Biological Resources Assessment for a Single-Family Residence at 2680 Cottontail Lane, Los Osos, San Luis Obispo County, California

JANUARY 2022

PREPARED FOR

Paul and Melanie Kasson

PREPARED BY

SWCA Environmental Consultants

BIOLOGICAL RESOURCES ASSESSMENT FOR A SINGLE-FAMILY RESIDENCE AT 2680 COTTONTAIL LANE, LOS OSOS, SAN LUIS OBISPO COUNTY, CALIFORNIA

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"As a County-approved biologist, I hereby certify that this Biological Resources Assessment 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; and I further certify that I was present throughout the site visit(s) associated with this report."



Signature

January 31, 2022

Date

EXECUTIVE SUMMARY/SYNOPSIS

SWCA Environmental Consultants (SWCA) has prepared this Biological Resources Assessment (BRA) at the request of Paul and Melanie Kasson (applicants) for a proposed single-family residential development project at 2680 Cottontail Lane in Los Osos, San Luis Obispo County, California (project). The applicant proposes to construct a new home on an undeveloped 0.47-acre parcel (Assessor's Parcel Number [APN] 074-326-050).

The purpose of this BRA is to document the biological resources on the parcel, identify potential impacts to natural resources that could occur from developing the project, and recommend avoidance and mitigation measures. The proposed project includes a two-story residence (approximately 3,500 square feet) with an attached garage, a driveway, a septic and leach system, landscaped areas, and underground utilities. The proposed improvements would be located on the southern portion of the parcel and would require approximately 5,840 square feet of permanent and temporary disturbances combined. The biological surveys conducted for the project confirmed the presence of the federally endangered Morro shoulderband snail (MSS) (*Helminthoglypta walkeriana*) on the parcel. This BRA provides recommendations for the applicant to obtain an Incidental Take Permit (ITP) from the U.S. Fish and Wildlife Service through an Individual Habitat Conservation Plan (HCP) or the upcoming Los Osos Community-wide HCP. The project also has the potential to impact Morro manzanita (*Arctostaphylos morroensis*), California legless lizard (*Anniella pulchra*), coast horned lizard (*Phrynosoma coronatum*), popcorn lichen (*Cladonia firma*), and nesting birds. Avoidance and mitigation measures are provided for these impacts.

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1 INTRODUCTION

1.1 Purpose of Biological Resources Assessment

SWCA Environmental Consultants (SWCA) has prepared this Biological Resources Assessment (BRA) at the request of Paul and Melanie Kasson (applicants) for a proposed single-family residential development project (project). The purpose of this BRA is to evaluate and document the biological resources in the project area and identify impacts to sensitive biological resources that could occur from the proposed project. The analysis considers sensitive natural communities, Environmentally Sensitive Habitat Areas (ESHA), and special-status plant and animal species that are known to occur within the vicinity of the project site. For those instances where potential impacts to sensitive biological resources may occur, mitigation measures and best management practices are proposed with the objective of avoiding or minimizing the impacts.

SWCA understands that this BRA would be used by the applicants, the project's planning and design team, the County of San Luis Obispo Planning and Building Department (County), and affected federal or state regulatory agencies during the environmental review process for the proposed project. This BRA has been prepared in accordance with the County's *Standard Guidelines for Biological Resources Assessments* (December 2016).

1.2 Biological Resources Assessment Background

A January 2019 draft of this BRA (2019 Draft) was submitted to the County in August 2021. Upon review of the 2019 Draft, the County identified that the project plans had changed since the 2019 Draft was completed and issued the applicants an Information Hold Letter (C-DRC2021-00018), dated September 7, 2021. The information hold letter requested additional information regarding a No-take Concurrence Letter from the U.S. Fish and Wildlife Service (USFWS) for potential take of Morro shoulderband snail (MSS) (*Helminthoglypta walkeriana*). Since the biological studies confirmed the presence of MSS on the parcel, it is unlikely that the USFWS would issue a No-take Concurrence Letter for the project. Therefore, Travis Belt of SWCA and Kip Morais of the County held a phone meeting on October 5, 2021, to discuss the County's needs to process the applicant's application. During the meeting, it was determined that the BRA needed to be updated to reflect the current project and to provide a recommended means of complying with the Federal Endangered Species Act (FESA) regarding the potential take of MSS. This revised BRA responds to the Information Hold Letter and the County's request for a revised BRA.

1.3 Project Location and Setting

The proposed project is located at 2680 Cottontail Lane in Los Osos, San Luis Obispo County, California (Figure 1). The parcels located in this part of Los Osos range between approximately 0.4 acre to 2.0 acres and are zoned for residential single family. The subject parcel (Assessor Parcel Number [APN] 074-326-050), situated north of 2696 Calle Cordoniz Road, is approximately 0.47 acre in size and currently undeveloped (Figure 2). The parcels located to the east, west, and south of the subject parcel are developed with single-family residences and include native vegetation. An undeveloped parcel is located immediately north of the subject parcel. Due to the larger parcel sizes and single-family residential zoning in the area, this part of Los Osos has low-density development and native vegetation.



Figure 1. Project vicinity map.



Figure 2. Project location map.

1.4 Project Description

The applicant proposes to construct and live in a two-story single-family residence. The site plan (Figure 3; Appendix A) includes an approximately 3,500-square-foot house with an attached garage, a deck, landscaped areas, a yard area, a septic system, and underground utilities. An asphalt-concrete driveway would have two points of ingress off Cottontail Lane and would provide access to the house. To reduce the total disturbance area, the septic and leach field system has been situated within the proposed yard area.

Existing gas and water services are located at the southwest corner of the parcel. Approximately 32 feet of trenched gas and water line would originate at the services, connect at the detached metal building, and terminate at the new house. Power, cable, and phone would be supplied from the existing power pole located on Bayview Heights Drive. Service lines would run through a utility easement that runs north/south along the eastern boundary of the subject parcel and neighboring parcel. The proposed development would require approximately 248 cubic yards (CY) of cut and 164 CY of fill.

Wastewater would be managed via a septic tank and leach field system. The new wastewater system would be placed under the proposed yard area at the northwest side of the house.

1.5 Soils, Topography, and Elevation

The soil in the parcel is Baywood fine sand and the topography is nearly flat to mildly sloped. Baywood fine sand is associated with stabilized sand dunes and is the dominating soil in the Los Osos area. Undisturbed Baywood fine sand in the Los Osos area typically supports coastal dune scrub, maritime chaparral, or oak woodland habitats. Based on the U.S. Geological Survey (USGS) Morro Bay South topographic quadrangle map, the elevation of the parcel is approximately 350 feet above mean sea level (USGS 1994). Representative photos of the parcel are included in Appendix B.

2 METHODOLOGY

2.1 Literature Review

SWCA conducted a literature review to gain insight on what species have known occurrences in the project vicinity. The review was initiated with a query of the most recent version of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) to identify reported occurrences of sensitive resources within the Morro Bay South USGS 7.5-minute quadrangle and the surrounding six quadrangles: Morro Bay North, Atascadero, Port San Luis, Cayucos, San Luis Obispo, and Pismo Beach. SWCA updated the literature review on January 12, 2022, to ensure that any newly documented special-status species occurrences in the area were considered.

In addition to the CNDDB query, the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants of California (CNPS 2018) was reviewed to provide additional information on rare plants that are known to occur in the area. SWCA has extensive experience with natural resources in Los Osos, and the literature review for this BRA included existing environmental documents and reports prepared by SWCA.

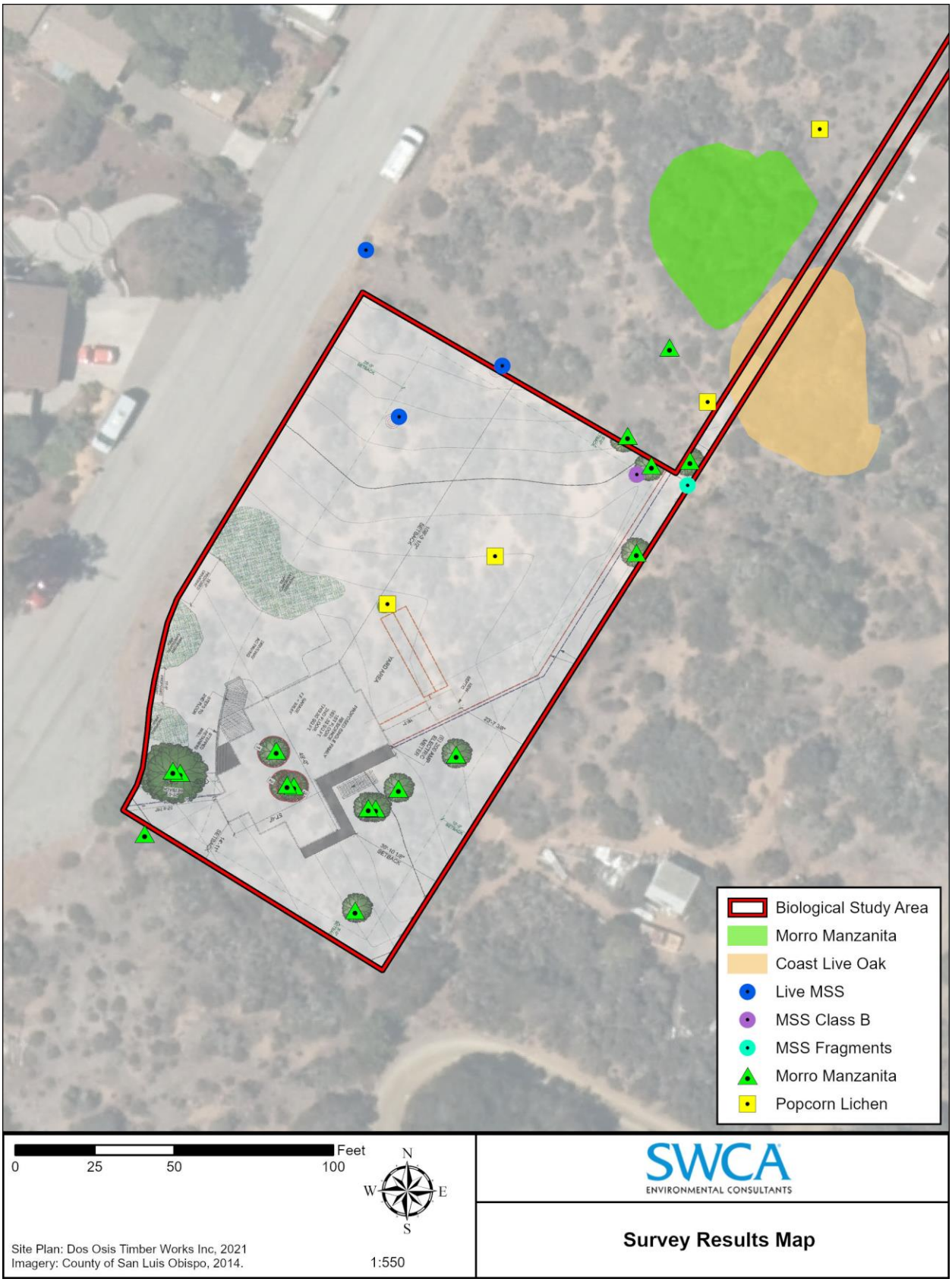


Figure 3. Survey results map.

2.2 Field Surveys

SWCA conducted four field surveys on the parcel in 2018/2019 and an additional fifth survey on January 24, 2022. SWCA Senior Biologist Travis Belt timed and conducted the 2018/2019 surveys to satisfy Morro shoulderband snail (MSS) (*Helminthoglypta walkeriana*) and botanical survey requirements. The January 24, 2022, survey was conducted to verify that the site conditions have not substantially changed since the first four surveys were completed. Table 1 provides the survey dates and conditions. The purpose of the field surveys was to: (1) characterize the existing conditions on the parcel; (2) determine the presence or absence of MSS; (3) determine the presence or absence of sensitive plant species; (4) evaluate the site's potential to support other sensitive wildlife species; and (5) identify those biological resources that could be impacted by the proposed project.

SWCA conducted MSS surveys in accordance with the *Protocol Survey Guidelines for the Morro Shoulderband Snail* (U.S. Fish and Wildlife Service [USFWS] 2003). This survey protocol requires that five protocol surveys be performed during rain or heavy fog conditions to establish the presence or absence of MSS. Based on the early detection of MSS on the parcel, SWCA conducted three of the four surveys during protocol MSS survey conditions. Mr. Belt conducted the MSS surveys under the authorization of federal permit PRT-824123-7. The survey effort included walking the parcel over a 60- to 120-minute period and using hand search methods to find MSS under live vegetation, woody debris, and refuse. The entire BSA was thoroughly examined during the surveys to determine the presence of live MSS, empty shells, and suitable MSS habitat. The presence of MSS was confirmed on the first survey; therefore, SWCA focused the remaining surveys on identifying the distribution of MSS in the parcel.

During all the surveys, SWCA inventoried the botanical resources observed on the parcel using dichotomous keys as necessary (Baldwin et al. 2012). The surveys were scheduled to correlate with the blooming period for those rare plant species with potential to occur in the parcel. Wildlife species were documented based on visual observation, auditory cues (i.e., calls and songs), and indirect signs (e.g., tracks, scat, skeletal remains, burrows, etc.). A list of species observed is included in Appendix C.

Table 1. 2018, 2019, and 2022 Survey Dates, Time, and Findings

Survey Number	Survey Date and Time	Rainfall Activity	Survey Focus	Findings	Biologist
1	4/17/18 9:00 a.m.–11:00 a.m.	Clearing but wet conditions during survey; 0.25 inch of precipitation recorded the evening prior to and morning of survey.	MSS and Botanical	1 live MSS 1 Class B MSS shell MSS shell fragments Morro manzanita	T. Belt; B. Wagner
2	6/8/18 9:00 a.m.–11:00 a.m.	Clear dry conditions.	Botanical	Morro manzanita	T. Belt
3	12/5/18 8:30 a.m.–9:30 a.m.	Light showers during survey; 0.25 inches of rain the night before survey.	MSS and Botanical	1 live MSS Morro manzanita popcorn lichen	T. Belt
4	1/16/19 9:00 a.m.–10:30 a.m.	Clear conditions during survey; heavy rains the night prior to survey; very wet conditions	MSS and Botanical	2 live MSS Morro manzanita popcorn lichen	T. Belt
5	1/24/22 10:00 a.m.–10:45 a.m.	Clear conditions prior to and during and the survey. Soil surface was dry.	Wildlife and Botanical	Inactive gopher holes, common avian species, and common plants	T. Belt

3 RESULTS

3.1 Plant Community

The parcel includes open and senescent chamise chaparral (*Adenostoma fasciculatum* Shrubland Alliance) (CNPS 2022) habitat that is dominated by chamise (*Adenostoma fasciculatum*); this community is also grouped under northern maritime chaparral (Holland 1986). Other species in the parcel include scattered occurrences of Morro manzanita (*Arctostaphylos morroensis*), black sage (*Salvia mellifera*), mock heather (*Ericameria ericoides*), buckbrush (*Ceanothus cuneatus*), coffeeberry (*Frangula californica*), and coast live oak (*Quercus agrifolia*). The open habitat is easy to walk through, and the large senescent shrubs provide minimal overhanging vegetation at the ground layer. Popcorn lichen (*Cladonia firma*) occurs in patches in the openings among the shrubs. The community is a good representation of native chamise chaparral with minimal cover of veldt grass (*Ehrharta calycina*) or other invasive species. The dominance of senescent chaparral vegetation is indicative of a chaparral community where fire has not occurred for many years (probably decades).

Chamise chaparral has a State Rarity rank of S5, which indicates that the community is secure in its range. Natural Communities with ranks of S1 through S3 are considered Sensitive Natural Communities to be addressed in the environmental review processes of the California Environmental Quality Act (CEQA) and its equivalents. Vegetation types with an S5 State Rarity rank do not have to be addressed under CEQA.

3.2 Special-Status Species

The following describes those sensitive biotic resources that have been documented within the Morro Bay South USGS Quadrangle and the surrounding six quadrangles.

3.2.1 *Special-Status Plant Species*

For the purposes of this section, special-status plant species are defined as the following:

- Plants listed or proposed for listing as threatened or endangered under the FESA (50 Code of Federal Regulations [CFR] Section 17.12 for listed plants and various notices in the *Federal Register* for proposed species).
- Plants that are candidates for possible future listing as threatened or endangered under the FESA.
- Plants that meet the definitions of rare or endangered species under CEQA (State CEQA Guidelines Section 15380).
- Plants considered by CNPS to be "rare, threatened, or endangered" in California (CNPS Ranks 1, 2, and 3).
- Plants listed by CNPS as plants about which we need more information and plants of limited distribution (CNPS Rank 4).
- Plants listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 California Code of Regulations [CCR] Section 670.5).
- Plants listed under the California Native Plant Protection Act (California Fish and Game Code [CFGC] Section 1900 et seq.).

- Plants considered sensitive by other federal agencies (i.e., U.S. Forest Service, Bureau of Land Management), state and local agencies, or jurisdictions.

Based on the literature review for this project, a total of 68 special-status plant species have been documented in the queried quadrangles (Table 2). Because the plant list presented in Table 2 is regional, SWCA evaluated the listed species to identify which special-status plant species have the potential to occur in the parcel. SWCA compared the known habitat requirements of those 68 species to the parcel's conditions, elevation, and soils. The analysis determined that the parcel supports suitable conditions for the following plant species:

- Hoover's bent grass (*Agrostis hooveri*)
- Morro manzanita (*Arctostaphylos morroensis*)
- sand mesa manzanita (*Arctostaphylos rudis*)
- Coulter's saltbush (*Atriplex coulteri*)
- coastal goosefoot (*Chenopodium littoreum*)
- compact cobwebby thistle (*Cirsium occidentale* var. *compactum*)
- surf thistle (*Cirsium rhothophilum*)
- popcorn lichen (*Cladonia firma*)
- sand almond (*Prunus fasciculata* var. *punctata*)
- dune larkspur (*Delphinium parryi* ssp. *blochmaniae*)
- Blochman's leafy daisy (*Erigeron blochmaniae*)
- mesa horkelia (*Horkelia cuneata* ssp. *puberula*)
- Kellogg's horkelia (*Horkelia cuneata* ssp. *sericea*)
- perennial goldfields (*Lasthenia californica* ssp. *macrantha*)
- southern curly-leaved monardella (*Monardella sinuata* ssp. *sinuata*)
- coast woolly-heads (*Nemacaulis denudata* var. *denudata*)
- Blochman's ragwort (*Senecio blochmaniae*)
- black-flowered figwort (*Scrophularia atrata*)
- splitting yarn lichen (*Sulcaria isidiifera*)
- Nipomo Mesa ceanothus (*Ceanothus impressus* var. *nipomensis*)

Morro manzanita and popcorn lichen were observed in the parcel during surveys. SWCA's biologist visited known occurrences of Blochman's leafy daisy, Blochman's ragwort, and compact cobwebby thistle to verify the blooming status of these species prior to each botanical survey. Coulter's saltbush, coastal goosefoot, compact cobwebby thistle, surf thistle, sand almond, dune larkspur, perennial goldfields, southern curly-leaved monardella, Blochman's ragwort, black-flowered figwort, splitting yarn lichen, and Nipomo Mesa ceanothus were not observed on the parcel during surveys conducted in the appropriate season. The ceanothus that was observed on the parcel was in bloom at the time of the surveys and was confirmed to be wedgeleaf ceanothus (*Ceanothus cuneatus* var. *cuneatus*).

3.2.1.1 MORRO MANZANITA

Morro manzanita is a perennial shrub in the heath family (Ericaceae). It is listed as Threatened under the FESA and is a CNPS Rank 1B.1 species. The CNPS ranking indicates that Morro manzanita is rare, threatened, or endangered in California, with over 80% of occurrences in immediate threat of disturbance. It is a narrow species endemic to coastal San Luis Obispo County, where it only occurs on lands surrounding Morro Bay. Its range includes Montaña de Oro State Park (Hazards Canyon area) in the

south, Los Osos Valley in the east, and Morro Rock in the north. Most occurrences are associated with Baywood fine sand. Remnant occurrences of Morro manzanita can be found in the developed parts of Los Osos on private parcels and in County right-of-way areas. Although most intact stands are above 200 feet in elevation, there are many remnant occurrences lower than 200 feet in elevation. Fourteen Morro manzanita plants occur on the subject parcel. The proposed project will impact three of the 14 specimens that occur on the parcel.

3.2.1.2 POPCORN LICHEN

Popcorn lichen occurs on soil, detritus, or moss on stabilized coastal dunes. This lichen is a CNPS Rank 2B.2 species. It is locally abundant in coastal areas of Europe. In North America, it is known from four populations in California: on the southeast side of Morro Bay, in Los Osos, and in Montaña de Oro State Park (Knudsen and Lendemer 2007). One of the documented occurrences of popcorn lichen is located approximately 1,400 feet west of the subject parcel in the Morro Dunes Ecological Reserve, just off Calle Cordoniz (Knudsen and Lendemer 2007). On the parcel, popcorn lichen occurs on the sand and on detritus in the openings among the maritime chaparral. Most occurrences are located near the southern boundary of the parcel and within the utility easement.

Table 2. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
Hoover's bent grass *Agrostis hooveri*	Occurs in sandy sites in chaparral, cismontane woodland, and valley and foothill grassland. 60–600 meters.	April–July	--/--/1B.2	**Suitable Conditions Present; Species Absent:** Species was not observed during surveys conducted in the appropriate season.
Santa Lucia manzanita *Arctostaphylos luciana*	Evergreen shrub; occurs on chaparral with shale outcrops. 350–850 meters.	February–March	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel is at a lower elevation than this species' range and does not support the appropriate soil. Species was not observed during surveys conducted in the appropriate season.
Morro manzanita ***Arctostaphylos morroensis***	**Occurs in chaparral, cismontane woodland, coastal scrub, and on stabilized coastal dunes. 5–205 meters.**	**December–March**	**FT/--/1B.1**	**Species Present: Fourteen Morro manzanita shrubs are located on the parcel; three may be impacted by the project.**
Oso manzanita *Arctostaphylos osoensis*	Evergreen shrub; occurs in chaparral and cismontane woodland associated with dacite porphyry (purple/red igneous volcanic rock) on buttes. 300–500 meters.	February–March	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel is at a lower elevation than this species' range and does not contain dacite soils. Species was not observed during surveys conducted in the appropriate season.
Pecho manzanita *Arctostaphylos pechoensis*	Occurs in closed coniferous forest, chaparral, and coastal scrub on siliceous shale. 125–850 meters.	November–March	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel is at a lower elevation than this species' range and does contain the appropriate soils. Species was not observed during surveys conducted in the appropriate season.
Santa Margarita manzanita *Arctostaphylos pilosula*	Evergreen shrub; occurs in closed coniferous forest, chaparral, and cismontane woodland on shale soils. 170–1,100 meters.	December–March	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel is at a lower elevation than this species' range and does not contain shale soils or the appropriate community. Species was not observed during surveys conducted in the appropriate season.
sand mesa manzanita *Arctostaphylos rudis*	Evergreen shrub; occurs in maritime chaparral and coastal scrub with sandy soils. 25–322 meters.	November–February	--/--/1B.2	**Marginal Conditions Present; Species Absent:** The parcel is located north of this species' typical range but supports the appropriate soil and habitat. Species was not observed during surveys conducted in the appropriate season.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
dacite manzanita *Arctostaphylos tomentosa* ssp. *daciticola*	Evergreen shrub; occurs in chaparral and cismontane woodland associated with dacite porphyry (purple/red igneous volcanic rock) on buttes. 100–300 meters.	March	--/--/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not contain volcanic soils or the appropriate community. Species was not observed during surveys conducted in the appropriate season.
marsh sandwort *Arenaria paludicola*	Occurs in marshes and swamps and grows through dense mats of *Typha*, *Juncus*, *Scirpus*, etc. in freshwater marsh. 10–170 meters.	May–August	FE/SE/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not support any marsh or aquatic habitat. Species not observed during surveys conducted in the appropriate season.
Mile's milk vetch *Astragalus didymocarpus* var. *milesianus*	Annual herb; occurs in coastal scrub on clay soils. 20–90 meters.	March–June	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain clay soils. Species not observed during survey conducted in the appropriate season.
Coulter's saltbush *Atriplex coulteri*	Occurs in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland/alkaline or clay. 3–460 meters.	March–October	--/--/1B.2	**Suitable Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
twisted horsehair lichen *Bryoria spiralifera*	Epiphytic lichen; typically associated with conifers. Largest known population is on Samoa Peninsula in Humboldt County. 0–30 meters.	NA	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not support native conifers. Species not observed.
round-leaved filaree *California macrophylla*	Annual herb; occurs in cismontane woodland and valley and foothill grassland with clay soils. 15–1,200 meters.	March–May	--/--/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not contain clay soils. Species not observed during survey conducted in the appropriate season.
San Luis mariposa-lily *Calochortus obispoensis*	Occurs in chaparral, coastal scrub, and valley and foothill grassland, often in serpentine grassland. 75–665 meters.	May–July	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain serpentine soil. Species not observed during surveys conducted in the appropriate season.
La Panza mariposa-lily *Calochortus simulans*	Occurs in chaparral, cismontane woodlands, lower montane coniferous forest, and valley and foothill grassland; often in sandy, granitic, or serpentine soils. 395–1,100 meters.	April-May	--/--/1B.3	**Suitable Conditions Absent; Species Absent:** The parcel is located at a lower elevation than this species range. Species not observed during surveys conducted in the appropriate season.
Cambria morning-glory *Calystegia subacaulis* ssp. *episcopalis*	Occurs in grassland and rocky areas associated with chaparral and cismontane woodland. 60–500 meters.	April–May	--/--/4.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain rocky soil. Species not observed during surveys conducted in the appropriate season.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
Hardham's evening-primrose *Camissoniopsis hardhamiae*	Annual herb; typically found in sandy, decomposed carbonate soils, especially in disturbed or burned areas among chaparral and cismontane woodland. 140–945 meters.	March–May	-- / -- / 1B.2	**Suitable Conditions Absent; Species Absent:** The parcel is at a lower elevation than this species' range. Species not observed during surveys conducted in the appropriate season.
San Luis Obispo sedge *Carex obispoensis*	Occurs in closed cone coniferous forests, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland, usually adjacent to seeps, springs, stream sides, or other water source with sand, clay, or serpentine. 5–790 meters.	April–June	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain any seeps or water sources. Species not observed during surveys conducted in the appropriate season.
San Luis Obispo owl's clover *Castilleja densiflora* ssp. *obispoensis*	Occurs in valley and foothill grassland. 10–215 meters.	April	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** Sandy soil is not conducive to this species. Species not observed during surveys conducted in the appropriate season.
Nipomo Mesa ceanothus *Ceanothus impressus* var. *nipomensis*	Perennial shrub; occurs in chaparral on sandy soils. 30–245 meters	February–April	--/--/1B.2	**Marginal Conditions Present; Species Absent:** Soil and habitat on the parcel are appropriate for this species. However, the parcel is located 10 miles north of this species' known range. Species not observed during surveys conducted in the appropriate season.
San Luis Obispo ceanothus *Ceanothus thrysiflorus* var. *obispoensis*	Perennial shrub; occurs in dacite soils among chaparral and cismontane woodland. Currently only known from Morro Bay area. 140–225 meters	June	--/--/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not contain appropriate soil. Species not observed during surveys conducted in the appropriate season.
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	Occurs in depressional areas within valley and foothill grassland. 1–230 meters.	June–November	--/--/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not contain appropriate soil. Species not observed during surveys conducted in the appropriate season.
coastal goosefoot *Chenopodium littoreum*	Annual herb; occurs on coastal dunes. 10–30 meters.	April–August	--/--/1B.2	**Marginal Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
dwarf soaproot *Chlorogalum pomeridianum* var. *minus*	Occurs in chaparral habitats with serpentine soils. 305-1,000 meters	May-August	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel is located at a lower elevation than this species' range and does not support serpentine soil. Species not observed during surveys conducted in the appropriate season.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
Point Reyes salty bird's-beak *Chloropyron maritimum* ssp. *palustre*	Annual herb; occurs in coastal marshes and swamps. 0–10 meters.	June-October	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain marsh areas. Species not observed during surveys conducted in the appropriate season.
salt marsh bird's-beak *Chloropyron maritimum* ssp. *maritimum*	Annual herb; occurs in marshes and swamps on coastal dunes. 0–30 meters.	May–October	FE/SE/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain marsh areas. Species not observed during surveys conducted in the appropriate season.
Irish Hills spineflower *Chorizanthe aphanantha*	Annual herb; has been observed in Irish Hills area of San Luis Obispo County. Reportedly occurs in chaparral and coastal sage scrub in rocky, gravelly, and serpentine soils. 100–370 meters.	April-August	--/--/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not contain suitable soil and is at a lower elevation than this species' range. Species not observed during surveys conducted in the appropriate season.
Brewer's spineflower *Chorizanthe breweri*	Occurs in chaparral, cismontane woodland, coastal scrub, and closed-cone coniferous forest; rocky or gravelly serpentine sites; usually in barren areas. 45–800 meters.	May–August	--/--/1B.3	**Suitable Conditions Absent; Species Absent:** The parcel does not contain appropriate soil. Species not observed during surveys conducted in the appropriate season.
straight-awned spineflower *Chorizanthe rectispina*	Occurs in chaparral, cismontane woodland, and coastal scrub. Often on granite in chaparral. 355–1035 meters.	April–July	--/--/1B.3	**Suitable Conditions Absent; Species Absent:** The parcel does not contain appropriate soil and is at a lower elevation than this species' range. Species not observed during surveys conducted in the appropriate season.
San Luis Obispo fountain thistle *Cirsium fontinale* var. *obispoense*	Occurs in chaparral, cismontane woodlands, serpentine seeps, or bogs. 35–380 meters.	February–July	FE/SE/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain appropriate soil or habitat. Species not observed during surveys conducted in the appropriate season.
compact cobwebby thistle *Cirsium occidentale* var. *compactum*	Perennial herb; occurs in chaparral, coastal dunes, coastal prairie, and coastal scrub. 5–150 meters.	April–June	--/--/1B.2	**Marginal Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
Cuesta Ridge thistle *Cirsium occidentale* var. *lucianum*	Perennial herb; occurs in openings among chaparral with rocky substrates and serpentinite; often found on steep rocky slopes and road cuts. 500–750 meters.	April–June	-- / -- /1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain appropriate soil or habitat and is at a lower elevation than this species' range. Species not observed during surveys conducted in the appropriate season.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
surf thistle *Cirsium rhothophilum*	Occurs in coastal dunes, coastal bluff scrub, and open areas in central dune scrub; usually in coastal dunes. 3–60 meters.	April–June	--/ST/1B.2	**Marginal Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
popcorn lichen ***Cladonia firma***	**Squamulose lichen; occurs on soil, detritus, or moss on stabilized coastal dunes among coastal scrub; known in CA only from Morro Bay and Baywood-Los Osos areas. 30–75 meters.**	**NA**	**--/--/2B.2**	**Suitable Conditions Present; Species Present: Species observed on and adjacent to the parcel.**
Pismo clarkia *Clarkia speciosa* ssp. *immaculata*	Occurs in sandy soils, openings in chaparral, cismontane woodland, and valley and foothill grassland, on ancient sand dunes not far from the coast. 25–185 meters.	May–July	FE/SR/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel is located north of this species' range. Species not observed during surveys conducted in the appropriate season.
dune larkspur *Delphinium parryi* ssp. *blochmaniae*	Perennial herb; occurs in maritime chaparral and coastal dunes with sandy or rocky soils. 0–200 meters.	April–May	--/--/1B.2	**Suitable Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
Eastwood's larkspur *Delphinium parryi* ssp. *eastwoodiae*	Perennial herb; occurs in coastal areas with serpentinite soil. Often associated with openings in chaparral and valley and foothill grassland. 75–500 meters.	February–March	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain appropriate soil. Species not observed during surveys conducted in the appropriate season.
umbrella larkspur *Delphinium umbraculorum*	Perennial herb; occurs in cismontane woodland. 400–1,600 meters.	April–June	--/--/1B.3	**Suitable Conditions Absent; Species Absent:** The parcel does not contain appropriate soil or habitat and is at a lower elevation than this species' range. Species not observed during surveys conducted in the appropriate season.
beach spectaclepod *Dithyrea maritima*	Occurs in coastal dunes, coastal scrub, sea shores, on sand dunes, and sandy places near the shore. 3–50 meters.	March–May	--/ST/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel is not on the shore or near the shore. Species not observed during surveys conducted in the appropriate season.
Betty's dudleya *Dudleya abramsii* ssp. *bettinae*	Occurs in coastal scrub, valley and foothill grassland, chaparral, and rocky barren serpentine exposures. 20–180 meters.	May–July	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain rock outcrops or serpentine soil. Species not observed during surveys conducted in the appropriate season.
mouse-gray dudleya *Dudleya abramsii* ssp. *murina*	Occurs in serpentine outcrops in chaparral and cismontane woodland. 90–300 meters.	May–June	--/--/1B.3	**Suitable Conditions Absent; Species Absent:** The parcel does not contain rock outcrops or serpentine soil. Species not observed during surveys conducted in the appropriate season.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
Blochman's dudleya *Dudleya blochmaniae* ssp. *blochmaniae*	Occurs in coastal scrub, chaparral, and valley and foothill grassland habitats on rocky outcrops in clay or serpentine soils. 5–450 meters.	April–June	--/--/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not contain rock outcrops or serpentine soil. Species not observed during surveys conducted in the appropriate season.
yellow-flowered eriastrum *Eriastrum luteum*	Annual herb; occurs in broad-leafed upland forest, chaparral, and cismontane woodland on sandy or gravelly soils. 290–1,000 meters.	May–June	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not support the appropriate communities and is at a lower elevation than the species' range. Species not observed during surveys conducted in the appropriate season.
Blochman's leafy daisy *Erigeron blochmaniae*	Perennial rhizomatous herb; occurs in coastal dunes and coastal scrub on sandy soils. 3–45 meters.	July–August	--/--/1B.2	**Suitable Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
Indian Knob mountainbalm *Eriodictyon altissimum*	Evergreen shrub; occurs in maritime chaparral, cismontane woodland, and coastal scrub with sandstone substrates. 80–270 meters.	March–June	FE/SE/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not support the appropriate soil. Species not observed during surveys conducted in the appropriate season.
Hoover's button-celery *Eryngium aristulatum* var. *hooveri*	Occurs in vernal pools in alkaline depressions near the coast. 5–45 meters.	July	--/--/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not support any vernal pools or alkaline depressions. Species not observed during surveys conducted in the appropriate season.
San Joaquin spearscale *Extriplex joaquiniana*	Shrub; occurs in chenopod scrub, meadows, seeps, playas, and valley and foothill grassland, often in alkaline soils. 1–835 meters.	April–October	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain the appropriate mesic conditions to support this species. Only known occurrence in Morro Bay is from an 1899 collection. Species not observed during surveys conducted in the appropriate season.
Ojai fritillary *Fritillaria ojaiensis*	Bulbiferous herb; occurs in broadleaf upland forest, chaparral, and lower montane coniferous forest on rocky soils. 300–998 meters.	March–May	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not support the appropriate soil or habitat and is at a lower elevation than the species' range. Species not observed during surveys conducted in the appropriate season.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
San Benito fritillary *Fritillaria viridea*	Occurs in chaparral on serpentine slopes. 200–1,525 meters.	March–May	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not support the appropriate soil and is at a lower elevation than the species' range. Species not observed during surveys conducted in the appropriate season.
mesa horkelia *Horkelia cuneata* ssp. *puberula*	Perennial herb; occurs in chaparral, cismontane woodlands, and coastal scrub in sandy or gravelly sites. 70–810 meters.	February–September	--/--/1B.1	**Suitable Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
Kellogg's horkelia *Horkelia cuneata* ssp. *sericea*	Perennial herb; occurs in closed-cone coniferous forest, maritime chaparral, and coastal scrub with sandy or gravelly openings. 10–200 meters.	April–September	--/--/1B.1	**Suitable Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
perennial goldfields *Lasthenia californica* ssp. *macrantha*	Perennial herb; occurs in coastal bluff scrub, coastal dunes, and coastal scrub. 5–520 meters.	January–November	--/--/1B.2	**Suitable Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	Annual herb; occurs in freshwater wetlands coastal salt marshes, wetland-riparian habitat, alkali sink, playas, vernal pools, and swamps. 1–1,220 meters.	February–June	--/--/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not contain the appropriate mesic conditions to support this species. Species not observed during surveys conducted in the appropriate season.
Jones's layia *Layia jonesii*	Occurs in chaparral and valley and foothill grassland on clay or serpentine outcrops. 5–400 meters.	March–May	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain the appropriate soil or habitat for this species. Species not observed during surveys conducted in the appropriate season.
San Luis Obispo County lupine *Lupinus ludovicianus*	Occurs in chaparral, cismontane woodland. Open areas in sandy soils of the Santa Margarita formation. 50–525 meters.	April–July	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not contain sandy soil of the Santa Margarita formation. Species not observed during surveys conducted in the appropriate season.
Santa Lucia bush-mallow *Malacothamnus palmeri* var. *palmeri*	Deciduous shrub; occurs in chaparral with rocky substrates. 60–360 meters.	May–July	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not support the appropriate soil or habitat. Species not observed during surveys conducted in the appropriate season.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
Palmer's monardella *Monardella palmeri*	Occurs in chaparral and cismontane woodland on serpentine slopes. 200–800 meters.	June–August	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel is at a lower elevation than the species' range and does not support the appropriate communities or substrate. Species not observed during surveys conducted in the appropriate season.
southern curly-leaved monardella *Monardella sinuata ssp. sinuata*	Annual herb; occurs in sandy soil among chaparral, cismontane woodland, coastal dunes, and coastal scrub with openings. 0–300 meters.	April–September	--/--/1B.2	**Suitable Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
woodland woollythreads *Monolopia gracilens*	Annual herb; associated with serpentine soil, often found in openings within broad-leafed upland forest, chaparral, cismontane woodland, north coast coniferous forest, and valley and foothill grassland. 100–1200 meters.	February–July	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not support appropriate soil or habitat types. Species was not observed during survey conducted in the appropriate season.
aparejo grass *Muhlenbergia utilis*	Perennial grass; occurs in coastal scrub, chaparral, cismontane woodland, and wetland/riparian areas. 25–2,325 meters.	March-October	--/--/2B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not support mesic, seep, marsh, or swamp habitats. Species was not observed during survey conducted in the appropriate season.
coast woolly-heads *Nemacaulis denudata var. denudata*	Annual herb; occurs on coastal dunes. 0–100 meters.	April–September	--/--/1B.2	**Suitable Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
hooked popcorn-flower *Plagiobothrys uncinatus*	Annual herb; occurs in chaparral, cismontane woodland, and valley and foothill grassland with sandy soils. 300–760 meters.	April–May	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel is at a lower elevation than the species' range. Species not observed during surveys conducted in the appropriate season.
Diablo Canyon blue grass *Poa diaboli*	Rhizomatous herb; occurs in closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub with shale substrates. 120–400 meters.	March–April	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel is at a lower elevation than the species' range and does not support shale substrates. Species not observed during surveys conducted in the appropriate season.
sand almond *Prunus fasciculata* var. *punctata*	Perennial shrub; occurs in chaparral and coastal scrub on coastal dunes. 15-200 meters	March–April	--/--/4.3	**Suitable Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
adobe sanicle *Sanicula maritima*	Occurs in moist seeps within coastal prairie, chaparral, meadows, and valley and foothill grassland habitats in clay or serpentine soils. 30–240 meters.	February–May	--/SR/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not support mesic habitats. Species not observed during surveys conducted in the appropriate season.
black-flowered figwort *Scrophularia atrata*	Occurs in closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, riparian scrub; around swales and in sand dunes; and in sand, diatomaceous shale, and soils derived from other parent materials. 10–250 meters.	March–April	--/--/1B.2	**Suitable Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
Blochman's ragwort *Senecio blochmaniae*	Perennial herb; occurs in coastal dunes. 0–100 meters.	May-October	--/--/4.2	**Suitable Conditions Present; Species Absent:** Species not observed during surveys conducted in the appropriate season.
rayless (chaparral) ragwort *Senecio aphanactis*	Occurs in chaparral, cismontane woodlands; coastal scrub/alkaline. 15–800 meters.	January–April	--/--/2B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not support alkaline soils. Species not observed during surveys conducted in the appropriate season.
Cuesta Pass checkerbloom *Sidalcea hickmanii* ssp. *anomala*	Occurs in closed-cone coniferous forest with rocky serpentine slopes. 600–800 meters.	May–June	--/SR/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel is at a lower elevation than the species' range and does not support the appropriate communities or soils. Species not observed during surveys conducted in the appropriate season.
most beautiful jewel-flower *Streptanthus albidus* ssp. *peramoenus*	Occurs in chaparral, cismontane woodlands, and valley and foothill grasslands on serpentine soil. 110–1000 meters.	April–June	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not support the appropriate soil or communities. Species not observed during surveys conducted in the appropriate season.
California seablite *Suaeda californica*	Occurs in low-growing evergreen shrub occurs in coastal salt marshes and swamps. 0–15 meters.	July–October	FE/--/1B.1	**Suitable Conditions Absent; Species Absent:** The parcel does not support the appropriate salt marsh conditions. Species not observed during surveys conducted in the appropriate season.
splitting yarn lichen *Sulcaria isidiifera*	Epiphytic lichen; occurs on branches of old growth oaks and shrubs in coastal scrub and woodland habitats.	NA	--/--/1B.1	**Suitable Conditions Present; Species Absent:** Species not observed during surveys.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
saline clover *Trifolium hydrophilum*	Annual herb that occurs in marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools. 0–300 meters.	April–June	--/--/1B.2	**Suitable Conditions Absent; Species Absent:** The parcel does not support the necessary mesic conditions. Species not observed during surveys conducted in the appropriate season.

General references: Baldwin et al. 2012. All plant descriptions paraphrased from CNPS 2018.

Status Codes

--= No status

Federal: FE = Federal Endangered; FT=Federal Threatened

State: SE=State Endangered; ST= State Threatened; SR= State Rare

California Native Plant Society (CNPS): ***Rank 1B =*** rare, threatened, or endangered in California and elsewhere. ***Rank 2 =*** rare, threatened, or endangered in California, but more common elsewhere. ***Rank 3 =*** plants that about which more information is needed. ***Rank 4 =*** a watch list plants of limited distribution.

Threat Code: ***0.1 =*** Seriously endangered I California (over 80% of occurrences threatened / high degree and immediacy of threat); ***0.2 =*** Fairly endangered in California (20-80% occurrences threatened); ***0.3 =*** Not very endangered I California (<20% of occurrences threatened or no current threats known)

Rationale Terms: ***Species Present:*** Species was or has been observed in the survey area. ***Species Absent:*** Based on appropriate survey efforts, absence of the species was confirmed. ***Suitable Conditions Present:*** The appropriate habitat, soils, and elevation are present in the survey area. ***Marginal Conditions Present:*** The appropriate habitat and/or soils are present but other factors (past disturbances, elevation range) may preclude species occurrence. ***Suitable Conditions Absent:*** The survey area did not support the appropriate habitat, soils, and/or elevation for the species.

3.2.2 *Special-Status Animal Species*

For the purposes of this section, special-status animal species are defined as the following:

- Animals listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.11 for listed animals and various notices in the *Federal Register* for proposed species).
- Animals that are candidates for possible future listing as threatened or endangered under the FESA.
- Animals that meet the definitions of rare or endangered species under CEQA (State CEQA Guidelines Section 15380).
- Animals listed or proposed for listing by the State of California as threatened and endangered under the CESA (14 CCR 670.5).
- Animal species of special concern to CDFW.
- Animal species that are fully protected in California (CFGC Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

Based on a CNDDB query and a review of existing literature, SWCA evaluated 38 special-status wildlife species that have been documented to occur in the queried quadrangles (Table 3). Because this list of species is regional, an analysis of the range and habitat preferences of those animal species was conducted to identify which species have potential to occur in the parcel. SWCA determined that the following special-status animal species and migratory birds have potential to occur in the parcel:

- silvery legless lizard (*Anniella pulchra pulchra*)
- northern harrier (*Circus cyaneus*)
- Morro shoulderband snail (*Helminthoglypta walkeriana*)
- Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*)
- loggerhead shrike (*Lanius ludovicianus*)
- coast horned lizard (*Phrynosoma coronatum*)
- Class Aves
  Other migratory bird species (nesting)

The parcel supports suitable conditions for the species listed above and nesting migratory birds. Although all the species listed above have potential to occur on the parcel, only MSS was observed during the surveys. MSS is discussed in more detail below. In addition, the parcel is within the range of Morro Bay kangaroo rat (MBKR) (*Dipodomys heermanni morroensis*); therefore, this species warrants specific discussion, which is provided below.

Table 3. Special-Status Wildlife Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Legal Status Federal/ State/CDFW	Rationale for Expecting Presence or Absence
Gastropods			
Morro shoulderband snail ***Helminthoglypta walkeriana***	**Restricted to Baywood fine sand in coastal dune and coastal sage scrub communities near Morro Bay. Often occur under shrubs or other cover material that has ample contact with the ground.**	**FE/--/--**	**Suitable Conditions Present; Species Present: MSS were observed in the parcel during the protocol surveys.**
mimic tryonia (California brackishwater snail) *Tryonia imitator*	Medium- to large-sized aquatic snail. Inhabit fresh and brackish waters in estuarine habitats.	--/SA/--	**Suitable Conditions Absent; Species Absent:** The parcel does not support any aquatic features. Species not observed during surveys.
Insects			
monarch butterfly *Danaus plexippus*	Occur along the coast from northern Mendocino to Baja California, Mexico. Winter roost in wind protected tree groves (eucalyptus, Monterey pine and cypress), with nectar and water sources nearby.	--/SA/--	**Suitable Conditions Absent:** The parcel does not contain any tree groves suitable for winter roosting. Species not observed during surveys.
Globose Dune beetle *Coelus globosus*	Occur in fore dunes, sand hummocks, and back dunes along the immediate coast. Occur in sand and under vegetation or debris. Found in Los Angeles, Marin, Mendocino, Monterey, Orange, San Diego, San Luis Obispo, Santa Barbara, Santa Cruz, Sonoma, and Ventura Counties.	**--/--/--**	**Suitable Conditions Absent:** Foredune coastal habitat does not occur on the parcel. Species not observed during surveys.
Morro Bay blue butterfly *Plebejus icarioides moroensis*	Locally common from March to July. Fly only along the immediate coast of San Luis Obispo and western Santa Barbara counties. Feeds on *Lupinus chamissonis*. Restricted to Vandenberg Air Force Base dunes, Pismo/Guadalupe dune system, and Morro Bay dunes.	--/SA/--	**Suitable Conditions Absent:** The necessary host plant is not present on the parcel. Species not observed during surveys.
Branchiopods			
vernal pool fairy shrimp *Branchinecta lynchi*	Occur in vernal pool habitats including depressions in sandstone, to small swale, earth slump, or basalt-flow depressions with a grassy or, occasionally, muddy bottom in grassland.	FT/--/--	**Suitable Conditions Absent:** The parcel does not support vernal pools.
California linderiella *Linderiella occidentalis*	Occur in seasonal ponds in grasslands, sandstone depressions, and alluvial flats with hardpan beneath.	--/--/--	**Suitable Conditions Absent:** The parcel does not support vernal pools.
Fish			
tidewater goby *Eucyclogobius newberryi*	Occur in brackish shallow lagoons and lower stream reaches where water is fairly still, but not stagnant.	FE/--/CSC	**Suitable Conditions Absent:** The parcel does not support any aquatic features.

Species Name	Habitat and Distribution	Legal Status Federal/ State/CDFW	Rationale for Expecting Presence or Absence
Southern California Coast steelhead Distinct Population Segment *Oncorhynchus mykiss irideus*	Occur in clear, cool water with abundant in-stream cover, well-vegetated stream margins, relatively water flow, and a 1:1 pool-to-riffle ratio.	FE/--/CSC	**Suitable Conditions Absent:** The parcel does not support any aquatic features.
South-Central California Coast steelhead Distinct Population Segments *Oncorhynchus mykiss irideus*	Occur in clear, cool water with abundant in-stream cover, well-vegetated stream margins, stable water flow, and a 1:1 pool-to-riffle ratio.	FT/--/CSC	**Suitable Conditions Absent:** The parcel does not support any aquatic features.
Amphibians			
lesser slender salamander *Batrachoseps minor*	Small and thin salamander that inhabits moist wooded areas. Restricted to a small range in Santa Lucia Mountains. All occurrences documented above 1,300 feet in mixed oak woodland, tanbark oak forest, sycamore woodland, and California bay forest (California Herps 2017).	--/--/CSC	**Suitable Conditions Absent:** The parcel does not support wooded areas and is west of and at a lower elevation than this species' range.
foothill yellow-legged frog *Rana boylii*	Frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Range in California includes the north and central coasts and the western Sierras.	--/--/CSC	**Suitable Conditions Absent:** The parcel does not contain any aquatic areas.
California red-legged frog *Rana draytonii*	Occur in aquatic habitats with little or no flow and surface water depths to at least 2.3 feet. Presence of fairly sturdy underwater supports such as cattails.	FT /-- /CSC	**Suitable Conditions Absent:** The parcel does not support any aquatic habitat.
western spadefoot *Spea hammondii*	Inhabits vernal pools in primarily grassland, but also in valley and foothill hardwood woodlands.	--/--/CSC	**Suitable Conditions Absent:** The parcel does not support any vernal pools for breeding or grassland habitat with small mammal burrows for upland shelter.
Coast Range newt *Taricha torosa torosa*	Breed in ponds, reservoirs, and slow-moving streams. Frequents terrestrial habitats such as oak woodlands.	--/--/CSC	**Suitable Conditions Absent:** The parcel is not near any aquatic habitat that could support this species; therefore, the upland habitat in the parcel is not accessible to this species.
Reptiles			
northern California legless lizard *Anniella pulchra*	Occur in sandy or loose loamy soils with high moisture content under sparse vegetation.	--/--/CSC	**Suitable Conditions Present:** Species is locally common in the Los Osos area and is likely present in the parcel. Species not observed during the surveys.

Species Name	Habitat and Distribution	Legal Status Federal/ State/CDFW	Rationale for Expecting Presence or Absence
lesser slender salamander *Batrachoseps minor*	Small and thin salamander that inhabits moist wooded areas. Restricted to small range in Santa Lucia Mountains of San Luis Obispo County. All occurrences are documented above 1,300 feet (400 meters) in mixed oak woodland, tanbark oak forest, sycamore woodland, and California bay forest (California Herps 2017).	--/--/CSC	**Suitable Conditions Absent:** The project study area does not support the appropriate habitat conditions and is located west of and at a lower elevation than this species' range.
western pond turtle *Emys marmorata*	Occur in quiet waters of ponds, lakes, streams, and marshes. Typically, in the deepest parts with an abundance of basking sites.	--/--/CSC	**Suitable Conditions Absent:** The parcel does not contain any aquatic areas.
coast horned lizard *Phrynosoma coronatum (blainvillii* population)	Frequents a wide variety of habitats, commonly occurring in lowlands along sandy washes, coastal sage scrub, and chaparral in arid and semi-arid climate conditions. Species prefers friable, rocky, or shallow sandy soils.	--/--/CSC	**Suitable Conditions Present:** Species is known to occur in Los Osos and may be present in the parcel. Species not observed during surveys.
Birds			
Cooper's hawk *Accipiter cooperii*	Occur in deciduous riparian woodland habitat throughout California. Nest in deciduous, mixed-deciduous, and evergreen forests, as well as in suburban and urban environments. Tend to nest in more open areas that have older and larger trees.	MBTA/--/WL	**Nesting Conditions Absent:** The parcel does not support any trees that are suitable for nesting. Species may forage in the parcel.
tricolored blackbird *Agelaius tricolor*	(Nesting colony); requires open water, protected nesting substrate such as cattails or tall rushes, and foraging area with insect prey.	MBTA/--/CSC	**Suitable Conditions Absent:** The parcel does not support suitable nesting substrate.
golden eagle *Aquila chrysaetos*	Usually occurring in mountainous areas with varying vegetative cover; removed from people. May forage in grasslands and other open habitats. Nests on cliff edges and rarely in tall trees.	MBTA, BGEPA/--/ FP, Sec.3503.5	**Suitable Conditions Absent:** the parcel is not located in mountainous areas and does not have suitable nesting habitats.
burrowing owl *Athene cunicularia*	Occur in open, dry grasslands, deserts and scrublands. Subterranean nester, dependent upon burrowing mammals.	MBTA/--/CSC	**Suitable Conditions Absent:** Due to the shrubby vegetation in the parcel, it is unlikely that this species would utilize the parcel for wintering. Species not observed in the parcel during the winter surveys.
ferruginous hawk *Buteo regalis*	(Wintering) open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon-juniper habitats; eats lagomorphs, ground squirrels, and mice.	MBTA/--/--	**Suitable Conditions Absent:** Lack of foraging opportunities makes the parcel unsuitable for foraging.
western snowy plover *Charadrius alexandrinus nivosus*	Occur on sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	MBTA, FT/ --/CSC	**Suitable Conditions Absent**: The parcel does not support suitable species nesting habitat. Species not observed in the BSA.

Species Name	Habitat and Distribution	Legal Status Federal/ State/CDFW	Rationale for Expecting Presence or Absence
northern harrier *Circus cyaneus*	Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Permanent resident of the northeastern plateau and coastal areas; less common resident of the Central Valley. Widespread winter resident and migrant in suitable habitat.	MBTA/--/CSC	**Marginal Conditions Present:** Species may nest or forage in the chaparral habitat on the parcel. However, most occurrences in the area are affiliated with coastal bluffs and wetlands.
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	Occur in forests to open riparian woodlands with thick under story.	FT, MBTA/SE/--	**Suitable Conditions Absent:** The parcel does not support riparian woodland. Species not observed during surveys.
white-tailed kite *Elanus leucurus*	Occur in open grasslands, meadows, or marshlands for foraging close to isolated trees for nesting and perching.	MBTA/--/FP	**Suitable Conditions Absent:** Lack of isolated trees, and lack of foraging opportunities makes the parcel unsuitable for nesting.
California horned lark *Eremophila alpestris actia*	Occur in short grass prairies, coastal plains, fallow grain fields and alkali flats. Found in coastal regions from Sonoma to San Diego county, and west to the San Joaquin Valley.	MBTA/--/--	**Suitable Conditions Absent:** The chaparral in the parcel does not provide foraging and/or nesting habitat for this species. Species not observed in the parcel.
California black rail *Laterallus jamaicensis coturniculus*	Shore birds; known to frequent tidal salt marshes. Utilize densely vegetated mud flats and high tide line in salt water marsh systems.	--/ST/--	**Suitable Conditions Absent:** The parcel does not contain marshes or vegetated mudflats. Species not observed during the surveys.
loggerheaded shrike *Lanius ludovicianus*	Predatory passerine; frequents open areas with scattered shrubs. Commonly observed foraging in grassland, desert scrubs, and waste places. Builds nests in isolated trees or shrubs near foraging areas.	--/--/CSC	**Marginal Conditions Present:** Although unlikely, the chaparral in the parcel could provide nesting and/or foraging habitat. Species not observed.
purple martin *Progne subis*	Occupies valley foothill and montane hardwood forests, conifer forests, and riparian habitats. May nest in old woodpecker cavities or in human-made structures such as bridges and culverts. Feeds on insects.	--/--/CSC	**Suitable Conditions Absent:** Requisite woodland habitat is not present. Species not observed during the surveys.
California Ridgway's rail *Rallus obsoletus obsoletus*	Previously known as California clapper rail (*R. longirostris obsoletus*). Occur within salt and brackish marshes dominated by pickleweed and Pacific cordgrass. Currently restricted to marsh areas within the vicinity of San Francisco Bay. Last sighting in Morro Bay was documented in 1939 (documented as a California clapper rail).	FE/SE/FP	**Suitable Conditions Absent:** The parcel does not support any marsh habitat and is not located in the San Francisco Bay marsh complex.
Class Aves Other migratory bird species (nesting)	Occur in annual grasslands, coastal scrub, chaparral, and oak woodlands may provide nesting habitat.	MBTA/--/--	**Suitable Conditions Present:** Potential nesting habitat occurs throughout the parcel. Pre-disturbance nesting bird surveys are proposed to avoid impacts to nesting birds.

Species Name	Habitat and Distribution	Legal Status Federal/ State/CDFW	Rationale for Expecting Presence or Absence
Mammals			
pallid bat *Antrozous pallidus*	Prefer rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Day roost in caves, crevices, mines, and occasionally in hollow trees and buildings. Night roost in more open sites, such as porches and buildings.	--/--/CSC	**Roosting Habitat Absent**: The parcel may provide foraging opportunities but does not provide any roosting substrate.
Townsend's big-eared bat *Corynorhinus townsendii*	Occur in a wide variety of habitats; most common in mesic (wet) sites. May use trees for day and night roosts; however, requires caves, mines, rock faces, bridges or buildings for maternity roosts. Maternity roosts are in relatively warm sites.	--/SCT/CSC	**Roosting Habitat Absent**: The parcel may provide foraging opportunities but does not provide any roosting substrate.
Morro Bay kangaroo rat *Dipodomys heermanni morroensis*	Typically occur in habitats associated with stabilized dunes and coastal dune scrub communities with dominant vegetation including mock heather, buck brush, and deer weed.	SE/FE/--	**Suitable Conditions Present; Species Absent:** The parcel is within this species historic range and does contain the appropriate conditions. Sign of species was not observed in the parcel.
western mastiff bat *Eumops perotis*	Found in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in cliff faces, high buildings, trees, and tunnels.	--/--/CSC	**Roosting Habitat Absent**: The parcel may provide foraging opportunities but does not provide any roosting substrate.
San Diego desert woodrat *Neotoma lepida intermedia*	Range from Baja California northward to northern San Luis Obispo County. Typically occur in woodlands and coastal scrub habitats. Desert woodrats build nests within cracks and rock crevices, or in clumps of cactus.	--/--/CSC	**Suitable Conditions Absent:** The parcel does not support rock crevices. Species not observed during surveys.
big free-tailed bat *Nyctinomops macrotis*	Rare vagrant in California, probable resident in Texas, New Mexico, and southern Arizona. Probably does not breed in California. Prefers rugged, rocky canyons but will roost on buildings or in caves and trees.	--/--/CSC	**Roosting Habitat Absent:** The parcel does not support rocky areas, buildings, or caves. Species not observed during surveys.
American badger *Taxidea taxus*	Occur in open stages of shrub, forest, and herbaceous habitats; need uncultivated ground with friable soils.	--/--/CSC	**Suitable Conditions Absent:** The chaparral habitat is not conducive to this species and sign was not observed.

General references: Unless otherwise noted all habitat and distribution data provided by California Natural Diversity Database

Status Codes

--= No status

Federal: FE = Federal Endangered; FT= Federal Threatened; FC= Federal Candidate; CH= Federal Critical Habitat; PCH= Proposed Federal Critical Habitat; MBTA= Protected by Federal Migratory Bird Treaty Act

State: SE= State Endangered; ST= State Threatened; SCT= State Candidate Threatened

California Department of Fish and Game: CSC= California Special Concern Species; FP= Fully Protected Species; SA= Not formally listed but included in CDFW "Special Animal" List; WL= Watch List

Rationale Terms: ***Species Present:*** Species was or has been observed in the survey area. ***Suitable Conditions Present:*** The survey area is within the species range and supports the appropriate habitat, soils, and elevation. ***Marginal Conditions Present:*** The survey area is in the species range and supports the appropriate habitat and/or soils but other factors (past disturbances, presence of predators) may preclude species occurrence. ***Suitable Conditions Absent:*** The survey area is not within the species range and/or does not support the appropriate habitat, soils, and/or elevation for the species.

3.2.2.1 MORRO SHOULDERBAND SNAIL

On December 15, 1994, USFWS listed MSS as an endangered species under the FESA. On July 24, 2020, the USFWS published their proposal to down list or reclassify MSS as a threatened species with a special rule under Section 4(d) of the FESA. MSS are a member of the land snail family Helminthoglyptidae and are found in association with sandy soils of coastal dune and coastal sage scrub communities near Morro Bay. MSS can be found in native and non-native habitats and are routinely observed in disturbed areas in Los Osos. MSS require shelter to avoid desiccation; therefore, MSS are closely associated with plants and debris that exhibit dense cover and ample contact with the ground. Plants that MSS are often found in association with include mock heather, seaside golden yarrow (*Eriophyllum staechadifolium*), deerweed (*Acmispon glaber*), sand almond, horkelia, and ice plant. Other plants that commonly occur in areas occupied by this species include black sage, dune buckwheat (*Eriogonum parvifolium*), California sagebrush (*Artemisia californica*), dune lupine (*Lupinus chamissonis*), veldt grass, and California croton (*Croton californicus*).

SWCA conducted three MSS surveys in the parcel during protocol conditions (see Table 1). Four live MSS, one empty shell, and shell fragments were identified in and directly adjacent to the parcel. Due to the senescent condition of the shrubs on the site, there is minimal cover for MSS in the parcel; therefore, the population of MSS using the parcel appears to be very small. This is consistent with survey data from other parcels in the immediate area. The MSS were observed on the northern portion of the site in the general vicinity of the proposed leach field (see Figure 3). The occurrences were associated with veldt grass, chamise (*Adenostoma fasciculata*), and mock heather (*Ericameria ericoides)*.

3.2.2.2 MORRO BAY KANGAROO RAT

MBKR was listed as endangered under the FESA in 1970 and listed as endangered under the CESA in 1971. MBKR is a well-studied species, and its rapid decline was documented from the 1950s through the 1980s (Kofron and Villablanca 2016). This species is endemic to Los Osos, where it historically occupied stabilized sand dunes consisting of Baywood fine sand and supporting coastal dune scrub vegetation. MBKR was most commonly found in coastal dune scrub with ample openings. This type of habitat was common in the Los Osos area in the 1950s and 1960s but was reduced when farming and development expanded in the area. Fire suppression and development resulted in the reduction of the open early stages of coastal dune scrub habitat and increase of dense and mature habitats. Dense and mature habitats are not suitable for MBKR (Kofron and Villablanca 2016).

The parcel is located approximately 1 mile south of the Buckskin area, where MBKR was last captured in 1985 (Kofron and Villablanca 2016). MBKR were documented in 1958 approximately 2 miles to the south near the summit of the mountain at Hazard's Canyon (CNDDB Occurrence 11), and approximately 1.5 miles to the west, just south of Highland Drive (CNDDB Occurrence 12). CNDDB Occurrence 11 was documented by Stewart in 1958; a 1977 update to Occurrence 11 identified the area as "dense maritime chaparral" and "seemed to be unsuitable for K-Rat habitat." Occurrence 11 also reports MBKR being seen "in vacant lots near the water tank" by a homeowner in 1977. The "water tank" is presumed to be the Golden State Water Company's tank on Alamo Drive. The current conditions in the parcel support senescent, open, and intact maritime chaparral that MBKR could forage in and find shelter. The open habitat conditions would allow easy mobility for MBKR and the Baywood fine sand is appropriate for MBKR burrowing.

During the preparation of the Draft Los Osos Habitat Conservation Plan (LOHCP), the USFWS, CDFW, and County developed the Morro Bay Kangaroo Rat Survey Area map. The map identifies areas in which the agencies may require MBKR surveys prior to approving development. The MBKR survey map

identifies the areas that the resource agencies believe have the greatest potential to support the species. The subject parcel is in areas identified as potential MBKR habitat on the map.

Live trapping surveys for MBKR were not performed for this BRA. However, SWCA biologists did perform visual search surveys for MBKR and sign of MBKR. SWCA did not observe any sign (e.g., inverted U-shaped burrows, seed pit caches, dust baths, or tail drags) of MBKR on the parcel. Three inactive gopher holes were observed on the parcel. Based on the lack of MBKR sign and that the species has not been observed or documented in the area, it is unlikely that MBKR are occupying the parcel.

4 REGULATORY OVERVIEW

4.1 Federal Policies and Regulations

4.1.1 *Federal Endangered Species Act of 1973*

The FESA provides legislation to protect federally listed plant and animal species. Impacts to listed species resulting from the implementation of a project would require the responsible agency or the applicant to formally consult with the USFWS or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) to determine the extent of impact to a FESA-protected species. If USFWS or NOAA Fisheries determine that impacts to a federally listed species would likely occur, alternatives and measures to avoid or reduce impacts must be identified. USFWS and NOAA Fisheries also regulate activities conducted in federal critical habitat, which are geographic units designated as areas that support primary habitat constituent elements for listed species.

4.1.1.1 LOS OSOS HABITAT CONSERVATION PLAN

The County has requested a federal Incidental Take Permit (ITP) pursuant to Section 10(a)(1)(B) of the FESA to cover take of the following four federally listed species: MSS, MBKR, Morro manzanita, and Indian Knob mountainbalm (*Eriodictyon altissimum*). The take is anticipated to occur from private development, public agency, private utility, and conservation projects occurring in the community of Los Osos. The LOHCP Area features the Baywood Fine Sands ecosystem, which is a unique biological system found only on ancient sand dunes in the Los Osos region.

The LOHCP includes an extensive conservation program designed to mitigate the potential effects of the covered activities on the covered species. Once the County has finalized all agreements and established a system for implementing the LOHCP and associated conservation program, landowners may participate in the LOHCP to obtain incidental take coverage for their projects that may take the covered species. Participation in the LOHCP is voluntary; landowners who are not conducting activities that cause ground disturbance or otherwise impact the covered species need not participate in the LOHCP. In addition, landowners that have projects that will cause ground disturbance may have other options for compliance with the federal, state, and local permitting requirements.

4.1.2 *Migratory Bird Treaty Act of 1918*

The Migratory Bird Treaty Act (MBTA) protects all migratory birds, including their eggs, nests, and feathers. The MBTA was originally drafted to put an end to the commercial trade in bird feathers, popular in the latter part of the 1800s. The MBTA is enforced by USFWS, and potential impacts to species protected under the MBTA are evaluated by USFWS in consultation with other federal agencies. On April 11, 2018, the USFWS issued guidance on the recent M-Opinion affecting MBTA implementation. The

M-Opinion concludes that the take of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take birds. The USFWS interprets the M-Opinion to mean the MBTA prohibitions on take apply when the purpose of the action is to take migratory birds, their eggs, or their nests. Working with other federal agencies on migratory bird conservation is an integral mission of the USFWS; therefore, the USFWS maintains that potential impacts to migratory birds resulting from federal actions should be addressed under the National Environmental Policy Act (NEPA).

4.2 State Policies and Regulations

4.2.1 *California Endangered Species Act of 1984 and California Species of Special Concern*

The CESA ensures legal protection for plants listed as rare or endangered, and wildlife species formally listed as endangered or threatened. The state also maintains a list of California Species of Special Concern (SSC). SSC status is assigned to species that have limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Under state law, CDFW is empowered to review projects for their potential to impact special-status species and their habitats. Under CESA, CDFW reserves the right to request the replacement of lost habitat that is considered important to the continued existence of CESA-protected species.

4.2.2 *California Fish and Game Code*

CFGC Section 3503 – Protections of Bird's Nests includes provisions to protect the nests and eggs of birds. Section 3503 states: "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."

Per CFGC Section 2835, in absence of a CDFW-approved Natural Community Conservation Plan, the CDFW cannot authorize take of a Fully Protected species. The classification of Fully Protected was the state's initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. Most "fully" protected species have been listed as threatened or endangered species under the CESA. Fully Protected Species lists were created for fish, mammals. amphibians and reptiles, birds, and mammals. CFGC Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) include provisions to protect Fully Protected species, such as: (1) prohibiting take or possession "at any time" of the species listed in the statute, with few exceptions; (2) stating that "no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to "take" a species that has been designated as Fully Protected; and (3) stating that no previously issued permits or licenses for take of these species "shall have any force or effect" for authorizing take or possession. Unless an applicant has developed a CDFW-approved Natural Community Conservation Plan, CDFW is unable to authorize incidental take of Fully Protected species when activities are proposed in areas inhabited by those species.

The CDFW also manages the California Native Plant Protection Act of 1977 (CFGC Section 1900 et seq.), which was enacted to identify, designate, and protect rare plants. In accordance with CDFW guidelines, plant species with CNPS Ranks 1A, 1B, 2A, 2B, and 3 are considered "rare" under the Native Plant Protection Act. Impacts to plants with these rarity rankings must be fully evaluated under CEQA. Plants with CNPS Rank 4 have limited distributions but are not necessarily eligible for listing. It is recommended that impacts to plants with CNPS Rank 4 also be evaluated per CEQA.

Pursuant to Division 2, Chapter 6, Sections 1600–1602 of the CFGC, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which

supports fish or wildlife. The CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." The CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." The CDFW jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife.

4.2.3 *California Coastal Act*

The California Coastal Act was enacted in 1976 to provide long-term protection of California's coastal resources. The act's coastal resources management policies are based on recommendations contained in the California Coastal Plan. One such policy includes:

> "Protection, enhancement and restoration of environmentally sensitive habitats, including intertidal and nearshore waters, wetlands, bays and estuaries, riparian habitat, certain wood and grasslands, streams, lakes, and habitat for rare or endangered plants or animals."

5 IMPACT ASSESSMENT AND MITIGATION

This impact assessment focuses on identifying potential impacts associated with implementation of the proposed project. The impact analysis is based on the parcel's existing conditions, survey data, regulatory setting, and the project description. The emphasis is on determining the potential effects of the project on special-status species, habitats, and jurisdictional areas. Adverse impacts could occur if the proposed project would result in take of special-status species and/or temporary or permanent modification to sensitive habitats or habitats occupied by special-status species. Where potential impacts to sensitive resources have been identified, measures for avoiding, minimizing, or mitigating adverse effects are recommended. The following section has been formatted to meet the general guidelines set forth by the County's *Draft Standard Guidelines for Biological Resources Assessments* (County of San Luis Obispo 2016).

5.1 Sufficiency of Biological Data

The biological surveys conducted in support of this BRA were sufficient to inventory the biological resources on the parcel. No additional field surveys or specialized investigation are needed to determine which resources may be impacted by the proposed project and the appropriate avoidance/mitigation measures.

5.2 Impacts

5.2.1 *Project Effect on Unique or Special-Status Species or their Habitats*

5.2.1.1 SPECIAL-STATUS PLANT SPECIES

Morro manzanita plants are sporadically located on the parcel. Morro manzanita is listed as threatened under the FESA and is a CNPS Rank 1B.1 species; therefore, potential impacts to this species must be addressed in CEQA documents. Development of the proposed site plan (see Appendix A) would directly

impact three Morro manzanita occurrences. The direct impacts are expected to occur during the grading for the house. The remaining occurrences on the parcel are far enough from the proposed development that their avoidance can be achieved. California Department of Forestry and Fire Protection (CAL FIRE) regulations will likely require the applicant to clear brush from around the house for fire safety. The brush clearing could result in the direct removal of Morro manzanita occurrences if avoidance was not required in the project's coastal development permit. Mitigation measures BIO-1 through BIO-3 and BIO-5 are provided to facilitate the avoidance and minimization impacts on the Morro manzanita that occur adjacent to the development areas. BIO-4 is provided to mitigate the anticipated removal of the three Morro manzanita plants located in the development areas.

Popcorn lichen is scattered in the northern half of the parcel. Several patches of this lichen species occur in the footprint of the proposed house and within the utility easement area. Direct impacts to this species are expected to occur during the grading for and construction of the house. BIO-6 is provided to minimize impacts to popcorn lichen.

5.2.1.2 WILDLIFE

The parcel provides suitable habitat for nesting birds, silvery legless lizard, coast horned lizard, MBKR, and MSS.

The habitat in the parcel provides suitable nesting habitat for a variety of bird species. Common passerines may use the non-native grassland and dune scrub vegetation for nesting and/or foraging; raptors may use the area for foraging but are not expected to nest in the parcel. The passerine nesting habitat would be impacted by project activities including grading and vegetation removal. If the project activities are conducted between March and September, birds may be nesting within or adjacent to the affected area and the individuals could be directly or indirectly impacted. Direct impacts may include loss of active nests during vegetation removal. Noise or other disturbances may cause an individual to abandon a nest resulting in an indirect impact. Mitigation measure BIO-7 is provided to avoid impacts to nesting birds during development of the parcel.

Silvery legless lizard is a fossorial species relatively common in areas of Los Osos that contain Baywood fine sand. Because fossorial species spend most of their lives underground, they are difficult to detect without shallow excavation of the soil surface. Although silvery legless lizard was not observed in the parcel during the surveys, the presence of silvery legless lizard on the parcel should be inferred. Coast horned lizard is also known to occur in the area. The project parcel supports the appropriate habitat for coast horned lizard, and SWCA's biologists have observed the species in the vicinity. Grading for development of the parcel could result in the direct take of silvery legless lizards and/or coast horned lizards. Direct take may include being struck by equipment, entrapped in stockpiled materials or trenches, or trampled or collected by construction personnel. BIO-8 provides a means to minimize impacts to silvery legless lizards and other reptiles during project implementation.

The parcel is in mapped MBKR range and the maritime chaparral on the parcel is suitable for MBKR; however, MBKR and their sign were not observed on the parcel. In addition, MBKR has not been observed in the vicinity since 1977. Due to the lack of MBKR sign on the parcel and that MBKR have not been detected in the vicinity for 45 years, it is unlikely that MBKR are present on the parcel. However, if MBKR were present in the parcel when grading occurred, direct impacts to the individual(s) could occur. Direct impacts could include being struck by equipment, entrapped in stockpiled materials or trenches, or trampled or collected by construction personnel. In recent coordination with the USFWS and CDFW regarding the LOHCP, the County has agreed to implement MBKR avoidance measures on projects that are participating in the LOHCP and that will occur in the mapped MBKR habitat. The LOHCP MBKR

avoidance measures are included in this BRA to ensure take of MBKR is avoided. BIO-9 is included to ensure impacts to MBKR are avoided during construction of the proposed project.

The maritime chaparral on the parcel supports live MSS. Direct take of MSS could occur during development and future use of the parcel. Direct take during project development may include being struck by equipment, stepped on by crewmembers, or uncovered and left to desiccate in the sun. It is possible that ongoing use of the residence could result in take of MSS after construction of the residence is complete. MSS can move into the residential area and be crushed or exposed to desiccation through standard ongoing uses of the parcel. SWCA recommends that the applicant obtain an ITP from the USFWS through the preparation of an Individual HCP. Use of the pending LOHCP may be an option if the LOHCP is approved and available for use at the time of project application; however, the subject parcel is located outside of the Los Osos Wastewater Treatment Plant area and therefore may not be covered by the LOHCP once it is approved. BIO-10 provides a recommendation for the applicant to obtain an ITP from the USFWS prior to development of the project.

5.2.2 *Project Effect on Extent, Diversity, or Quality of Native or Other Important Vegetation*

The parcel supports chamise chaparral habitat that supports rare plant species (Morro manzanita and popcorn lichen) and rare wildlife (MSS). The County of San Luis Obispo Local Coastal Program and Coastal Policies define Environmentally Sensitive Habitats as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." The Local Coastal Program Policies identifies "habitats containing or supporting rare and endangered or threatened species" as ESHA. Since the Local Coastal Program defines ESHA as an area that supports rare and endangered or threatened species, those portions of the parcel that support Morro manzanita and MSS habitat are ESHA under the Local Coastal Program. The grading that is required to implement the project would impact 5,840 square feet of the ESHA on the parcel. The impacts would be associated with the removal of Morro manzanita plants and other plants that provide habitat for MSS. The removal of Morro manzanita plants would be mitigated by planting more Morro manzanita plants on-site or participating in the upcoming LOHCP. Likewise, the impacts to MSS and its habitat would require the applicant to participate in the LOHCP or prepare an Individual HCP and obtain an ITP from the USFWS to cover the project for take of MSS. The ITP will include the proposed avoidance and compensatory mitigation measures for impacts to MSS and the associated ESHA. Mitigation measures BIO-1 through BIO-5 are provided to minimize and mitigate potential impacts to ESHA. The proposed measures will minimize and mitigate the impacts to Morro manzanita, MSS, and MSS habitat. As such, the impact to ESHA would be mitigated to less than significant.

5.2.3 *Project Effects on Wetlands or Riparian Habitats*

The parcel does not contain any wetland or riparian habitats and the project will not affect wetland or riparian vegetation.

5.2.4 *Project Effect on Movement of Resident or Migratory Fish and Wildlife Species*

The proposed project is in a developed area and will have no direct or indirect effect on the movement of resident or migratory fish and wildlife species.

5.3 Avoidance and Mitigation Measures

BIO-1 Prior to ground disturbance, the applicant shall retain a qualified biologist for all measures requiring environmental mitigation to ensure compliance with the coastal development permit measures. The biologist shall be responsible for: (1) ensuring that procedures for verifying compliance with environmental mitigations are implemented; (2) establishing lines of communication and reporting methods; (3) conducting compliance reporting; (4) conducting construction crew training regarding environmentally sensitive areas and protected species; (5) maintaining authority to stop work; and (6) outlining actions to be taken in the event of non-compliance. Monitoring shall be conducted full time during the initial disturbances (site clearing) and be reduced to every other week following initial disturbances or a frequency and duration determined by the applicant in consultation with the County and USFWS.

Prior to the commencement of site grading, the qualified biologist shall conduct an environmental awareness training for all construction personnel. The environmental awareness training shall include discussions of the special-status species that occur in the project area, including Morro manzanita, MSS, California legless lizard, coast horned lizard, MBKR, and nesting birds. Topics of discussion shall include descriptions of the species' habitats; general provisions and protections afforded by the FESA and CEQA; measures implemented to protect special-status species; review of the project boundaries and special conditions; the monitor's role in project activities; lines of communication; and procedures to be implemented in the event a special-status species is observed in the work area.

BIO-2 All grading plans shall clearly show the location of the Morro manzanita plants to be avoided and project delineation fencing that excludes the adjacent Morro manzanita occurrences and maritime chaparral habitat from disturbance. The fencing shall consist of highly visible construction fence supported by steel T-stakes that are driven into the soil. The monitoring biologist shall field-fit the placement of the project delineation fencing to minimize impacts to Morro manzanita, MSS, and other sensitive resources. The project delineation fencing shall remain in place and functional throughout the duration of the project and no work activities shall occur outside the delineated work area. The grading plans shall clearly show all staging areas, which shall be located within the construction area and outside the adjacent habitat areas.

BIO-3 Prior to permit issuance, the project plans shall specify that installation of the power, cable, and phone lines from the existing pole on Bayview Heights Drive be conducted without trenching in the utility easement area. Installation of the utility lines may include underground trenchless technology (horizontal directional drilling) or overhead installation. The vegetation in the utility easement shall not be removed for utility line installation.

BIO-4 The project will require the removal of three Morro manzanita plants. The applicant may choose to participate in the LOHCP to mitigate this impact as directed by the LOHCP requirements or the applicant may choose to mitigate this impact by developing and implementing a Morro Manzanita Replacement Plan. If the applicant chooses to implement a Morro Manzanita Replacement Plan, the plan shall provide for the installation and maintenance of 15 Morro manzanita plants on the project parcel. The Morro Manzanita Replacement Plan shall include:

a. A brief narrative of the project location, description, and purpose;

b. Clearly identified parties responsible for the mitigation program and their contact information;

c. A map showing and quantifying all manzanita planting areas;

d. A detailed discussion of the methods for implementing the Morro Manzanita Replacement Plan, including invasive species removal, sources of plant materials, and supplemental watering regimes;

e. Provisions for the collection of Morro manzanita propagules from the disturbance area, replacement planting propagation, and reintroduction into the parcel;

f. Identification of locations, amounts, and sizes of the Morro manzanita plants to be planted.

g. Identification of necessary components (e.g., temporary irrigation, amendments, etc.) to ensure successful plant reestablishment;

h. A program schedule and established success criteria for a 5-year maintenance, monitoring, and reporting program that is structured to ensure the success of the mitigation plantings; and

i. Methods for removing non-native species from the site.

BIO-5 The applicant shall not remove Morro manzanita from the CAL FIRE buffer area. Other shrub species in the CAL FIRE buffer area may be removed to reduce the fire ladder. However, only dead wood and lower branches of Morro manzanita specimens in the CAL FIRE buffer area may be removed. Morro manzanita located in the CAL FIRE buffer area may be trimmed but not removed to reduce the fire ladder. This may include removing Morro manzanita branches from individual shrubs that are in contact with each other and removing lower branches to create air space between the ground level and the shrub canopy.

BIO-6 Prior to construction, the environmental monitor shall relocate the popcorn lichen occurrences from the disturbance areas. This species occurs on the sand and detritus in the openings of the chaparral. Popcorn lichen is most visible in the winter months. It is recommended that the popcorn lichen relocation efforts occur in the winter months to maximize detection of the occurrences. The environmental monitor shall remove the popcorn lichen from the disturbance areas and place them at the base of existing shrubs in the adjacent undisturbed habitat on the parcel.

BIO-7 To the maximum extent possible, site preparation, ground-disturbing, and construction activities should be conducted between October and February (outside of the migratory bird breeding season). If such activities are required during the migratory bird breeding season (March–September), the monitoring biologist shall conduct a nesting bird survey and verify that migratory birds are not occupying the site. If nesting activity is detected, the following measures shall be implemented:

a. The project shall be modified or delayed as necessary to avoid direct take of identified nests, eggs, and/or young protected under the MBTA and CFGC;

b. The County-approved biologist shall determine an appropriate biological buffer zone around active nest sites. Construction activities within the established buffer zone will be prohibited until the young have fledged the nest and achieved independence; and

c. The County-approved biologist shall document all active nests and submit a letter report to the County documenting project compliance with the MBTA, CFGC, and applicable project mitigation measures.

BIO-8 Within 30 days prior to site grading and during site grading, a qualified biologist shall conduct surveys for silvery legless lizards, coast horned lizards, and other reptiles. The surveyor should utilize hand search or cover board methods in areas of disturbance where legless lizards and/or coast horned lizards are expected to be found (e.g., under shrubs, other vegetation, or debris). If cover board methods are used, they shall commence at least 30 days prior to the start of construction. Hand search surveys should be completed immediately prior to and during grading activities. During grading activities, the biologist shall walk behind the grading equipment to capture silvery legless lizards that are unearthed by the equipment. The surveyor shall capture and relocate any legless lizards or other reptiles observed during the survey effort. The captured individuals shall be relocated from the construction area and placed in suitable habitat on the parcel but outside of the work area. Following the survey and monitoring efforts, the County-approved biologist shall submit to the County a project completion report that documents the number of silvery legless lizards and other reptiles captured and relocated, and the number of legless lizards or other reptiles mortally taken during grading activities.

BIO-9 Prior to project construction, the applicant shall retain a qualified biologist to implement Phase 1 and Phase 2 (if necessary) of the MBKR pre-project survey protocol as described in Appendix F of the LOHCP. The qualified biologist shall conduct a Phase 1 Visual Survey on the parcel prior to construction-related disturbances. The survey methods shall include the following:

a. The visual survey shall occur between April 1 and August 31. Visual surveys shall be conducted only during the morning or late afternoon and during times of low wind conditions. The wind shall not be high enough to disturb/smooth the soil surface.

b. The parcel shall be subject to a 100% visual examination by the biologist. The property shall be traversed in a series of transects close enough together so that all of the ground surface can be visually assessed.

c. The biologist(s) shall evaluate the habitat for all types of diagnostic sign for kangaroo rats, including burrows, tail drag marks, tracks, scat, dust baths, and surface seed pit caches. The biologist(s) shall thoroughly evaluate the soil surface to determine the likelihood of diagnostic sign being obliterated and thus hiding the presence of MBKR sign.

d. The County shall be notified immediately if potential sign of MBKR is observed. If scat is observed, the scat shall be collected and submitted to the CDFW for analysis to determine if it is that of MBKR.

e. Areas where potential diagnostic sign is observed shall be mapped and the locations recorded with a Global Position System (GPS) unit.

f. The results of the visual survey shall be provided to the County and the wildlife agencies within 10 working days of survey completion. The wildlife agencies shall provide a written determination regarding the need for track plate/camera station and trapping surveys (Phase 2). The wildlife agencies will provide a written determination regarding the need for Phase 2 survey work within 30 days. If Phase 2 survey work is required by the wildlife agencies, the biologist shall implement the Track Plate/Camera Station and Live Trapping as directed by the agencies.

If the Phase 1 Survey does not detect any sign of MBKR and the wildlife agencies do not require implementation of Phase 2 survey work, the applicant may proceed with the project, as permitted.

BIO-10 The parcel is known to support live MSS. Vegetation removal in areas that support live MSS may result in take of the species. Based on the parcel conditions and the proposed site plan, complete avoidance of live MSS during and following construction will not be feasible; therefore, the applicant must coordinate with the USFWS and the County to obtain an ITP for MSS, prior to issuance of grading permits.

The applicant may obtain the ITP through the LOHCP or through development of an Individual HCP. If the applicant chooses to develop an Individual HCP, the avoidance, minimization, and mitigation measures shall include, but not be limited to, the following:

a. Avoidance and Minimization:

    1. Exclusion Fencing: The applicant shall install construction exclusion fencing around the development area to ensure that inadvertent disturbance of MSS habitat outside of the development area does not occur (refer to BIO-2). Ground disturbances shall be limited to those areas within the delineated development area.

    2. Preconstruction Surveys: Preconstruction surveys and minimization measures must be conducted in advance of ground disturbance. A qualified biologist shall be present during initial grading and excavation, including clearing of vegetation and stripping of the surface soil layer to monitor for the presence of MSS. The biologist shall conduct hand search methods to find, capture, and relocate MSS from the disturbance area. All suitable habitat within the disturbance area shall be surveyed for living MSS. Any live MSS found during the survey shall be relocated to adjacent habitat outside of the delineated development area.

    3. Construction Monitoring: Upon completion of site preparation and grading activities, the biologist shall periodically visit the project site throughout the remainder of the project construction period. During periods of rain or heavy fog/dew, the biologist will conduct pre-activity surveys to ensure that no MSS have migrated into the work area. Any MSS observed during this period shall be relocated to suitable habitat outside of the development area. No construction work will be initiated until the biologist determines that the work area is clear of MSS.

b. Mitigation:

    1. The applicant shall coordinate with the USFWS during preparation of the draft Individual HCP to establish a compensatory mitigation agreement that benefits MSS. Compensatory mitigation may include on-site conservation, off-site conservation, and/or payment of an in-lieu fee that is commensurate with the impact and provides financial benefits to the conservation of MSS.

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APPENDIX A

Site Plan

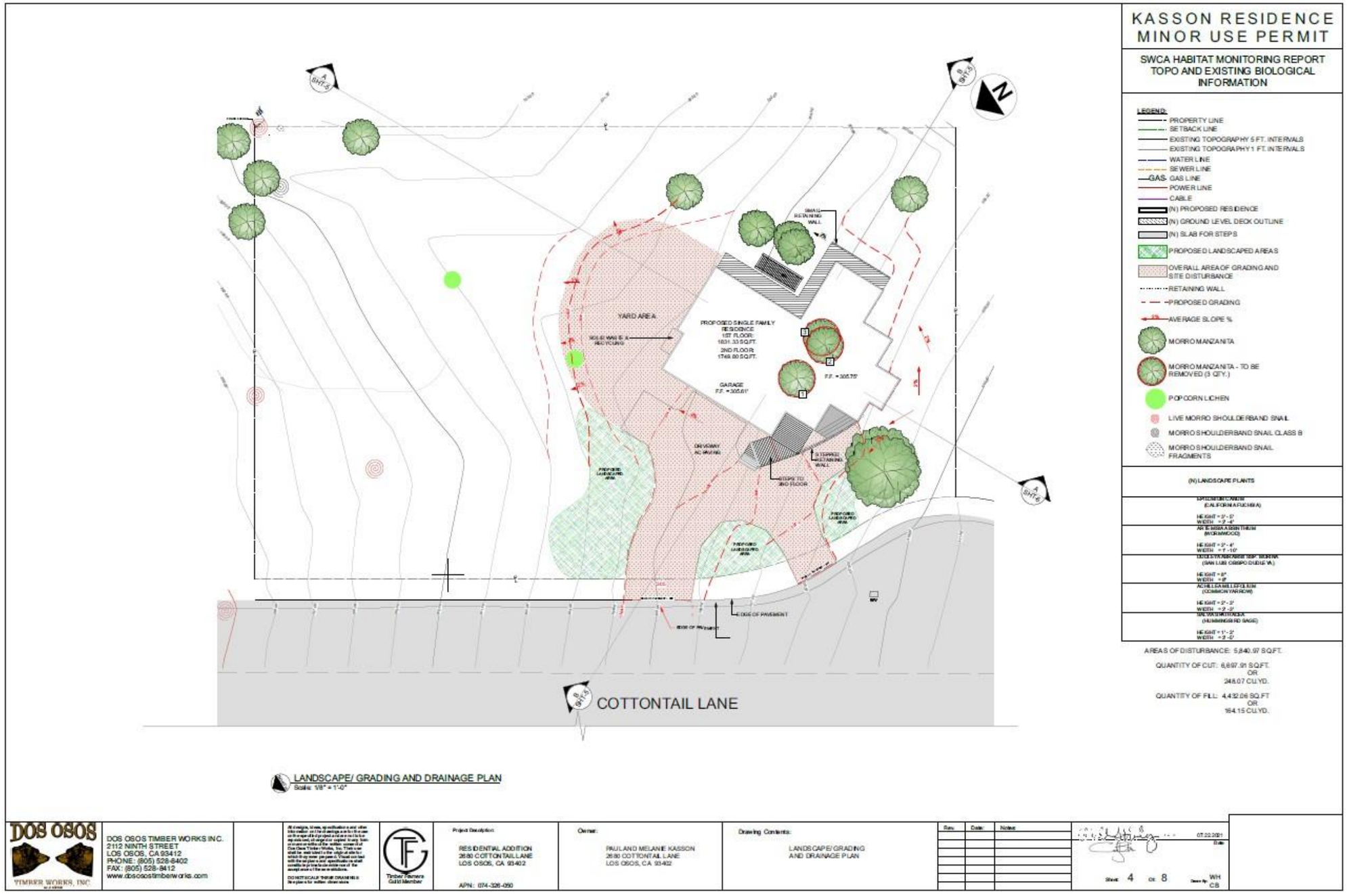


Figure A-1. Site plan map.

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APPENDIX B

Photo Documentation



Photo B-1. Representative view of the chamise chaparral habitat on the parcel. Photo taken January 24, 2022.



Photo B-2. Representative view of the chamise chaparral habitat on the parcel. Photo taken January 24, 2022.



Photo B-3. Representative view of the habitat in the County right-of-way on Cottontail Lane. Photo taken April 17, 2018.



Photo B-4. Representative view of the habitat near the existing power pole and in the utility easement. Photo taken January 16, 2019.



Photo B-5. View of an MSS on the parcel. Photo taken January 16, 2019.



Photo B-6. View of popcorn lichen on the parcel. Photo taken July 17, 2018.

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APPENDIX C

List of Species Observed

Table C-1. Plant Species Observed

Scientific Name	Common Name	Native	Species Status / Notes
Vascular Plants nomenclature follows "The Jepson Manual" and http://ucjeps.berkeley.edu/interchange.html			
Angiosperms (Dicots)			
Asteraceae	**Sunflower Family**		
Artemisia californica	California sagebrush	Yes	
Baccharis pilularis var. *consanguinea*	coyote brush	Yes	
Corethrogyne filaginifolia	California aster	Yes	
Ericameria ericoides	mock heather	Yes	
Heterotheca grandiflora	telegraph weed	Yes	
Pseudognaphalium luteoalbum	cudweed	No	
Caryophyllaceae	**Pink Family**		
Cardionema ramosissimum	sand mat	Yes	
Chenopodiacea	**Chenopod Family**		
Chenopodium californicum	California pigweed	Yes	
Cucurbitaceae	**Gourd Family**		
Marah fabaceus var. *fabaceus*	wild cucumber	Yes	
Ericaceae	**Heath Family**		
Arctostaphylos morroensis	Morro manzanita	Yes	1B.1/FT
Euphorbiaceae	**Spurge Family**		
Croton californicus	croton	Yes	
Fabaceae	**Pea Family**		
Acacia longifolia	golden wattle	No	
Acmispon glaber	deer weed	Yes	
Fagaceae	**Oak Family**		
Quercus agrifolia	coast live oak	Yes	
Lamiaceae	**Mint Family**		
Salvia mellifera	black sage	Yes	
Phrymaceae	**Lopseed Family**		**Formally Scrophulariaceae**
Mimulus aurantiacus	sticky monkey flower	Yes	
Rhamnaceae	**Buckthorn Family**		
Ceanothus cuneatus var. *cuneatus*	wedgeleaf ceanothus	Yes	
Rosaceae	**Rose Family**		
Adenostoma fasciculatum	chamise	Yes	
Heteromeles arbutifolia	toyon	Yes	
Horkelia cuneata var. *cuneata*	coast horkelia	Yes	
Angiosperms (Monocots)			
Agavaceae	**Century Plant Family**		
Agave americana	Century plant	No	

Scientific Name	Common Name	Native	Species Status / Notes
Poaceae	**Grass Family**		
Bromus madritensis ssp. *madritensis*	foxtail chess	No	
Ehrharta calycina	veldt grass	no	
Festuca myuros	rattail fescue	No	Cal-IPC: moderate
Lichens			
Cladonia firma	popcorn lichen	Yes	2B.2

Table C-2. Wildlife Species Observed

Scientific Name	Common Name	Notes
Birds		
Diurnal Raptors		
Cathartes aura	turkey vulture	
Upland Game Birds		
Callipepla californica	California quail	
Pigeons and Doves		
Zenaida macroura	mourning dove	
Streptopelia decaocto	Eurasian colored dove	
Hummingbirds		
Calypte anna	Anna's hummingbird	
Tyrant Flycatchers		
Sayornis nigricans	black phoebe	
Jays, Crows, and Allies		
Aphelocoma californica	California scrub jay	
Corvus brachyrhynchos	American crow	
Chickadees, Nuthatches, and Allies		
Baeolophus inornatus	oak titmouse	
Psaltriparus minimus	bush tit	Detected by vocalization
Wrens		
Thryomanes bewickii	Bewick’s wren	
Thrushes		
Toxostoma redivivum	California thrasher	Detected by vocalization
Mimids		
Mimus polyglottos	northern mockingbird	
Wood-warblers		
Vermivora celata	orange-crowned warbler	
Emberizine Sparrows and Allies		
Pipilo crissalis	California towhee	

Scientific Name	Common Name	Notes
Pipilo maculates	spotted towhee	
Junco hymalis	dark-eyed junco	
Finches, and Old World Sparrows		
Carpodacus mexicanus	house finch	
Mammals		
Lagomorphs		
Sylvilagus bachmanii	brush rabbit	
Ruminantia		
Odocoileus hemionus californicus	black-tailed deer	Scat, tracks
Reptiles		
Elgaria coerulea	Northern alligator lizard	
Sceloporus occidentalis	western fence lizard	
Gastropods		
Helminthoglypta walkeriana	Morro shoulderband snail	

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