 59 inches: weathered bedrock

Properties and qualities

Slope: 50 to 75 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: Fine Loamy 9-13 (R015XE020CA)
Hydric soil rating: No

Description of Lodo

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum weathered from sandstone and/or shale

Typical profile

H1 - 0 to 16 inches: gravelly clay loam
H2 - 16 to 20 inches: unweathered bedrock

Properties and qualities

Slope: 50 to 75 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: SHALLOW GRAVELLY FINE LOAMY (R015XE104CA)
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 10 percent
Hydric soil rating: No

Dibble, clay loam

Percent of map unit: 10 percent
Hydric soil rating: No

Gaviota, sandy loam

Percent of map unit: 2 percent
Hydric soil rating: No

Gilroy, gravelly loam

Percent of map unit: 2 percent
Hydric soil rating: No

Henneke, very cobbly clay loam

Percent of map unit: 2 percent
Hydric soil rating: No

Mcmullin, gravelly loam

Percent of map unit: 2 percent
Hydric soil rating: No

Lompico, loam

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, slopes of 30 to 50 percent

Percent of map unit: 1 percent
Hydric soil rating: No

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APPENDIX C. SPECIAL STATUS PLANTS REPORTED FROM THE REGION

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
1.	**Bristlecone Fir** *Abies bracteata*	None/None G2G3/S2S3 1B.3	N/A	Lower montane coniferous forest. Rocky sites in Monterey and SLO Counties. 210-1600 m.	No. Suitable habitat is not present in the Study Area.	No
2.	**Red Sand-Verbena** *Abronia maritima*	None/None G4/S3? 4.2	February - November	Coastal dunes; <100m sCCo, Sco, ChI; Baja CA	No. Suitable habitat is not present in the Study Area.	No
3.	**Hoover's Bent Grass** *Agrostis hooveri*	None/None G2/S2 1B.2	April - July	Sandy soil in oak woodland habitat; <600 m. Endemic to SLO & SB Counties.	No. Study Area is outside of species known range.	No
4.	**Douglas's Fiddleneck** *Amsinckia douglasiana*	None/None G4/S4 4.2	March - May	Unstable shaly sedimentary slopes; (100) 150–1600 m. SCoR, w WTR	No. Study Area is outside of species known range.	No
5.	**Oval-Leaved Snapdragon** *Antirrhinum ovatum*	None/None G3/S3 4.2	May - November	Heavy, adobe-clay soils on gentle, open slopes, also disturbed areas; 200-1000 m. s San Joaquin Valley, s SCoRI	No. Suitable substrate is not present in the Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
6.	**Santa Lucia Manzanita** *Arctostaphylos luciana*	None/None G2/S2 1B.2	December - March	Shale outcrops, slopes, chaparral, 500-700 m. Cuesta Pass, SLO County.	No. Suitable chaparral; habitat is not present in the Study Area.	No
7.	**Bishop Manzanita** *Arctostaphylos obispoensis*	None/None G3/S3 4.3	February - June	Rocky, gen serpentine soils, chaparral, open close-cone forest near coast; 60-950 m; SCoRO	No. Suitable habitat and substrate are not present in the Study Area.	No
8.	**Santa Margarita Manzanita** *Arctostaphylos pilosula*	None/None G2?/S2? 1B.2	December - May	Shale outcrops, slopes, chaparral; 300-1100 m. s SCoRO Endemic to SLO County	No. Study Area is outside of species known range.	No
9.	**Indian Valley Spineflower** *Aristocapsa insignis*	None/None G1/S1 1B.2	May - September	Foothill woodland; 300-600 m. SCoRI (Monterey, SLO Counties)	No. Study Area is outside of species known range.	No
10.	**Carlotta Hall's Lace Fern** *Aspidotis carlotta-halliae*	None/None G3/S3 4.2	January - December	Generally serpentine slopes, crevices, outcrops	No. Suitable serpentine substrate is not present in the Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
11.	**Miles' Milk-Vetch** *Astragalus didymocarpus* var. *milesianus*	None/None G5T2/S2 1B.2	March - June	Clay or serpentine soils in coastal scrub, grassy areas near coast. 0-90 m. Endemic to SLO County	No. Suitable substrate is not present in the Study Area.	No
12.	**Salinas Milk-Vetch** *Astragalus macrodon*	None/None G4/S4 4.3	April - July	Eroded pale shales or sandstone, or serpentine alluvium; 300-950 m. SCoR	No. Study Area is outside of species known range.	No
13.	**Arroyo de la Cruz Mariposa-Lily** *Calochortus clavatus* var. *recurvifolius*	None/None G4T1/S1 1B.2	June - July	Rocky slopes in coastal bluff scrub, maritime chaparral, coastal prairie, and lower montane coniferous forest; 10-120 m. SLO County	No. Suitable habitat is not present in the Study Area.	No
14.	**San Luis Mariposa-lily** *Calochortus obispoensis*	None/None G2/S2 1B.2	May - July	Chaparral, coastal scrub, valley and foothill grassland, often on serpentine but also sandstone; 100-500 m. SCoRO Endemic to SLO County	No. Suitable habitat is not present in the Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
15.	**La Panza Mariposa-lily** *Calochortus simulans*	None/None G2/S2 1B.3	April - June	Grassland, oak woodland & pine forest, on sand, granite, or serpentine; <1100 m. Endemic to SLO County	No. Suitable habitat is not present in the Study Area.	No
16.	**Dwarf Calycadenia** *Calycadenia villosa*	None/None G3/S3 1B.1	May - October	Dry, rocky hills, ridges, in chaparral, woodland, meadows and seeps; <1100 m. c&s SCoRO	No. Suitable habitat is not present in the Study Area.	No
17.	**Cambria Morning-Glory** *Calystegia subacaulis* ssp. *episcopalis*	None/None G3T2/S2 4.2	(March) April – June (July)	Dry, open scrub, woodland, or grassland; <500 m. c SCoRO Endemic to SLO County	No. Suitable habitat is not present in the Study Area.	No
18.	**San Luis Obispo Sedge** *Carex obispoensis*	None/None G3?/S3? 1B.2	April - June	Serpentine springs, stream sides; <600 m. Endemic to SLO County	No. Suitable habitat is not present in the Study Area.	No
19.	**San Luis Obispo Owl's-clover** *Castilleja densiflora* var. *obispoensis*	None/None G5T2/S2 1B.2	March - May	Coastal grassland, <100 m. Endemic to SLO County.	No. Suitable habitat is not present in the Study Area. Study Area is outside of species known range.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
20.	**Lemmon's Jewelflower** *Caulanthus lemmonii*	None/None G3/S3 1B.2	February - May	Dry, exposed slopes, grassland, chaparral, scrub; 80-1100 m. sw San Joaquin Valley, se SnFrb, e SCoRO, SCoRI	No. Suitable habitat is not present in the Study Area. Study Area is outside of species known range.	No
21.	**Lompoc Ceanothus** *Ceanothus cuneatus* var. *fascicularis*	None/None G5T4/S4 4.2	February - April	Chaparral on coastal sandy mesas; <400 m. s Cco	No. Suitable habitat is not present in the Study Area. Study Area is outside of species known range.	No
22.	**Brewer's Spineflower** *Chorizanthe breweri*	None/None G2/S2 1B.3	April - August	Chaparral, foothill woodland on serpentine; <800 m. Endemic to SLO County	No. Suitable substrate is not present in the Study Area.	No
23.	**Douglas' Spineflower** *Chorizanthe douglasii*	None/None G4/S4 4.3	April - July	Foothill woodland, pine forest, chaparral, sandy or gravelly soils; 200-1600 m. e SCoRO, SCoRI	No. Suitable substrate is not present in the Study Area.	No
24.	**Palmer's Spineflower** *Chorizanthe palmeri*	None/None G4/S4 4.2	April - August	Serpentine; 60-700m. SCoRO (w Monterey, w San Luis Obispo cos.)	No. Suitable substrate is not present in the Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
25.	**Straight-awned Spineflower** *Chorizanthe rectispina*	None/None G2/S2 1B.3	April - July	Chaparral, dry woodland in sandy soil; 200-600 m. SCoRO	No. Suitable habitat and substrate are not present in the Study Area.	No
26.	**San Luis Obispo Fountain Thistle** *Cirsium fontinale* var. *obispoense*	Endangered/Endangered G2T2/S2 1B.2	February – July (August - September)	Serpentine seeps and streams; <300 m. Endemic to SLO County	No. Suitable serpentine substrate is not present in the Study Area.	No
27.	**Compact Cobwebby Thistle** *Cirsium occidentale* var. *compactum*	None/None G3G4T2/S2 1B.2	April - June	Coastal bluffs, on dune sand or clay; 5-155 m. CCo	No. Suitable habitat and substrate are not present in the Study Area.	No
28.	**Cuesta Ridge Thistle** *Cirsium occidentale* var. *lucianum*	None/None G3G4T2/S2 1B.2	April - June	Chaparral, woodland or forest openings, often on serpentine; 500-750m. s SCoRO (s Santa Lucia Range, San Luis Obispo, CA)	No. Suitable serpentine substrate is not present in the Study Area. Study Area is outside of species known range.	No
29.	**Paniculate Tarplant** *Deinandra paniculata*	None/None G4/S4 4.2	(March) April - November	Foothill woodland; 300-500 m. SCoRI (Monterey, SLO counties).	No. Study area is outside of species known range.	No
30.	**Small-Flowered Gypsum-Loving Larkspur** *Delphinium gypsophilum* ssp. *parviflorum*	None/None G4T2T3Q/S2S3 3.2	(March)April - June	Clay soil in cismontane woodland; 200-350 m.	No. Suitable substrate is not present in the Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
31.	**Dune Larkspur** *Delphinium parryi* ssp. *blochmaniae*	None/None G4/T2 1B.2	April - June	Coastal chaparral, sand. 0-200 m. sCCo	No. Suitable habitat is not present in the Study Area.	No
32.	**Eastwood's Larkspur** *Delphinium parryi* ssp. *eastwoodiae*	None/None G4T2/S2 1B.2	(February) March - March	Coastal chaparral, grassland, on serpentine; 100-500m sCCo, SCoRO (San Luis Obispo County)	No. Suitable habitat and substrate are not present in the Study Area.	No
33.	**Umbrella Larkspur** *Delphinium umbraculorum*	None/None G3/S3 1B.3	April - June	Moist oak forest; 400-1600 m. SCoRO, WTR.	Moderate. Moist oak forest habitat is present in the Study Area.	No
34.	**Betty's Dudleya** *Dudleya abramsii* ssp. *bettinae*	None/None G4T2/S2 1B.2	May - July	Rocky outcrops in serpentine grassland; <50-180 m. Endemic to SLO County	No. Suitable substrate is not present in the Study Area.	No
35.	**Mouse-Gray Dudleya** *Dudleya abramsii* ssp. *murina*	None/None G4T2/S2 1B.3	May - June	Serpentine outcrops; 120-300 m. Endemic to SLO County	No. Suitable substrate is not present in the Study Area.	No
36.	**Blochman's Dudleya** *Dudleya blochmaniae* ssp. *blochmaniae*	None/None G3T2/S2 1B.1	April - June	Open, rocky slopes, often serpentine or clay soils; <450 m. s CCo, SCo	No. Suitable substrate is not present in the Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
37.	**Yellow-flowered Eriastrum** *Eriastrum luteum*	None/None G2/S2 1B.2	May - June	Bare sandy decomposed granite slopes in cismontane woodland, chaparral, forest; 360-1000 m. SCoR, Monterey, SLO Counties	No. Suitable substrate is not present in the Study Area.	No
38.	**Blochman's Leafy Daisy** *Erigeron blochmaniae*	None/None G2/S2 1B.2	June - August	Sand dunes and hills; <30 m. s CCo	No. Suitable dune habitat is not present in the Study Area.	No
39.	**San Joaquin Spearscale** *Extriplex joaquinana*	None/None G2/S2 1B.2	April - October	Alkaline soils; < 350(840) m. NCoRI, San Joaquin Valley, CCo, SnFrB, SCoRI	No. Suitable alkaline soil is not present in the Study Area.	No
40.	**Ojai Fritillary** *Fritillaria ojaiensis*	None/None G3/S3 1B.2	February - May	Rocky slopes, river basins, woodland and forest habitats; 300-500 m. SCoRO, WTR	Moderate. Forest and woodland habitats are present in the Study Area.	No
41.	**San Benito Fritillary** *Fritillaria viridea*	None/None G2/S2 1B.2	March - May	Serpentine slopes; 200-1500 m. SCoR (San Benito, SLO Counties)	No. Suitable substrate is not present in the Study Area..	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
42.	**Hardham's Bedstraw** *Galium hardhamiae*	None/None G3/S3 1B.3	April - October	Serpentine soil with Sargent Cypress; 400-950 m. SCoRO	No. Suitable substrate is not present in the Study Area.	No
43.	**Hogwallow Starfish** *Hesperevax caulescens*	None/None G3/S3 4.2	March - June	Clay soils, mesic sites in valley and foothill grassland; 0-505 m.	No. Suitable substrate is not present in the Study Area.	No
44.	**Mesa Horkelia** *Horkelia cuneata* var. *puberula*	None/None G4T1/S1 1B.1	February – July (September)	Dry, sandy coastal chaparral; gen 70-700 m. SCoRO, SCo.	No. Suitable habitat is not present in the Study Area.	No
45.	**Kellogg's Horkelia** *Horkelia cuneata* var. *sericea*	None/None G4T1?/S1? 1B.1	April - September	Old dunes, coastal sand hills; <200 m. CCo	No. Suitable dune habitat is not present in the Study Area.	No
46.	**Santa Lucia Horkelia** *Horkelia yadonii*	None/None G3/S3 4.2	April - July	Sandy meadow edges, seasonal streambeds in chaparral or foothill-pine woodland; 350-1900m. SCoRO	No. Suitable habitat and substrate are not present in the Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
47.	**Santa Lucia Dwarf Rush** *Juncus luciensis*	None/None G3/S3 1B.2	April - July	Vernal pools, ephemeral drainages, wet meadow habitats, and streams; 300-1900 m. CaRH, n SNH, SCoRO, TR, PR, MP.	No. Suitable habitat is not present in the Study Area.	No
48.	**Jones's Layia** *Layia jonesii*	None/None G2/S2 1B.2	March - May	Open serpentine or clay slopes; <400 m. Endemic to SLO County.	No. Suitable substrate is not present in the Study Area.	No
49.	**Jared's Pepper-grass** *Lepidium jaredii* ssp. *jaredii*	None/None G2G3T1T2/S1S2 1B.2	March - May	Alkali bottoms, slopes, washes, <500 m. SCoRI, San Joaquin Valley.	No. Suitable substrate is not present in the Study Area.	No
50.	**Jones' Bush Mallow** *Malacothamnus jonesii*	None/None G4/S4 4.3	(March) April - October	Open chaparral in foothill woodland; 250-830 m. SCoRO (Monterey, SLO Counties).	No. Suitable habitat is not present in the Study Area.	No
51.	**Carmel Valley Bush-mallow** *Malacothamnus palmeri* var. *involucratus*	None/None G3T2Q/S2 1B.2	April - October	Chaparral, cismontane woodland, coastal scrub; 30-1100 m. s CCo, SCoRO.	No. Suitable habitat is not present in the Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
52.	**Santa Lucia Bush-mallow** *Malacothamnus palmeri* var. *palmeri*	None/None G3T2Q/S2 1B.2	May - July	Rocky. chaparral, cismontane woodland, coastal scrub; 30-1100 m. s CCo, SCoRO.	No. Suitable habitat is not present in the Study Area.	No
53.	**Oregon meconella** *Meconella oregana*	None/None G2G3/S2 1B.1	March-April	Coastal prairie and scrub.	Low. Suitable shaded moist forest habitat is present in the Study Area.	No
54.	**Palmer's Monardella** *Monardella palmeri*	None/None G2/S2 1B.2	June – August	Serpentine soils in chaparral, forest; 200-800 m. SCoRO.	No. Suitable habitat and substrate are not present in the Study Area.	No
55.	**Woodland Woollythreads** *Monolopia gracilens*	None/None G3/S3 1B.2	(February) March - July	Chaparral, serpentine grassland, cismontane woodland, sandy to rocky soils; SnFrB, SCoR.	No. Suitable substrate is not present in the Study Area.	No
56.	**Shining Navarretia** *Navarretia nigelliformis* ssp. *radians*	None/None G4T2/S2 1B.2	(March) April - July	Vernal pools, clay depressions, dry grasslands; 150-1000 m. SCoR.	No. Suitable habitat and substrate are not present in the Study Area.	No
57.	**Narrow-Petaled Rein Orchid** *Piperia leptopetala*	None/None G4/S4 4.3	May - July	Generally dry sites, scrub, woodland; <2200m. KR, NCoR, CaR, SN, SnFrB, SCoR, TR, PR; to WA.	No. Suitable habitat is not present in the Study Area..	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
58.	**Hooked Popcorn Flower** *Plagiobothrys uncinatus*	None/None G2/S2 1B.2	April - May	Canyon sides, chaparral; on sandstone, fire follower, 300-600 m. n SCoR (Gabilan Range, Santa Lucia Mountains).	Low. Suitable habitat and post-fire conditions could be present in the Study Area. Nearest occurrence is 10.8 miles northwest (CNDDB #1).	No
59.	**Hoffmann's Sanicle** *Sanicula hoffmannii*	None/None G3/S3 4.3	March - May	Shrubby coastal hills, pine woodland; <500m. CCo, SCo, n ChI.	No. Suitable habitat is not present in the Study Area.	No
60.	**Adobe Sanicle** *Sanicula maritima*	None/Rare G2/S2 1B.1	February - May	Coastal, grassy, open wet meadows, ravines; ±150 m. CCo (SLO County).	No. Suitable habitat is not present in the Study Area.	No
61.	**Chaparral Ragwort** *Senecio aphanactis*	None/None G3/S2 2B.2	January - April(May)	Drying alkaline flats, chaparral, cismontane woodland, coastal scrub; <400 m. CW, SCo, ChI.	No. Suitable habitat is not present in the Study Area.	No
62.	**San Gabriel Ragwort** *Senecio astephanus*	None/None G3/S3 4.3	May - July	Rocky slopes, chaparral, , coastal scrub; 400 – 1500 m. SCoR, TR.	No. Suitable habitat and substrate are not present in the Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected within Study Area?
63.	**Cuesta Pass Checkerbloom** *Sidalcea hickmanii* ssp. *anomala*	None/Rare G3T1/S1 1B.2	May - June	Closed-cone-conifer forest, gen serpentine; 600-800 m. Endemic to SLO County.	No. Suitable habitat and substrate are not present in the Study Area.	No
64.	**Most Beautiful Jewel-flower** *Streptanthus albidus* ssp. *peramoenus*	None/None G2T2/S2 1B.2	(March) April – September (October)	Open, grassy or ±barren slopes, often serpentine; ±150-800 m. c SCoRO.	No. Suitable habitat and substrate are not present in the Study Area.	No
65.	**California Seablite** *Suaeda californica*	Endangered/None G1/S1 1B.1	July - October	Margins of coastal salt marshes; <5 m. CCo.	No. Suitable habitat is not present in the Study Area.	No
66.	**Cook's Triteleia** *Triteleia ixioides* ssp. *cookii*	None/None G5T2T3/S2S3 1B.3	May - June	Streamsides, ravines on serpentine near cypresses; <500 m. SCoRO	No. Suitable substrate is not present in the Study Area.	No

California Geographic Subregion Abbreviations:

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

State/Rank Abbreviations:

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

California Rare Plant Ranks:

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California, but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 4: Plants of limited distribution - a watch list

CRPR Threat Ranks:

0.1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 - Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3 - Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Global/State Ranks:

G1/S1 – Critically Imperiled	G4/S4 – Apparently Secure	Q – Element is very rare but there are taxonomic questions associated with it.
G2/S2 – Imperiled	G5/S5 – Secure	Range rank – (e.g., S2S3 means rank is somewhere between S2 and S3)
G3/S3 – Vulnerable		? – (e.g., S2? means rank is more certain than S2S3 but less certain than S2)

APPENDIX D. SPECIAL STATUS ANIMALS REPORTED FROM THE REGION

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected within Study Area?
1.	**Tricolored Blackbird** *Agelaius tricolor*	None/Candidate Endangered G2G3/S1S2 SSC (Nesting)	March 15 through August 15	Requires open water, protected nesting substrate, & foraging area with insect prey near nesting colony.	No. Suitable Habitat is not available in Study Area.	No
2.	**Northern California Legless Lizard** *Anniella pulchra*	None/None G3/S3 SSC	May - September	Sandy or loose loamy soils under coastal scrub or oak trees. Soil moisture essential.	Moderate. Suitable habitat is available in Study Area. Nearest occurrence record 9.7 miles west (CNDDB #66).	No
3.	**Pallid Bat** *Antrozous pallidus*	None/None G5/S3 SSC	Spring - Summer	Rock crevices, caves, tree hollows, mines, old buildings, and bridges.	Moderate. Suitable roosting and foraging habitat is present in Study Area. Nearest occurrence record is 7.5 miles west (CNDDB #38).	No
4.	**Golden Eagle** *Aquila chrysaetos*	None/None G5/S3 WL/Fully Protected	March 15 through August 15	Nests in large, prominent trees in valley and foothill woodland. Requires adjacent food source.	Low. Habitat is suitable for foraging; moderately suitable for nesting. Nearest nesting occurrences is 15.5 miles northeast (CNDDB #122).	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected within Study Area?
5.	**Lesser Slender Salamander** *Batrachoseps minor*	None/None G1/S1 SSC	Late fall to Early Winter	Wooded habitats and semi-mesic areas (e.g., swales, drainages, etc.) with an overstory of trees or shrubs and abundant rocks, litter, or woody debris.	High. Suitable habitat is present in Study Area and multiple records within 3 miles.	No
6.	**Obscure Bumble Bee** *Bombus caliginosus*	None/None G4?/S1S2 Special Animal	Spring	Open coastal grasslands and meadows.	No. Suitable Habitat is not available in Study Area.	No
7.	**Crotch Bumble Bee** *Bombus crotchii*	None/None G3G4/S1S2 Special Animal	Spring	Coastal California East to Sierra Cascade crest and South into Mexico.	No. Suitable Habitat is not available in Study Area.	No
8.	**Vernal Pool Fairy Shrimp** *Branchinecta lynchi*	Threatened/None G3/S3 Special Animal	Rainy Season	Clear water sandstone depression pools, grassed swale, earth slump, or basalt flow depression pools.	No. Suitable Habitat is not available in Study Area.	No
9.	**Western Snowy Plover** *Charadrius alexandrinus nivosus*	Threatened/None G3T3/S2S3 SSC	March 15 through August 15	Sandy beaches, salt pond levees, & shorelines of large alkali lakes. Needs friable soils for nesting.	No. Suitable Habitat is not available in Study Area.	No
10.	**Sandy Beach Tiger Beetle** *Cicindela hirticollis gravida*	None/None G5T2/S2 Special Animal	N/A	Adjacent to non-brackish water near the coast from San Francisco to N. Mexico. Clean, dry, light-colored sand in the upper zone.	No. Suitable Habitat is not available in Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected within Study Area?
11.	**Northern Harrier** *Circus cyaneus*	None/None G5/S3 SSC (Nesting)	March 15 through August 15	Nests on ground in shrubby areas, usually near water. Forages in open areas.	No. Marginally suitable foraging habitat and low-quality nesting habitat is available in the Study Area. Nearest nesting occurrence 9 miles west (CNDDB #53).	No
12.	**Globose Dune Beetle** *Coelus globosus*	None/None G1G2/S1S2 Special Animal	n/a	Coastal sand dune habitat. Inhabits foredunes and sand hummocks.	No. Suitable Habitat is not available in Study Area.	No
13.	**Townsend's Big-eared Bat** *Corynorhinus townsendii*	None/None G3G4/S2 SSC	Spring - Summer	Caves, buildings, and mine tunnels. Cave like attics as day roosts. On coast roosts are normally within 100 m. of creeks.	No. Suitable Habitat is not available in Study Area.	No
14.	**Monarch Butterfly** *Danaus plexippus*	None/None G4T2T3/S2S3 Special Animal	September - March (aggregations)	Roosts located in wind-protected tree groves with nectar and water nearby.	No. Suitable Habitat is not available in Study Area.	No
15.	**Western Pond Turtle** *Emys marmorata*	None/None G3G4/S3 SSC	April - August	Permanent or semi-permanent streams, ponds, lakes.	No. Suitable Habitat is not available in Study Area.	No
16.	**Tidewater Goby** *Eucyclogobius newberryi*	Endangered/None G3/S3 SSC	N/A	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	No. Suitable Habitat is not available in Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected within Study Area?
17.	**Bald Eagle** *Haliaeetus leucocephalus*	Delisted/ Endangered G5/S3 Fully Protected	March 15 through August 15	Nests within 1 mile of water in tall live trees with open branches.	No. Suitable Habitat is not available in Study Area.	No
18.	**Morro Shoulderband Snail** *Helminthoglypta walkeriana*	Endangered/None G1/S1S2 Special Animal	N/A	Restricted to the coastal strand and sage scrub habitats in the immediate vicinity of Morro Bay.	No. Suitable Habitat is not available in Study Area.	No
19.	**Monterey Dusky-footed Woodrat** *Neotoma macrotis luciana*	None/None G5T1Q/S1 SSC	N/A	Variety of habitats with moderate to dense understory vegetation	Moderate. Suitable habitat available in Study Area and woodrat nests observed; however, subspecies range is not well known, and nearest record is 11.5 miles north (CNDDB #1)	Possibly. Unknown *Neotoma* sp. nests present.
20.	**Steelhead - South/Central California Coast DPS** *Oncorhynchus mykiss irideus*	Threatened/None G5T2Q/S2 SSC	February - April	Fed listing refers to runs in coastal basins from Pajaro River south to, but not including, the Santa Maria River.	No. Suitable Habitat is not available in Study Area.	No
21.	**Steelhead - Southern California DPS** *Oncorhynchus mykiss irideus*	Endangered/None G5T1Q/S1 Special Animal	February - April	Fed listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek, San Diego County).	No. Suitable Habitat is not available in Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected within Study Area?
22.	**Salinas Pocket Mouse** *Perognathus inornatus psammophilus*	None/None G4T2?/S1 SSC	N/A	Annual grassland and desert shrub in Salinas Valley, with friable soils	No. Not within species known range.	No
23.	**Coast Horned Lizard** *Phrynosoma blainvillii*	None/None G3G4/S3S4 SSC	May - September	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	Low. Marginally suitable habitat available in Study Area.	No
24.	**Morro Bay Blue Butterfly** *Plebejus icarioides moroensis*	None/None G5T2/S2 Special Animal	N/A	Inhabits stabilized dunes and surrounding areas in coastal SLO County (Morro Bay) and nw SB County. Dependent on dune lupine (*Lupinus chamissonis*).	No. Suitable Habitat is not available in Study Area.	No
25.	**Atascadero June Beetle** *Polyphylla nubila*	None/None G1/S1 Special Animal	N/A	Known only from sand dunes in Atascadero and San Luis Obispo, San Luis Obispo County.	No. Suitable Habitat is not available in Study Area.	No
26.	**Purple Martin** *Progne subis*	None/None G5/S3 SSC (Nesting)	March 15 through August 15	In San Luis Obispo County prefers nesting in Sycamore trees along riparian corridors.	No. Suitable Habitat is not available in Study Area.	No
27.	**San Luis Obispo Pyrg** *Pyrgulopsis taylori*	None/None G1/S1 Special Animal	N/A	Freshwater habitats in San Luis Obispo County.	No. Suitable Habitat is not available in Study Area.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected within Study Area?
28.	**California Red-legged Frog** *Rana draytonii*	Threatened/None G2G3/S2S3 SSC	January - September	Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks for larval development.	No. Suitable breeding and upland habitat not available.in Study Area.	No
29.	**Western Spadefoot Toad** *Spea hammondii*	None/None G3/S3 SSC	January – August	Vernal pools in grassland and woodland habitats	No. Suitable Habitat is not available in Study Area.	No
30.	**California Spotted Owl** *Strix occidentalis occidentalis*	Petitioned/None G3G4T2T3/S3 SSC	February - September	Older forests, high canopy cover, multi-layered canopy.	Moderate. Suitable habitat is present in Study Area and the species is documented within 2 miles.	No
31.	**Coast Range Newt** *Taricha torosa*	None/None G4/S4 SSC	December - May	Slow moving streams, ponds, and lakes with surrounding evergreen/oak forests along coast.	No. Suitable Habitat is not available in Study Area.	No
32.	**American Badger** *Taxidea taxus*	None/None G5/S3 SSC	February – May	Needs friable soils in open ground with abundant food source such as California ground squirrels.	No. Habitat is marginal. Nearest CNDDB occurrence 9.2 miles northeast.	No
33.	**Lompoc Grasshopper** *Trimerotropis occulens*	None/None G1G2/S1S2 Special Animal	N/A	Unknown. Known only from Santa Barbara and San Luis Obispo Counties	Unknown. Not enough is known about species.	No

	Common Name *Scientific Name*	Fed/State Status Global/State Rank CDFW Rank	Nesting-Breeding Period	Habitat Preference	Potential to Occur	Detected within Study Area?
34.	**Least Bell's Vireo** *Vireo bellii pusillus*	Endangered/ Endangered G5T5/S2 Special Animal	March 15 through August 15	Riparian habitat, near water or dry streambed, <2000 ft. Nests in willows, mesquite, Baccharis.	No. Suitable Habitat is not available in Study Area.	No
35.	**San Joaquin Kit Fox** *Vulpes macrotis mutica*	Endangered/Threatened G4T2/S2 Special Animal	December – July	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose textured sandy soil and prey base.	No. Suitable Habitat is not available in Study Area.	No

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

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FT: Federally Threatened
PE: Proposed Federally Endangered
PT: Proposed Federally Threatened
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CT: California Threatened
Cand. CE: Candidate for California Endangered
Cand. CT: Candidate for California Threatened
SSC: CDFW Species of Special Concern
FP: CDFW Fully-Protected

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