200 Madera Street (APN 074-483-009)
Los Osos, San Luis Obispo County, California
MUP/CDP C-DRC2021-00024

Biological Resources Assessment

Prepared for:

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Prepared by:

EAM
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Revised: July 15, 2022

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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 visits associated with this report. I

Signature

July 15, 2022
Date

EXECUTIVE SUMMARY

This Biological Resources Assessment was prepared for Dr. Sarabjit S. Purewal on a 0.45-acre (19,600-square foot) parcel located at 200 Madera Street (APN 074-483-009), Los Osos, San Luis Obispo County, California.

For this report four (4) site visits, which included four (4) focused biological resources surveys, were conducted over the entire Subject Parcel to determine the presence or potential presence of sensitive communities, and/or special-status plants or wildlife. The Subject Parcel was dominated by areas of sparse non-native annual grassland and individual scattered shrubs consisting primarily of chamise (*Adenostoma fasciculatum*) and buckbrush (*Ceanothus cuneatus*). No aquatic or wetland habitats were observed.

A review of the California Natural Diversity Database was conducted to identify special-status species and sensitive natural communities (e.g., plant communities) that have the potential to occur and in this review; nine (9) natural communities, 113 plants, and 81 animal species were identified as occurring in the general vicinity of the Subject Parcel.

Potential impacts to special-status species were identified during the surveys and the impact assessment of the proposed residential project. This included potential impacts to Kellogg's horkelia (*Horkelia cuneata* var. *sericea*), (Morro shoulderband snail (*Helminthoglypta walkeriana),* obscure bumble bee (*Bombus caliginosus*), California legless lizard (*Anniella pulchra*), coast horned lizard (*Phrynosoma blainvillii*), and nesting birds. Avoidance and protection measures have been proposed within this report to reduce potential direct and indirect impacts to these species.

INTRODUCTION

The following Biological Resources Assessment has been prepared by Ecological Assets Management LLC (EAM), for Dr. Sarabjit S. Purewal on a 0.45-acre parcel located at 200 Madera Street (APN 074-483-009), Los Osos, San Luis Obispo County, California.

This report documents existing conditions on the Subject Parcel, evaluates the potential for project-related impacts to biological resources, and recommends measures to avoid, minimize, and mitigate impacts to these biological resources prior to, during, and following implementation of the residential project.

SITE LOCATION

The 0.45-acre Subject Parcel is located in western San Luis Obispo County, California, within the community of Los Osos (refer to Figure 1 and 2). The property is located at 200 Madera Street and the closest main cross street is San Ricardo Lane located approximately 400 feet to the north. The parcel is located within the central portion of the Morro Bay South 7.5-minute quadrangle at the following coordinates: 35.305107°, -120.856229°.

The Subject Parcel is bordered existing developed parcels to the northwest, northeast and east; the Madera Street cul-de-sac to the north, and undeveloped areas to the west and south (refer to Appendix A).

PURPOSE OF REPORT

EAM has prepared this report at the request of Dr. Sarabjit S. Purewal, to examine existing conditions and the potential for special-status biological resources to be present within or immediately adjacent to the Subject Parcel. This report also assesses if additional protocol or focused survey efforts are necessary, and whether any biological impacts and effects may occur to federal and state listed species, and sensitive or jurisdictional habitats from the proposed action (see below for Proposed Project). The analysis is based on the Proposed Project, existing site conditions, results of biological surveys, and the potential for special-status plant and animal species and/or habitat to occur on or adjacent to the Subject Parcel.

PROPOSED PROJECT

The proposed project is the new construction of a single family 3,542 square-foot two-story residence with an attached 2,130 square-foot garage, storage, and art studio (Refer to Appendix G). In addition, the project will include an exterior concrete deck in the rear of the residence and areas of outdoor hardscape.

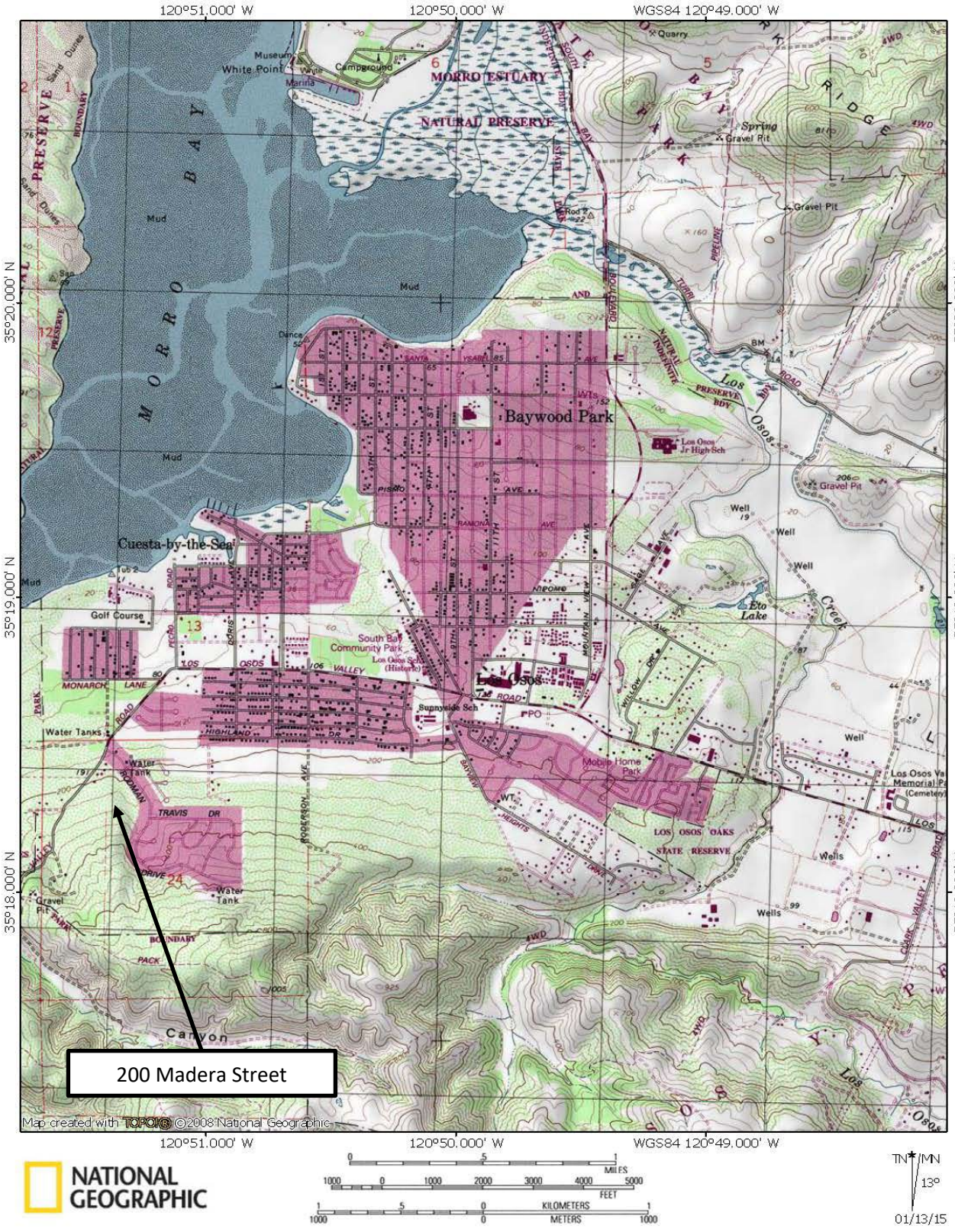

FIGURE 1. Location map of Subject Parcel.

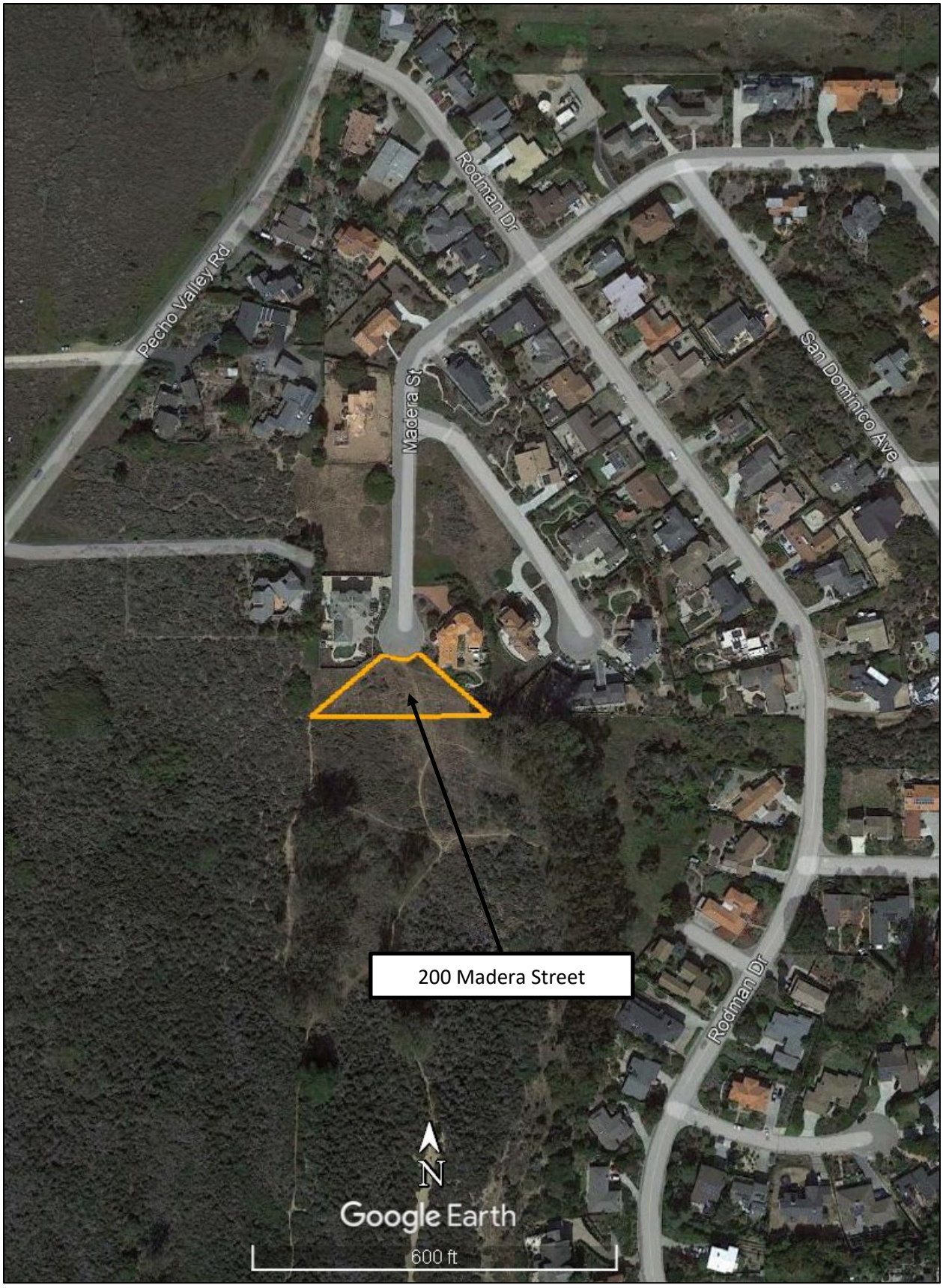

FIGURE 2. Aerial image of parcel location in Los Osos.

SURVEY METHODS

Survey Area

The Survey Area for this Biological Resources Assessment consisted of the entire 0.45-acre parcel (i.e., Subject Parcel). A buffer area was not surveyed due to the adjacent private properties. However, EAM surveyed the adjacent 22.7-acre Shannon parcel located immediately to the west in 2019, 2020, and 2022. The Subject Parcel location is shown in Figure 1 and Figure 2, and also over an aerial image within Appendix F, Existing Conditions and Habitat Map. This Survey Area included the entire parcel and thus accounts for the total site disturbance that will occur on the parcel from the proposed residential project.

Literature Review

Prior to visiting the Subject Parcel, EAM biologists reviewed the California Natural Diversity Data Base (CNDDB) (2021) from a six (6) U.S. Geological Survey (USGS) 7.5-minute quadrangle area around the Subject Parcel to evaluate the potential for occurrence of special-status species and sensitive natural communities. The search area included the following quadrangles: Morro Bay South, Port San Luis, Atascadero, San Luis Obispo, Pismo Beach, and Morro Bay North. The typical nine (9) quadrangle review was not possible due to the location of the parcel in the Morro Bay South quadrangle which has no additional quadrangles to the west, northwest, or southwest due to the Pacific Ocean. The review area was deemed appropriate based on the Subject Parcel's unique soil type (e.g., Baywood fine sands), coastal location, dominant plant communities, current conditions, elevation (<80 meters), because these features limit the potential number of special-status plant and animal species, and special-status plant communities that could be present.

In addition to CNDDB results, EAM reviewed the results from a query of the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants for the Morro Bay South, Port San Luis, Atascadero, San Luis Obispo, Pismo Beach, and Morro Bay U.S. Geological Survey (USGS) 7.5-minute quadrangles. Other databases and literature reviewed included the US Fish and Wildlife's Information for Planning and Conservation (IPac), CalFlora online database, the USFWS National Wetland Inventory, U.S. Geological Survey National Hydrography Dataset, the University of California Davis Soil Resource Laboratory SoilWeb website, and available environmental documents and reports conducted in nearby areas for background information and recent findings.

Other literature reviewed for the project included recent environmental documents and reports from nearby areas, including the County of San Luis Obispo's Draft Environmental Impact Report for the Los Osos Wastewater Project and numerous other botanical resources survey reports previously prepared by EAM in Los Osos. These includes Morro shoulderband snail survey report prepared for this parcel in 2015 and 2017 (refer to Appendix H), and the botanical resource survey report prepared for the

nearby parcel located at 207 Madera Street, the nearby Pratt parcels, and numerous other vacant parcels in the Cabrillo Estates development.

Site Visits

EAM biologist Dwayne Oberhoff visited the Subject Parcel on four (4) separate occasions in 2021 assessing existing conditions and biological resources. The dates of the site visits include March 16, April 14, May 19, and November 30, 2021. During the site visits, plant communities on the Subject Parcel were characterized and the potential for occurrence of special-status plants and animals identified by the CNDDB and CNPS queries were evaluated. The three (3) site visits in March, April, May 2021, were specifically timed to cover the flowering periods of the special-status plant species with potential for occurrence. These focused survey efforts and the results presented here constitute a full floristic inventory of the Subject Parcel that will be discussed in more detail in this report.

In late 2014 and early 2015 Dwayne Oberhoff and Bob Sloan conducted five (5) focused, protocol-level surveys for Morro shoulderband snail on the Subject Parcel from November 30, 2014, to February 7, 2015. During those surveys all areas and habitats located on the Subject Parcel were surveyed by walking transects, visual observation, and carefully sifting through soil and leaf litter by hand under vegetation, around woody debris, and other areas where Morro shoulderband snail could be present. During the five protocol-level surveys, three (3) empty class B Morro shoulderband snail shells were observed (refer to Appendix H).

In addition, one focused survey for Morro shoulderband snail conducted during protocol conditions was conducted on January 9, 2017, to assess the current conditions and presence of Morro shoulderband snail at the 200 Madera Street (refer to Appendix H). The single protocol survey and habitat assessment conducted on the Subject Parcel observed no live Morro shoulderband snail, empty Morro shoulderband snail shells, and observed habitats were similar to the conditions observed during the 2014//2015 protocol surveys and habitat assessment.

RESULTS

Existing Conditions

The Subject Parcel ranges in elevation from 260 to 276 feet (80 to 84 meters) above sea level and was observed to moderately slope downward from south to north (approx. 15% average slope). The Subject Parcel was dominated by non-native veldt grass (*Ehrharta calycina*) and bare sand with a few individual scattered shrubs consisting of primarily of chamise (*Adenostoma fasciculatum*) and buckbrush (*Ceanothus cuneatus*). The Subject Parcel has been mowed annually for weed abatement and fire safety purposes over the last several years, and this activity has reduced and removed some of the native shrubs. In general, the Subject Parcel contains limited cover of

native woody shrubs and a sparse cover of non-native grasses. Appendix A includes site photos taken during the site visits.

The University of California Davis, Soil Resource Laboratory website, SoilWeb (http://casoilresource.lawr.ucdavis.edu/), maps the underlying soils of the Subject Parcel as maps a single soil unit on the Subject Parcel: Baywood fine sand, 9 to 15 percent (%) slopes.

No aquatic or wetland habitats were observed within or adjacent to the Subject Parcel during the site visits.

Observed Habitats

All site visits thoroughly covered the 0.45-acre Subject Parcel and during these site visits one (1) natural plant community was observed: non-native annual grassland. The areas of widely scattered native shrubs would not be considered a habitat. Observed and general conditions within this plant community are discussed below. Refer to Appendix F (Existing Conditions and Habitat Map) for a habitat map of the Subject Parcel.

- Non-native Annual Grassland

This community covers all of the Subject Parcel and is dominated by scatted clumps of veldt grass and is not classified within either the Manual of California Vegetation (Sawyer 2009) or in Holland (1986). However, based on the Manual of California Vegetation, this community would be considered a semi-natural Alliance (Saywer et al 2009) due to it being "strongly dominated by non-native plants that have become naturalized in the state." Most the Subject Parcel has been, and continues to be, mowed annually for fire hazard abatement, and due to these regular and annual disturbances special-status plant species are generally not found in these areas, based on the multitude of surveys conducted within Los Osos and the immediate vicinity of the Subject Parcel. In addition, this community provides low quality wildlife habitat due to the regular disturbances. In addition, a pedestrian hiking trail bisects the Subject Parcel and is heavily utilized by pedestrians and dog-walkers.

SPECIAL-STATUS SPECIES

Special-Status Plant Species

Three (3) site visits were conducted in spring 2021 and consisted of focused surveys for special-status plants. The surveys were conducted over the entire parcel and these site visits consisted of walking all portions of the parcel and identifying all plant species observed. All of the surveys were conducted during the flowering periods for the species identified by the CNDDB and CNPS queries as occurring within the six (6) U.S. Geological Survey (USGS) 7.5-minute quadrangle area around the Subject Parcel in order to evaluate the potential for occurrence of sensitive plants and habitats. Plants

were identified to species, or sub-species, with dichotomous keys used as necessary (Hoover, 1970; Baldwin, ed. 2012).

For the purpose of this study, special-status plants are vascular plants listed, proposed for listing, or candidates for listing as Threatened or Endangered by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (ESA); those listed or proposed for listing as Rare, Threatened, or Endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA); and plants occurring on California Rare Plant Rank 1, 2, 3 and 4, as developed by the CDFW and the CNPS. Sensitive natural communities are those plant communities listed as rare in the CNDDB.

The specific Rare Plant Rank code definitions are as follows:

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

The CNDDB and CNPS queries identified 113 special-status plant species known to occur within a six (6) 7.5-minute quadrangle review area around the Subject Parcel. Appendix A contains a table of all special-status plant species identified by the CNDDB, CNPs, and other database queries. The list in Appendix A includes special-status plant species that grow in a broad range of habitats, soil types, and elevations that are not found on or in the vicinity of the Subject Parcel.

The majority of the 113 special-status plant species identified in the database have highly specialized habitat requirements such as serpentine rock outcrops and soils, broadleaf or coniferous forests, native grasslands, saltwater or freshwater marsh, or sand dunes, that are not present on or adjacent to the Subject Parcel. Species that occur on serpentine based soils such as: San Luis mariposa lily (*Calochortus obispoensis*), Jones layia (*Layia jonesii*), Betty's dudleya (*Dudleya abramsii ssp. bettinae*), and most

beautiful jewel flower (*Streptanthus albidus ssp. peramoenus*) are not expected to occur on the property due to the lack of serpentine based soils. Similarly, special-status plants known to occur at higher elevations such as San Benito fritillary (*Fritillaria viridea*), and Cuesta Ridge thistle (*Cirsium occidentale var. lucianum*), or in grassland habitats such as Blochman's dudleya (*Dudleya blochmaniae ssp. blochmaniae*), and Cambria (or San Luis Obispo County) morning glory (*Calystegia subacaulis ssp. episcopalis*), were not observed and are not expected to occur on the Subject Parcel due to the lack of suitable soils and habitat conditions. In addition, species known to occur on active dunes, coastal salt marshes and wetlands/seeps such as beach spectaclepod (*Dithyrea maritima*), California seablite (*Suaeda californica*) and Chorro Creek bog thistle (*Cirsium fontinale* var. *obispoense*) were not observed and are not expected to occur due to the absence of specific habitat requirements.

Of the 113 total species identified in the database queries, the following eighteen (18) special-status plant species are known to occur on sandy soils in coastal scrub and chaparral habitats, and have been previously identified in the Los Osos area.

- Arroyo de la Cruz manzanita (*Arctostaphylos cruzensis*)
- Morro manzanita (*Arctostaphylos morroensis*)
- Hardham's evening-primrose (*Camissoniopsis hardhamiae*)
- Lompoc ceanothus (Ceanothus cuneatus var. fascicularis)
- San Luis Obispo ceanothus (*Ceanothus thyrsiflorus var. obispoensis*)
- Straight-awned spineflower (*Chorizanthe rectispina*)
- Popcorn lichen (*Cladonia firma*)
- Dune larkspur (*Delphinium parryi* ssp. *blochmaniae*)
- Blochman's leafy daisy (*Erigeron blochmaniae*)
- Saint's daisy (*Erigeron sanctarum*)
- Indian Knob mountainbalm (*Eriodictyon altissimum*)
- San Luis Obispo wallflower (*Erysimum capitatum var. lompocense*)
- Suffrutescent wallflower (*Erysimum suffrutescens*)
- Mesa horkelia (*Horkelia cuneata* var. *puberula*)
- Kellogg's horkelia (*Horkelia cuneata* var. *sericea*)
- Southern curly-leaved monardella (*Monardella sinuata ssp. sinuata*)
- San Luis Obispo monardella (*Monardella frutescens*)
- Sand almond (*Prunus fasciculata var. punctata*)

Focused botanical surveys were conducted over the entire Subject Parcel on March 16, April 14, and May 18, 2021, and during these surveys a full floristic inventory of the Subject Parcel was compiled (refer to Appendix C). Of the eighteen (18) special-status plant species listed above, a single Kellogg's horkelia was observed during the surveys. The single individual horkelia is located within the central southern portion of parcel in an area that is regularly mowed (refer to Appendix F). Based on these results, impacts to Kellogg's horkelia will occur from the proposed residential project.

A CNDDB special-status species occurrence discussion table is included in Appendix A. During the site visits twenty-nine (23) vascular plant species were identified and a list of all species observed on the Subject Parcel during the surveys is provided in Appendix C. Of the plant species observed, fourteen (14) were native and nine (9) were non-native species.

Special-Status Plant Communities

The query of the CNDDB also identified nine (9) sensitive natural communities/plant communities within the six (6) 7.5-minute quadrangle review area. These communities are:

- Central Dune Scrub
- Central Foredunes
- Central Maritime Chaparral
- Coastal and Valley Freshwater Marsh
- Coastal Brackish Marsh
- Northern Coastal Salt Marsh
- Northern Interior Cypress Forest
- Serpentine Bunchgrass
- Valley Needlegrass Grassland

None of the sensitive natural communities were observed on the parcel. Central Maritime chaparral is present in large areas to the south at slightly higher elevations (approximately >300 feet above mean sea level) than the Subject Parcel.

Special-Status Wildlife Species

The query of the CNDDB identified a total of eighty-one (81) special-status wildlife species as occurring within the general vicinity of the Subject Parcel. Appendix B discusses the habitat requirements of each special-status species, presence of potentially suitable habitat, and likelihood to occur on the Subject Parcel. Four (4) of the 81 (eighty-one) identified special-status species known from the vicinity have the potential to be located on or in the immediately vicinity of the Subject Parcel (refer to Appendix B) based on habitat requirements and habitats observed on site. In addition, nesting birds are also potentially present. Many of the special-status wildlife species identified in the database review would be associated with riparian and aquatic habitats, or open water and estuarine habitats. Since the Subject Parcel does not have riparian, aquatic habitats, or estuarine habitats, these species do not have a potential to occur on the Subject Parcel. A list of the wildlife species observed during the site visits is included in Appendix D. Analysis of the CNDDB results found the following special-status wildlife species and common migratory nesting bird species to be present or have potential to occur on or in the immediate vicinity of the Subject Parcel. These species include:

- Obscure bumble bee (*Bombus caliginosus*)
- Morro shoulderband snail – (*Helminthoglypta walkeriana*)
- Northern California legless lizard – (*Anniella pulchra*)
- Coast horned lizard – (*Phrynosoma blainvillii*)
- Migratory Nesting Birds

Three (3) empty Morro shoulderband snail shells were observed during focused protocol surveys in 2014/2015. Other than the 2014/2015 identified presence of Morro shoulderband snail on the Subject Parcel, no other special-status wildlife species were documented on site during the site visits associated with this report.

A list and description of the four (4) special-status species and nesting birds, their habitats, conservation status, and their likelihood for occurrence within the Subject Parcel is provided below.

- Obscure bumble bee (*Bombus caliginosus*)
  This species occurs along the Pacific Coast, from southern California to southern British Columbia, with scattered records from the east side of California's Central Valley. Common plants utilized by the species includes *Ceanothus, Cirsium, Clarkia, Keckiella, Lathyrus, Lotus, Lupinus, Rhododendron, Rubus, Trifolium,* and *Vaccinium*. Buckbrush (Ceanothus cuneatus) was observed on the Subject Parcel and could provide a suitable food source for the species. The species is reported to nest in underground abandoned rodent nests, or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees and leaves. There are two occurrences of this species recorded within the Los Osos area.

  Due to the limited available information on this species' ecology and local occurrences, it is difficult to assess whether the species is potentially present on the Subject Parcel. In addition, personal communications with Ken Osborne (Osborne Biological Consulting) regarding *Bombus* species, no protocol survey methodology has been developed to date, and due to their large range (entire Pacific coast) and diverse use of food source plants, determining presence/absence on the Subject Parcel would be very difficult and not conclusive. Based on the presence of large areas of potentially suitable habitat in nearby areas, any potential impacts to this species would not be considered significant and no avoidance and protection measures are recommended.

- Morro shoulderband snail (*Helminthoglypta walkeriana*)
  Morro shoulderband snail is found in western San Luis Obispo County within the vicinity of Morro Bay. Specifically, it is found south from the northern portion of the city of Morro Bay, west of Los Osos Creek and north of Hazard Canyon. Within this area, the primary habitat components for Morro shoulderband snail are coastal dune and coastal scrub plant communities found on sandy soils with ≤10 percent (%) slopes. Key native plant species associated with Morro

shoulderband snail include mock heather (*Ericameria ericoides)*, coast buckwheat (*Eriogonum parvifolium*), dune bush lupine (*Lupinus chamissonis*), deerweed (*Acmispon glaber*), California croton (*Croton californicus*), seaside golden yarrow (*Eriophyllum staechadifolium*), black sage (*Salvia mellifera*) and California sagebrush (*Artemisia californica*). Morro shoulderband snail are also commonly found in association with non-native plant species such as veldt grass (*Ehrharta calycina*), ice plant (*Carpobrotus edulis*), and anthropogenic structures or debris/garbage (i.e., plywood, cardboard, etc.).

Five (5) protocol surveys for Morro shoulderband snails were conducted on the parcel in 2014/2015 and during these surveys three (3) empty Morro shoulderband snail shells were observed. A subsequent single protocol survey in 2017 did not identify any live snails or empty shells. Based on the presence of suitable habitat on and adjacent to the Subject Parcel, Morro shoulderband snail is potentially currently present. In order to determine presence on the Subject Parcel, additional new surveys would need to be conducted. The previous survey results reports prepared in 2015 and 2017 are located in Appendix H.

- Northern California legless lizard (*Anniella pulchra*)
  This lizard species occurs in moist warm loose soil in sparsely vegetated areas consisting of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Moisture is essential. In the Los Osos area, it is commonly found associated with leaf litter under trees and bushes in sunny areas and dunes stabilized with bush lupine and mock heather. Often can be found under surface objects such as rocks, boards, driftwood, and logs.

  This species is difficult to locate during focused survey efforts or pre-construction surveys, but is commonly found in Los Osos during initial grubbing of project sites and is easily relocated to new areas. Based on numerous previous projects in the general vicinity, this species is likely present on the Subject Parcel and impacts to this species may occur. Recommended avoidance and minimization measures are provided below to reduce impacts on this species.

- Coast horned lizard (*Phrynosoma blainvillii*)
  This reptile species Inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains. Found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Often found in lowlands along sandy washes and along dirt roads, and near ant hills. Species is found in Los Osos in sparsely vegetated areas with openings containing sandy soils.

EAM biologists observed the species in 2019 approximately 0.31-mile to the west of the Subject Parcel. This species was not observed during the four (4) surveys conducted on the Subject Parcel, but could be present in the future. Recommended avoidance and minimization measures are provided below to reduce impacts on this species.

- Other Nesting Birds

  Suitable nesting habitat for numerous native and migratory birds is present throughout and adjacent to the Subject Parcel, including within the project footprint. Direct impacts to nesting birds could occur from removal of vegetation during the nesting season or from indirect impacts associated with disturbances from construction equipment and other project activities. The Subject Parcel is relatively small, but may be used as foraging habitat by raptors, such as, Cooper's hawk and red-shoulder hawk, however, no species of raptor is anticipated to nest on site. Recommended avoidance and minimization measures are provided below to reduce impacts on this species.

Critical Habitat Identification

The Subject Parcel was reviewed to determine if it is located within federally-designated critical habitat. It was determined that the Subject Parcel is not located within any critical habitat unit, but critical habitat for Morro shoulderband snail is located immediately to the west of the Subject Parcel.

Habitat Connectivity

The Subject Parcel is not known to be an important wildlife corridor or provide linkage between known important disjunct wildlife habitats or satellite/core populations. The proposed project will remove non-native annual grassland, but it will not block any known wildlife corridor or linkage.

REGULATORY OVERVIEW

Section 404 of the Clean Water Act Of 1977

Regulatory protection for water resources throughout the United States is under the jurisdiction of the U.S. Army Corps of Engineers (Corps). Section 404 of the Clean Water Act prohibits the discharge of dredged or fill material into Waters of the U. S. without formal consent from the Corps. Waters of the U.S. includes Special Aquatic Sites (e.g., marine waters, tidal areas, stream channels) and wetlands. Under Section 404, actions in Waters of the U.S. may be subject to either an individual permit or a general permit, or may be exempt from regulatory requirements.

No wetlands or Other Waters of the U.S., as defined by the Corps, occur within or immediately adjacent to the Subject Parcel.

Section 401 of the Clean Water Act Of 1977

Section 401 of the Clean Water Act and its provisions ensure that federally permitted activities comply with the federal Clean Water Act and state water quality laws. Section 401 is implemented through a review process that is conducted by the Regional Water Quality Control Board (RWQCB), and is triggered by the Corps permitting process. Specifically, the RWQCB certifies via the 401 process that the proposed project complies with applicable effluent limitations, water quality standards, and other conditions of California law.

No areas that would be subject to Section 401 of the Clean Water Act occur within or immediately adjacent to the Subject Parcel.

Federal Endangered Species Act Of 1973

The Federal Endangered Species Act (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 individual to formally consult with the USFWS or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to determine the extent of impact to a particular species.

Previous focused surveys for Morro shoulderband snail conducted during protocol conditions in 2014/2015 identified three (3) empty Morro shoulderband snail shells and suitable habitat for the species on the Subject Parcel. Focused surveys for Morro shoulderband snail during protocol conditions were not conducted for this report in 2021, but based on the previous identification of Morro shoulderband snail shells, and presence of suitable habitats on and adjacent to the Subject Parcel, live Morro shoulderband snail is potentially present. Due to the Subject Parcel being known habitat for Morro shoulderband snail, receiving a "no-take" concurrence determination from the U.S. Fish and Wildlife Service is not an available option. An Incidental Take Permit through the preparation and execution of an individual Habitat Conservation Plan would likely need to be prepared in order to develop the Subject Parcel or participation in the forthcoming community-wide Los Osos Habitat Conservation Plan. Due to USFWS' current workload, the processing of an individual Habitat Conservation Plan is unknown and due to the forthcoming community-wide Los Osos Habitat Conservation Plan the USFWS will likely not prioritize review/processing of any individual Habitat Conservation Plan.

Assessing special-status plant species based on suitable soils, habitat and nearby occurrences identified eighteen (18) plants that have potential to occur on or within the vicinity of the Subject Parcel. However, no federally-listed plant species were observed during the four (4) focused surveys of the Subject Parcel conducted in Spring 2021.

California Endangered Species Act

The State of California Endangered Species Act (CESA) ensures legal protection for plants listed as rare or endangered and species of wildlife formally listed as endangered or threatened. The state also lists "Species of Special Concern" based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Under state law, the California Department of Fish and Game is empowered to review projects for their potential to impact state-listed species and California Special Concern species, and their habitats.

This assessment did not identify any State-listed endangered or threated species as potentially occurring on the Subject Parcel.

Section 1602 of the Fish and Game Code

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the law requires any person, state or local government agency, or public utility proposing a project that may impact a river, stream, or lake to notify the CDFG before beginning the project. If the CDFG determines that the project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required.

Since no drainages, channels, streams, rivers or lakes occur within the immediate vicinity of the Subject Parcel, the proposed project will not require a 1602 Streambed Alteration Agreement prior to project implementation.

Other Sections of the Fish and Game Code

Fully Protected and Protected species may not be taken or possessed without a permit from the Fish and Game Commission and/or the CDFW. Information on these species can be found within section 3511 (birds), section 4700 (mammals), section 5050 (reptiles and amphibians), and section 5515 (fish) of the Fish and Game Code.

Known and/or potentially suitable habitat for two (2) California Species of Concern and one "Special Animal" was identified as occurring on the Subject Parcel. This includes: Northern California legless lizard, coast horned lizard, and obscure bumble bee (Special Animal). Legless lizard is likely present on the parcel based on EAM's experience with previous nearby projects. Coast horned lizards have a moderate potential to be present, but have been observed by EAM biologists within the vicinity. Obscure bumble bee is a wide-ranging species along the entire west coast, which may be in the general vicinity due to the presence of buckbrush (*Ceanothus* sp.). No survey protocol has been developed to determine presence/absence of this bumble bee species and any potential impacts to this species is currently best dealt with through conservation or restoration of suitable habitats. No species designated as "Fully Protected" under the Fish and Game Code were identified as potentially present and/or impacted from the proposed project.

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 1800's.

Numerous bird species were observed during the surveys, but no species of raptors were observed during the site visits. Implementation of the proposed residential project could directly and indirectly affect species of bird covered under the MTBA, but pre-activity surveys for active nests should be conducted prior to construction if construction occurs between February 1 and September 15. Avoidance and protection measures are recommended and provided below.

IMPACT ASSESSMENT AND RECOMMENDED MEASURES

The following impact analysis and recommended avoidance/protection measures are intended to support the California Environmental Quality Act (CEQA) review process conducted by the County of San Luis Obispo acting as the lead agency for the project.

As proposed, the residential project will directly remove areas of non-native veldt grass and numerous individual scattered native shrubs. One (1) special-status plant species was observed and a protection measure is being recommended. In addition, Morro shoulderband snail, nesting birds, Northern California legless lizard, and coast horned lizard are potentially present and could be affected during vegetation removal and/or construction activities. Focused protocol surveys and/or pre-construction surveys are recommended for all these species to determine if these species are present and if impacts will occur. If construction occurs within the nesting season, additional presence/absence surveys for nesting birds must be conducted prior to grading, and any active nests present must be monitored and documented per the recommended mitigation measures.

The following avoidance and minimization measures are intended to help reduce project-related impacts to biological resources on the site.

SENSITIVE NATURAL COMMUNITIES

The database queries identified nine (9) sensitive natural communities (plant communities) within the project vicinity: Central Dune Scrub, Central Foredunes, Central Maritime Chaparral, Coastal and Valley Freshwater Marsh, Coastal Brackish Marsh, Northern Coastal Salt Marsh, Northern Interior Cypress Forest, Northern Serpentine Bunchgrass, and Valley Needlegrass Grassland. During the site visits none of these communities were observed on the Subject Parcel. Prior to development of the parcel in the early 1990s it was likely vegetated with coastal scrub with intermixed chaparral species. However, development of this tract removed all of this native vegetation at that time and annual fire hazard abatement has prevented recolonization of these native communities.

SPECIAL STATUS PLANT SPECIES

Kellogg's Horkelia

Based on the results of the focused botanical resources surveys, and the presence of a single Kellogg's horkelia, the proposed project will impact this special-status plant species. Due to the location of the single horkelia within the proposed project footprint, direct impacts to this individual will occur. This species has been successfully transplanted within Los Osos and this single individual should be replanted in a protected area on the subject parcel or within a different protected area within close proximity. Specific avoidance, protection, and mitigation measures that limit the removal and mitigate for impacts to Kellogg's horkelia are provided below.

Project-related disturbances within the Subject Parcel will impact Kellogg's horkelia and the following measure is intended to reduce and mitigate project related impacts to this special-status species.

> **BIO 1 – Kellogg's horkelia:** Prior to the start of site preparation, all Kellogg's horkelia located within the proposed project disturbance area shall be transplanted to a protected area of the Subject Parcel or at a suitable off-site location that contains suitable soils and habitat. The replanting shall be done by a qualified biologist and be conducted in early winter (late November to December) when winter rains have commenced. All replanting shall be done in undisturbed native topsoil, and to ensure success, all transplanted Kellogg's horkelia should be hand watered once weekly for the first twelve (12) weeks to increase survival.

SPECIAL STATUS ANIMAL SPECIES

Morro Shoulderband Snail

Direct impacts (i.e., take) to Morro shoulderband snail has the potential to occur from the proposed project due to the previous documented presence of Morro shoulderband snail and the presence of suitable habitats on and adjacent to the Subject Parcel. Based on this, the project will have to participate in the forthcoming Los Osos Community-wide HCP in order to mitigate impacts to this species and in order to proceed with construction.

> **BIO-2 Los Osos Habitat Conservation Plan Inclusion:** The project would be eligible for coverage under the current proposed terms of County of San Luis Obispo's ("County") Los Osos Habitat Conservation Plan ("LOHCP") awaiting U.S. Fish and Wildlife Service final approval and issuance of an Incidental Take Permit ("ITP"). Following the effective date of the County's ITP and LOHCP, but prior to building permit approval, the project proponent shall secure a Certificate of Inclusion ("COI") from the County, which would confer take coverage under the ITP. The project proponent shall comply with the terms of the COI and ITP, which

includes compliance with the LOHCP. If the County finds that the project proponent is out of compliance with the terms of the COI and ITP, the County has the authority to revoke the COI. Without a valid COI, all work relating to the project shall cease immediately.

If, following one year from the approval of the project, the ITP has not been issued by the U.S. Fish and Wildlife Service and the LOHCP is not in effect, the project will not have coverage under a County ITP. Without coverage under a County ITP, no site disturbance or construction may occur at the site, no building permits may be approved, and no time extension may be granted without amendment of this land use permit. Amendment of this land use permit to allow the project to proceed without coverage under a County ITP will require submittal of an application to amend this land use permit and the necessary surveys and reports to properly consider and address the potential for incidentally take (harm, injure, capture and/or kill) of Morro Shoulderband Snail (Helminthoglypta walkeriana), and the application to amend this land use permit (including its environmental determination and conditions of approval) would require review and approval by the appropriate Review Authority.

Special Status and Other Nesting Birds

Even though no nesting birds were observed, both direct and indirect impacts to nesting birds have the potential to occur if work activities are conducted during the nesting season (e.g., February 1 to September 15). Direct impacts to nesting raptors and other bird species from tree removal will not occur since no trees are proposed to be removed. However, direct impacts to nesting birds have the potential to occur from impacts associated with the direct removal of grassland habitat and individual shrubs present on the parcel. Indirect impacts to nesting birds located adjacent to the proposed work areas has the potential to occur from disturbances and noise associated with grubbing, grading, and other project-related activities. The following avoidance and protection measures address both direct and indirect impacts to nesting birds for the proposed project.

BIO 3 – Nesting Bird Impact Avoidance and Protection.

- If feasible, vegetation removal activities should be scheduled to occur outside the February 1 to September 15 nesting. No surveys for nesting birds shall be required for project activities occurring between September 16 and January 31.
- For project-related activities that occur during the nesting season (February 1 to September 15) a nesting bird survey shall be conducted by a qualified biologist at least 14 days prior to vegetation removal for each phase of the project. The surveys shall be conducted within all accessible areas within 500 feet of the work area.

- If nests are located during any survey, all project-related activities shall be avoided within the following buffer zones: 50 feet for non-raptor species and 500 feet for all active raptor nests. Buffer areas shall be closed to all construction personnel and equipment until a qualified biologist has determined nesting has ended and the young have fledged the nest and the nest is no longer active.

Northern California Legless Lizard and Coast Horned Lizard

Direct impacts to Northern California legless lizard and coast horned lizard could occur during initial grubbing and vegetation removal efforts if the species are present within the proposed project disturbance area. Legless lizard is a relatively common reptile species found within the sandy soils and shrub habitats in Los Osos. However, even when present, the species is extremely difficult to locate during focused pre-construction surveys within suitable habitats. Generally, preconstruction surveys are conducted, but the species is typically not observed until the site is grubbed and the species is unearthed. Legless lizards are expected to occur within the proposed project site based on suitable soils and the presence of shrub habitats, and previous observations in the area. Coast horned lizard have been observed within the general area of the Subject Parcel and the sparse annually mowed non-native annual grasslands onsite provides potentially suitable habitat for this species.

The following measure will attempt to locate these species prior to ground disturbing activities and also relocate these species if disturbed or unearthed during grubbing/grading activities.

BIO 4 - Northern Legless Lizard and Coast Horned Lizard Impact Avoidance. No more than three (3) days prior to initiation of ground disturbing activities, all areas of the project footprint, including under shrubs, shall be surveyed by a qualified biologist. Any individuals found shall be relocated to an area on the parcel consisting of appropriate habitat at least 50 feet outside the project development footprint. A qualified biologist shall monitor all initial vegetation clearing and ground disturbing activities in areas of suitable habitat to capture and relocate individuals to an area on the parcel consisting of appropriate habitat at least 50 feet outside the project development footprint.

CONCLUSION

As documented by this Biological Resources Assessment, the proposed single-family residential project has the potential to directly and/or indirectly impact special-status wildlife species during construction activities. Incorporation of the biological avoidance and protection measures included in this report, and County requirements under the Local Coastal Program and the Minor Use Permit process, are expected to provide sufficient protection under CEQA for biological resources during project construction.

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Appendix A: Habitat Requirements and Potential for Occurrence of Special-Status Plants Occurring in the Vicinity of the Subject Parcel

Appendix A. List of Special-Status Plant Species Within a Five Mile Radius of the Subject Parcel

Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
Red sand verbena *Abronia maritima*	--/--/4.2	Perennial herb that occurs in coastal foredunes dunes at elevations from 0-100 meters.	February-November	Suitable habitats not present on site. Species not observed during focused surveys.
Hoover's bent grass *Agrostis hooveri*	--/--/1B.2	Stoloniferous perennial herb on sandy soils in chaparral, cismontane woodland, and valley and foothill grassland. Elevation 60 to 600 meters.	April - July	Suitable habitats not present on site. Species not observed during focused surveys.
Arroyo de la Cruz manzanita *Arctostaphylos cruzensis*	--/--/1B.2	Perennial shrub; blooms from December to March; occurs between 60 and 310 meters in sandy soils; found in broadleaved upland forest, coastal bluff scrub, closed-cone coniferous forest, chaparral, coastal scrub and valley and foothill grassland.	December-March	Suitable habitat present on site. Nearest occurrences south in Montana de Oro State Park. Not observed during focused botanical surveys.
Santa Lucia manzanita A*rctostaphylos luciana*	--/--/1B.2	Perennial shrub; occurs on shale outcrops in chaparral and cismontane woodland habitats; ranges from 350 to 850 meters in elevation.	February - March	Suitable habitats not present on site. Species not observed during focused surveys.
Morro manzanita *Arctostaphylos morroensis*	FT/--/1B.1	Evergreen shrub; blooms December through March; ranges in elevation from 5 to 205 meters; typically found on sandy-loam or Baywood sands in chaparral, woodlands, coastal dunes and coastal scrub.	December-March	Suitable habitats not present on site. Species not observed during focused surveys.
Bishop manzanita *Arctostaphylos obispoensis*	--/--/4.3	Rocky, generally serpentine soils, chaparral, open closed-cone forest near coast. Elevation 60 to 950 meters in elevation.	February - March	Suitable habitats not present on site. Species not observed during focused surveys.
Oso manzanita *Arctostaphylos osoensis*	--/--/1B.2	Perennial shrub known to occur in chaparral and cismontane woodland on the porphyry buttes east of Morro Bay.	February-March	Suitable habitats not present on site. Species not observed during focused surveys.
Pecho manzanita *Arctostaphylos pechoensis*	--/--/ 1B.2	Perennial shrub. Occurs on shale outcrops in chaparral, and coniferous forest at elevations <500 meters.	November – March	Suitable habitats not present on site. Species not observed during focused surveys.
Santa Margarita manzanita *Arctostaphylos pilosula*	--/--/1B.2	Perennial shrub. Occurs in closed coniferous forest, chaparral, and cismontane woodland; usually on shale soils. Elevation 170 – 1100 meters.	December – March	Suitable habitats not present on site. Species not observed during focused surveys.

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Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
Dacite manzanita *Arctostaphylos tomentosa* ssp. *daciticola*	--/--/1B.1	Perennial shrub occurs in chaparral and cismontane woodland. Only one known occurrence of this species in SLO County on the porphyry buttes (Hollister Peak) east of Morro Bay.	January-May	Suitable habitats not present on site. Species not observed during focused surveys.
Marsh sandwort *Arenaria paludicola*	FE/SE/1B.1	Stoloniferous, perennial herb; blooms May to August; occurs in freshwater marshes and swamps, bogs and fens, and some coastal scrub, ranging from 3 to 170 meters in elevation; common associates include Typha, Juncus, and Scirpus.	May - August	Suitable habitats not present on site. Species not observed during focused surveys.
Carlotta Hall's lace fern *Aspidotis carlotta-halliae*	--/--/4.2	Generally serpentine slopes, crevices, and outcrops. Elevation 100 - 1,400 meters.	-	Suitable habitats not present on site. Species not observed during focused surveys.
Miles' milk-vetch *Astragalus didymocarpus var. milesianus*	--/--/1B.2	Annual herb; blooms March to June; found in coastal scrub habitats, typically occurring on clay soils; ranges in elevation 20 to 90 meters.	March - May	Suitable habitats not present on site. Species not observed during focused surveys.
Nuttall's milkvetch *Astragalus nuttallii var. nuttallii*	--/--/4.2	Found in rock, sandy areas, bluffs at elevations <250 meters.	January-November	Suitable habitats not present on site. Species not observed during focused surveys.
Coulter's saltbush *Atriplex coulteri*	--/--/1B.2	Perennial herb/subshrub that grows in alkaline or clay soils, open sites, scrub, and coastal bluff scrub at elevations <500 meters.	March-October	Suitable habitats not present on site. Species not observed during focused surveys.
False gray horsehair lichen *Bryoria pseudocapillaris*	--/--/3.2	Usually on conifers; north coast coniferous forest and sand dunes in San Luis Obispo.	N/A	Suitable habitats not present on site. Species not observed during focused surveys.
Twisted horsehair lichen *Bryoria spiralifera*	--/--/ 1B.1	Usually on conifers along the immediate coast. Elevation: < 30 meters.	N/A	Suitable habitats not present on site. Species not observed during focused surveys.
Calandrinia breweri Brewer's calandrinia	--/--/4.2	Sandy to loamy soil in disturbed areas and recently burned sites. Elevation < 1,200 meters.	February - May	Suitable habitats not present on site. Species not observed during focused surveys.

Appendix A. List of Special-Status Plant Species Within a Five Mile Radius of the Subject Parcel

Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
Club-haired mariposa lily *Calochortus clavatus var. clavatus*	--/--/4.3	Generally rocky serpentine and clay soils at elevations <1300 meters.	April - June	Suitable habitats not present on site. Species not observed during focused surveys.
San Luis mariposa lily *Calochortus obispoensis*	--/--/1B.2	Chaparral, coastal scrub, valley and foothill grassland. Often in serpentine grassland at elevations from 75-665 meters.	May - July	Suitable habitats not present on site. Species not observed during focused surveys.
La Panza mariposa lily *Calochortus simulans*	--/--/1B.3	Annual herb. Chaparral, cismontane woodland, coniferous forest, valley and foothill grassland, on sandy, granitic or serpentine soils. Elevation 395 – 1100 meters.	April-June	Suitable habitats not present on site. Species not observed during focused surveys.
Dwarf calycadenia *Calycadenia villosa*	--/--/1B.1	Rocky sites in chaparral, oak woodland, juniper woodland, grasslands, open dry flats and hillsides, alluvial fans; below 4,200 feet.	May–October	Suitable habitats not present on site. Species not observed during focused surveys.
Cambria (San Luis Obispo County) morning-glory *Calystegia subacaulis ssp. episcopalis*	--/--/4.2	Rhizomatous, perennial herb; blooms from April to May; occurs in chaparral, cismontane woodland, and grassland areas in clay-rich soils; ranges from 60-500 meters; restricted to outer South Coast ranges in SLO and Santa Barbara Counties.	April – May	Suitable habitats not present on site. Species not observed during focused surveys.
Hardham's evening-primrose *Camissoniopsis hardhamiae*	--/--/1B.2	Annual herb known to occur on sandy soils in chaparral and foothill woodland habitats; typically blooms from March to May. Two recorded occurrences in the Los Osos area.	March – May	Suitable habitat present on site. Nearest occurrence 2.1 miles northeast at a much lower elevation. Species not observed during focused surveys.
Carex comosa Bristly sedge	--/--/2B.1	Perennial grasslike herb (rhizomatous). Occurs in coastal prairie, marshes and swamps (lake margins), and valley and foothill grasslands. Elevation <400 m.	May - September	Suitable habitats not present on site. Species not observed during focused surveys.
San Luis Obispo sedge *Carex obispoensis*	--/--/1B.2	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.	March – June	Suitable habitats not present on site. Species not observed during focused surveys.

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Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
San Luis Obispo owl's clover *Castilleja densiflora ssp. obispoensis*	--/--/1B.2	Annual herb; blooms in April; ranges from 10 to 400 meters in elevation and occurs in meadows, seeps, and valley and foothill grassland.	March - May	Suitable habitats not present on site. Species not observed during focused surveys.
Congdon's tarplant *Centromadia parryi ssp. congdonii*	--/--/ 1B.1	Perennial herb found growing on terraces and within swales, floodplains, grasslands and disturbed sites at elevations<300 m.	June - October	Suitable habitats not present on site. Species not observed during focused surveys.
Lompoc ceanothus *Ceanothus cuneatus var. fascicularis*	--/--/4.2	Sandy substrates in coastal chaparral. Elevation < 275 meters.	February - May	Suitable habitats present on site. However, perennial shrub was not observed during focused surveys.
Nipomo Mesa ceanothus *Ceanothus impressus var. nipomensis*	--/--/1B.2	Perennial shrub found in sandy chaparral.	February - April	Suitable habitats not present on site. Species not observed during focused surveys. Species is not known to the Los Osos area.
San Luis Obispo ceanothus *Ceanothus thyrsiflorus var. obispoensis*	--/--/1B.2	Shrub found in coastal hills and bluffs at elevations <60 meters.	January-April	Suitable habitat present on site. Nearby occurrence approx. 4.0 miles to the northeast. Species not observed during focused botanical surveys.
Congdon's tarplant *Centromadia parryi ssp. congdonii*	--/--/ 1B.1	Terraces, swales, floodplains, grassland, and disturbed sites. Elevation < 300 meters.	June - October	Suitable habitats not present on site. Species not observed during focused surveys.
Island mountain-mahogany *Cercocarpus betuloides var. blancheae*	--/--/4.3	Shrub to small tree found in chaparral at elevations. Elevation < 600 meters.	March - April	Suitable habitats not present on site. Species not observed during focused surveys. Species is not known to the Los Osos area.
Coastal goosefoot *Chenopodium littoreum*	--/--/1B.2	Annual herb that grows on sandy flats in coastal dunes along wetland and salt marsh habitat. Typically found between 30 and 100 meters, and is known from the Los Osos area.	April-August	Suitable habitats present on site. However, species not observed during focused surveys.
Dwarf soaproot *Chlorogalum pomeridianum var. minus*	--/--/1B.2	Chaparral habitats with serpentine soils. 305-1000 meters.	May-August	Suitable habitats not present on site. Species not observed during focused surveys.

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Saltmarsh bird's-beak *Chloropyron maritimum ssp. maritimum*	FE/SE/1B.2	Annual herb known to occur along margins of salt marsh habitat and coastal dunes. Limited to the higher zones of the Morro Bay estuary.	May-Oct	Suitable habitats not present on site. Species not observed during focused surveys.
Brewer's spineflower *Chorizanthe breweri*	--/--/1B.3	Occurs in closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub habitats on serpentine derived soils and rock outcrops, in rocky and gravelly areas; ranges in elevation from 45 to 800 meters; annual herb; blooms May through August.	April-August	Suitable habitats not present on site. Species not observed during focused surveys.
Douglas's spineflower *Chorizanthe douglasii*	--/--/4.3	Annual herb; found in foothill woodland, pine forest, and chaparral on sandy or gravelly soils. Elevation ranges 300 - 1,600 meters.	April – July	Suitable habitats not present on site. Species not observed during focused surveys. Species found generally at higher elevations.
Peninsular spineflower *Chorizanthe leptotheca*	--/--/4.2	Found on gravel or sandy soils at elevations from 600 to 1600 meters.	May-August	No suitable habitat present on site. Species not observed during focused botanical surveys. Species found at much higher elevations.
Palmer's spineflower *Chorizanthe palmeri*	--/--/4.2	Found on serpentine soils at elevations from 60 – 700 meters.	May – August	Suitable habitats not present on site. Species not observed during focused surveys.
Straight-awned spineflower *Chorizanthe rectispina*	--/--/1B.3	Chaparral, foothill woodland, northern coastal scrub, coastal sage scrub on sand or gravel. Elevation 200 – 600 meters.	May - July	Suitable habitat present on site. Species not observed during focused botanical surveys. The project site is coastward of all known populations in San Luis Obispo County.
Potbellied spineflower *Chorizanthe ventricosa*	--/--/4.3	Annual herb; occurs on serpentinite soils in cismontane woodland and valley and foothill grassland at elevations of 500 - 1,000 meters.	May - September	Suitable habitats not present on site. Species not observed during focused surveys.
Chorro Creek bog thistle (San Luis Obispo fountain thistle) *Cirsium fontinale var. obispoense*	FE/SE/1B.2	Perennial herb; ranges from 35 to 365 meters in elevation; occurs in chaparral and cismontane woodland habitats, often in serpentine seeps and streams.	April - October	Suitable habitats not present on site. Species not observed during focused surveys.

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Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
Compact cobwebby thistle *Cirsium occidentale var. compactum*	--/--/1B.2	Biennial herb found growing in bluffs at elevations <50 meters.	February - July	Suitable habitats not present on site. Species not observed during focused surveys.
Cuesta Ridge thistle *Cirsium occidentale var. lucianum*	--/--/1B.2	Perennial herb known to occur along the Cuesta Ridge in openings on steep rocky serpentinite slopes ranging from 500 to 750 meters elevation.	April - June	Suitable habitats not present on site. Species not observed during focused surveys.
Surf thistle *Cirsium rhothophilum*	--/FT/1B.2	Perennial herb; blooms April through June; ranges in elevation from 3 to 60 meters; occurs in coastal dune and coastal bluff scrub communities in close proximity to the ocean.	April - August	Suitable habitats not present on site. Species not observed during focused surveys.
La Graciosa thistle *Cirsium scariosum* var. *loncholepis*	FE/ST/1B.1	Biennial or short-lived perennial herb found in marshes and dune wetlands at elevations<50 meters.	April to September	Suitable habitats not present on site. Species not observed during focused surveys.
Pismo clarkia *Clarkia speciosa* ssp. *immaculata*	FE/SR/1B.1	Annual herb. Sandy soils, openings in chaparral, cismontane woodland, valley and foothill grassland. On ancient sand dunes not far from the coast. 25-185 meters.	May - June	Suitable habitats not present on site. A single observation in the Irish Hills to the southeast, but most occurrences in the Edna and Pismo Beach areas.
Popcorn lichen *Cladonia firma*	--/--/2B.1	On soil, detritus, or moss in coastal dunes and coastal scrub. Elevation: 30 – 75 meters.	N/A	Suitable habitats present on site. However, species not observed during focused botanical surveys. Species not observed during focused botanical surveys.
Monkey-flower savory *Clinopodium mimuloides*	--/--/4.2	Moist places, stream banks, chaparral, woodland. Elevation 400 - 1,800 meters.	June - October	Suitable habitats not present on site. Species not observed during focused surveys.
Paniculate tarplant *Deinandra paniculata*	--/--/4.2	Annual herb that occurs in coastal scrub and valley and foothill grassland. Elevation 35 – 430 meters.	May - October	No suitable habitat present on site. Species not observed during focused botanical surveys.
Dune larkspur *Delphinium parryi* ssp. *blochmaniae*	--/--/1B.2	Perennial herb found growing in coastal chaparral and sandy soils at elevations <200 meters.	April - May	Suitable habitats present on site. However, species not observed during focused botanical surveys.

Appendix A. List of Special-Status Plant Species Within a Five Mile Radius of the Subject Parcel

Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
Eastwood's larkspur *Delphinium parryi* ssp. *eastwoodiae*	--/--/1B.2	Perennial herb known to occur on serpentine based soils (clays) and outcrops in the general San Luis Obispo area, at elevations ranging from 75 to 500 meters	March - May	No suitable habitat present on site. Species not observed during focused botanical surveys.
Umbrella larkspur *Delphinium umbraculorum*	--/--/ 1B.3	Perennial herb. Occurs in cismontane woodland. Elevation 400 – 1600 meters.	April - June	No suitable habitat present on site. Species not observed during focused botanical surveys.
Beach spectaclepod *Dithyrea maritima*	--/ST/1B.1	Rhizomatous, perennial herb; blooms March through May; found in sandy soils, usually near shore, in coastal dunes and coastal scrub habitats; ranges from 3 to 50 meters in elevation.	March – August	No suitable habitat present on site. Species not observed during focused botanical surveys. Subject parcel well above elevational range.
Betty's dudleya *Dudleya abramsii* ssp. *bettinae*	--/--/1B.2	Perennial succulent and is endemic to coastal San Luis Obispo County west of Cerro Romualdo; found in chaparral, coastal scrub, and valley and foothill grasslands, usually on serpentine outcrops or shallow rocky soils; ranges in elevation from 20 to 180 meters.	May - June	No suitable habitat present on site. Species not observed during focused botanical surveys.
Mouse-gray dudleya *Dudleya abramsii* ssp. *murina*	--/--/1B.3	Perennial succulent herb; occurs in chaparral and cismontane woodland, usually on serpentine rock outcrops, at elevations ranging from 90 to 300 meters.	May-June	No suitable habitat present on site. Species not observed during focused botanical surveys.
Blochman's dudleya *Dudleya blochmaniae* ssp. *blochmaniae*	--/--/1B.1	Perennial herb; blooms April through June; found on rocky, often clay or serpentine soils in coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland; ranges from 5 to 450 meters in elevation.	April - June	No suitable habitat present on site. Species not observed during focused botanical surveys.
Yellow-flowered eriastrum *Eriastrum luteum*	--/--/1B.2	Found on dry slopes, sandy or gravelly soil, typically in association with chaparral or woodland. Elevation < 1,000 meters.	May - June	No suitable habitat present on site. Species not observed during focused botanical surveys. Species has not been documented within the Los Osos area.
Blochman's leafy aisy *Erigeron blochmaniae*	--/--/1B.2	Perennial herb found growing in sand dunes and hills at elevations<70 meters.	July - October	Suitable habitat present on site. Species not observed during focused botanical surveys.
Saint's daisy *Erigeron sanctarum*	--/--/4.2	Perennial herb found growing in sand sites, coastal scrub or woodland at elevations <500 meters.	March – June	Suitable habitat present on site. Species not observed during focused botanical surveys.

Appendix A. List of Special-Status Plant Species Within a Five Mile Radius of the Subject Parcel

Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
Indian Knob mountainbalm *Eriodictyon altissimum*	FE/SE/1B.1	Evergreen shrub; blooms March through June; ranges in elevation from 80 to 270 meters and occurs in maritime chaparral, cismontane woodland, and coastal scrub, usually on sandstone; often found in open disturbed areas.	March – June	Suitable habitat present on site. Perennial shrub species not present and would have been easily observed and identified if present.
Elegant wild buckwheat *Eriogonum elegans*	--/--/4.3	Annual herb found in Foothill Woodland and Valley Grassland on sand or gravel at elevations between 200 to 1200 meters.	May - November	No suitable habitat present on site. Species not observed during focused botanical surveys.
Hoover's button-celery *Eryngium aristulatum var. hooveri*	--/--/1B.1	Vernal pools in alkaline depressions near the coast. 5-45 meters.	July	No suitable habitat present on site. Species not observed during focused botanical surveys.
San Luis Obispo wallflower *Erysimum capitatum var. lompocense*	--/--/4.2	Subshrub, sometimes perennial herb, found growing in stabilized coastal sand dunes and coastal scrub at elevations <150 meters.	February-May	Suitable habitat present. Species would have been easily observed and identified if present. Generally found at much lower elevations in the Los Osos area.
Suffrutescent wallflower *Erysimum suffrutescens*	--/--/4.2	Coastal dunes, coastal scrub, coastal bluff scrub, chaparral. Coastal dunes and bluffs at elevations from 0-150 meters.	January-July	Suitable habitat present. Species would have been easily observed and identified if present. Generally found at much lower elevations in the Los Osos area.
San Benito poppy *Eschscholzia hypecoides*	--/--/4.3	Annual herb that grows in grassy areas of woodlands and chaparral at elevations from 200 to 1600 meters.	March - June	No suitable habitat present on site. Species not observed during focused botanical surveys. Species not known to Los Osos; found farther inland.
San Joaquin spearscale *Extriplex joaquinana*	--/--/1B.2	Found on alkaline soils at elevations<350 meters.	April-September	No suitable habitat present on site. Species not observed during focused botanical surveys.
Stinkbells *Fritillaria agrestis*	--/--4.2	Perennial herb (bulb); occurs in chaparral, valley grassland, foothill woodland, and wetland-riparian areas on clay (generally serpentine) banks and depressions. Elevation < 500 meters.	March - June	No suitable habitat present on site. Species not observed during focused botanical surveys. Species not known to Los Osos; found farther inland.

Appendix A. List of Special-Status Plant Species Within a Five Mile Radius of the Subject Parcel

Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
Ojai fritillary *Fritillaria ojaiensis*	--/--/1B.2	Bulbiferous, perennial herb found in chaparral, cismontane woodland, and broadleaf or coniferous forest on rocky slopes and river basins, at elevations ranging from 300 to 1000 meters.	February - May	No suitable habitat present on site. Species not observed during focused botanical surveys.
San Benito fritillary *Fritillaria viridea*	--/--/1B.2	Bulbiferous perennial herb; occurs in chaparral on serpentine soils, ranges from 200 to 1525 meters in elevation.	March - May	No suitable habitat present on site. Species not observed during focused botanical surveys.
Santa Barbara bedstraw *Galium cliftonsmithii*	--/--4.3	Perennial herb found in light shade within coastal canyons, dry banks and chaparral at elevations from 200 to 1220 meters	April – June	No suitable habitat present on site. Species not observed during focused botanical surveys. Species not known to Los Osos.
San Francisco gumplant *Grindelia hirsutula* var. *maritima*	--/--/3.2	Perennial herb found in sandy, clay or serpentine slopes or roadsides within valley grassland, northern coastal scrub, coastal sage scrub, wetland-riparian at elevations <1700 meters.	April - June	No suitable habitat present on site. Species not observed during focused botanical surveys.
Monterey cypress *Hesperocyparis macrocarpa*	--/--/1B.2	Tree found in closed-cone pine and cypress forests at elevations <50 meters.	--	No suitable habitat present on site. Species not observed during focused botanical surveys.
Vernal barley *Hordeum intercedens*	--/--/3.2	Annual grass found in vernal pools, saline streambeds and alkaline flats at elevations <500 meters.	March - June	No suitable habitat present on site. Species not observed during focused botanical surveys.
Mesa horkelia *Horkelia cuneata var. puberula*	--/--/1B.1	Perennial herb that occurs in chaparral, cismontane woodlands, coastal scrub; in sandy or gravelly sites. 70-810 meters.	February-July	Suitable habitat present on site. Species not observed during focused botanical surveys.
Kellogg's horkelia *Horkelia cuneata* var. *sericea*	--/--/1B.1	Perennial herb. Occurs in closed-cone coniferous forest, chaparral (maritime), and coastal scrub in sandy or gravelly openings. Elevation 10 – 200 meters.	April–September	Suitable habitat present on site. Species not observed during focused botanical surveys.
Southwestern spiny rush *Juncus acutus* ssp. *leopoldii*	--/--/4.2	Perennial herb that grows in salt marshes and alkaline seeps at elevations<300 meters.	June – August	No suitable habitat present on site. Species not observed during focused botanical surveys.
Perennial goldfields *Lasthenia californica* ssp. *macrantha*	--/--/1B.2	Perennial herb (annual) found in grasslands and dunes along immediate coast.	January-November	No suitable habitat present on site. Species not observed during focused botanical surveys.

Appendix A. List of Special-Status Plant Species Within a Five Mile Radius of the Subject Parcel

Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	--/--/1B.1	Annual herb that grows in coastal salt marshes, playas, valley and foothill grassland, and vernal pools usually on alkaline soils from 1- 1,400 meters.	February-June	No suitable habitat present on site. Species not observed during focused botanical surveys.
Salinas Valley goldfields *Lasthenia leptalea*	--/--/4.3	Annual herb found in openings within woodlands at elevations <500 meters.	February - May	No suitable habitat present on site. Species not observed during focused botanical surveys.
Jones' layia *Layia jonesii*	--/--/1B.2	Annual herb; blooms March through May; occurs on clay soils and serpentine outcrops in chaparral and valley and foothill grassland; ranges in elevation from 5 to 400 meters.	March-April	No suitable habitat present on site. Species not observed during focused botanical surveys.
Large-flowered leptosiphon *Leptosiphon grandiflorus*	--/--/4.2	Annual that grows in open grassy flats in sandy soil at elevations <1200 meters.	April – July	No suitable habitat present on site. Species not observed during focused botanical surveys. Species not known to Los Osos; found farther inland.
Small-leaved lomatium *Lomatium parvifolium*	--/--/4.2	Perennial herb found growing in pine woodland and serpentine outcrops at elevations from 70 to 150 meters.	February-May	No suitable habitat present on site. Species not observed during focused botanical surveys.
San Luis Obispo County lupine *Lupinus ludovicianus*	--/--/ 1B.2	Perennial herb. Occurs in chaparral and cismontane woodland on sandstone or sandy soils. Elevation 50 – 525 meters.	April – July	Suitable habitat present on site, but no occurrences within the Los Osos area. Species not observed during focused botanical surveys.
Jones' bush-mallow *Malacothamnus jonesii*	--/--/4.3	Shrub that grows in open chaparral within foothill woodlands at elevations from 250 – 830 meters.	May - July	Suitable habitat present on site. Perennial shrub species not present and would have been easily observed and identified if present.
Carmel Valley Bush-mallow *Malacothamnus palmeri var. involucratus*	--/--/1B.2	Perennial shrub found in valleys within chaparral, foothill woodland at elevations from 30 to 800 meters.	May - August	Suitable habitat is present on site, but this species has not been documented in the Los Osos area. Not observed during focused botanical surveys.
Santa Lucia bush-mallow *Malacothamnus palmeri* var. *palmeri*	--/--/1B.2	Perennial shrub found in interior valleys, foothills on rocky substrate. At elevations from 30 – 800 meters.	May -July	Suitable habitat is present on site, but this species has not been documented in the Los Osos area. Not observed during focused botanical surveys.

Appendix A. List of Special-Status Plant Species Within a Five Mile Radius of the Subject Parcel

Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
Palmer's monardella *Monardella palmeri*	--/--/1B.2	Rhizomatous, perennial herb; blooms June through August; occurs on serpentine soils in chaparral and cismontane woodland habitats at elevations ranging from 200 to 800 meters.	June-July	No suitable habitat present on site. Species not observed during focused botanical surveys.
Southern curly-leaved monardella *Monardella sinuata* ssp. *sinuata*	--/--/1B.2	Found in sandy soils, coastal strand, dune and sagebrush scrub, coastal chaparral and oak woodland at elevations <300 meters.	April-September	Suitable habitat present on site. Species not observed during focused botanical surveys.
San Luis Obispo monardella *Monardella undulata* ssp. *undulata*	--/--/1B.2	Subshrub found in stabilized dunes, coastal scrub, and stabilized sandy soils at elevations <200 meters.	May-September	Suitable habitat present on site. Species not observed during focused botanical surveys.
Woodland Woollythreads *Monolopia gracilens*	--/--/1B.2	Annual herb; openings of broadleaved upland forest, chaparral, cismontane woodland, north coast coniferous forest and valley and foothill grassland typically on serpentine; 100 to 1,200 meters in elevation.	February - July	No suitable habitat present on site. Species not observed during focused botanical surveys.
California spineflower *Mucronea californica*	--/--/4.2	Annual that grows in sandy soils within coastal strand, chaparral, foothill woodland, and valley grassland. Elevations <1000 meters.	March - August	Suitable habitat present on site. Species not observed during focused botanical surveys.
Aparejo grass *Muhlenbergia utilis*	--/--/2B.2	Perennial herb found in wet sites along streams, ponds at elevations from 250 to 1000 meters.	October - March	No suitable habitat present on site. Species not observed during focused botanical surveys.
Coast woolly threads *Nemacaulis denudata* var. *denudata*	--/--/1B.2	Annual herb that grows on beaches and coastal sand dunes in open spaces of the coastal strand; known to occur in the Montana de Oro area in sandy soils.	April-September	No suitable habitat present on site. Species not observed during focused botanical surveys.
Adobe yampah *Perideridia pringlei*	--/--/4.3	Perennial herb that grows on grassy slopes and serpentine outcrops within chaparral, foothill woodland, northern coastal scrub and coastal sage scrub at elevations from 300 – 1800 meters.	April - June	No suitable habitat present on site. Species not observed during focused botanical surveys.
Michael's rein orchid *Piperia michaelii*	--/--/4.2	Generally dry sites, coastal scrub, woodland, and mixed-evergreen or closed-cone-pine forest. Elevation < 700 meters.	April - August	Suitable habitat present on site. Species not observed during focused botanical surveys.

Appendix A. List of Special-Status Plant Species Within a Five Mile Radius of the Subject Parcel

Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
Hooked popcornflower *Plagiobothrys uncinatus*	--/--/1B.2	Chaparral, canyon sides, and rocky outcrops; ± fire follower. Elevation 300 - 600 meters.	April - May	No suitable habitat present on site. Species not observed during focused botanical surveys.
Diablo Canyon blue grass *Poa diaboli*	--/--/1B.2	Rhizomatous herb occurs in closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub with shale substrates. 120 - 400 meters.	March - April	No suitable habitat present on site. Species not observed during focused botanical surveys.
Sand almond *Prunus fasciculata* var. *punctata*	--/--/4.3	Perennial shrub found in sandy soils in scrubland and oak woodlands at elevations <200 meters.	March-April	Suitable habitat present on site. Species not observed during focused botanical surveys.
Santa Lucia gooseberry *Ribes sericeum*	--/--/4.3	Perennial deciduous shrub, only found in the Santa Lucia Mountains. Inhabits broadleafed upland forest, coastal bluff scrub, cismontane woodland, and north coast coniferous forests. Elevation 180 - 800 meters.	December - April	No suitable habitat present on site. Species not observed during focused botanical surveys. No occurrences within the Los Osos area.
Coulter's matilija poppy *Romneya coulteri*	--/--/4.2	Perennial shrub found in dry washes, canyons at elevation < 1200 meters.	March - July	No suitable habitat present on site. Species not observed during focused botanical surveys. No occurrences within the Los Osos area.
Hoffmann's sanicle *Sanicula hoffmannii*	--/--/4.3	Perennial herb found in shrubby coastal hills and pine woodlands at elevations <500 meters.	March-May	No suitable habitat present on site. Species not observed during focused botanical surveys.
Adobe sanicle *Sanicula maritima*	--/SR/1B.1	Moist seeps within coastal prairie, chaparral, meadows, and valley and foothill grassland habitats in clay or serpentine soils. 30-240 meters	February-May	No suitable habitat present on site. Species not observed during focused botanical surveys.
Black-flowered figwort *Scrophularia atrata*	--/--/1B.2	Perennial herb found in calcium and diatom rich soils at elevations <400 meters.	April - June	No suitable habitat present on site. Species not observed during focused botanical surveys.
Rayless (chaparral) ragwort *Senecio aphanactis*	--/--/2.2	Chaparral, cismontane woodlands; coastal scrub on alkaline flats, dry open rocky areas at 15-800 meters.	January-April	No suitable habitat present on site. Species not observed during focused botanical surveys.
Blochman's ragwort *Senecio blochmaniae*	--/--/1B.2	Perennial subshrub found in coastal sand dunes and sandy floodplains at elevations <150 meters.	May-November	No suitable habitat present on site. Species not observed during focused botanical surveys.

Appendix A. List of Special-Status Plant Species Within a Five Mile Radius of the Subject Parcel

Species	Status* Fed/CA/CNPS	Habitat Requirements	Blooming Period	Project Site Suitability/Observations
Cuesta Pass checkerbloom *Sidalcea hickmanii* ssp. *anomala*	--/--/1B.2	Closed-cone coniferous forest, generally serpentine. Elevation 600 - 800 meters.	May - June	No suitable habitat present on site. Species not observed during focused botanical surveys.
Guirado's goldenrod *Solidago guiradonis*	--/--/4.3	Perennial stream banks and seeps, serpentine. Elevation 600 - 900 meters.	September – October	No suitable habitat present on site. Species not observed during focused botanical surveys.
Most beautiful jewel-flower *Streptanthus albidus* ssp. *peramoenus*	--/--/1B.2	Annual herb; blooms April through June; occurs on serpentine soils in chaparral, valley and foothill grassland, and cismontane woodland, ranging from 120 to 1000 meters elevation.	April-June	No suitable habitat present on site. Species not observed during focused botanical surveys.
California seablite *Suaeda californica*	FE/--/1B.1	Perennial succulent shrub that grows along the margins of coastal salt marshes in a narrow elevational range from 0 to 5 meters; known to occur in the Morro Bay area	July-October	No suitable habitat present on site. Species not observed during focused botanical surveys.
Splitting yarn lichen *Sulcaria isidiifera*	--/--/1B.1	On branches of oaks and shrubs, coastal scrub. Elevation: 20 – 30 meters.	N/A	No suitable habitat present on site. Species not observed during focused botanical surveys.
Saline clover *Trifolium hydrophilum*	--/--/1B.2	Salt marshes and open areas in alkaline soils. Elevation < 300 meters.	April – June	No suitable habitat present on site. Species not observed during focused botanical surveys.
Plant/Natural Communities				
Central Dune Scrub				Not present
Central Foredunes				Not present
Central Maritime Chaparral				Not present
Coastal and Valley Freshwater Marsh				Not present
Coastal Brackish Marsh				Not present
Northern Coastal Salt Marsh				Not present
Northern Interior Cypress Forest				Not present
Serpentine Bunchgrass				Not Present
Valley Needlegrass Grassland				Not present

**Sources: California Natural Diversity Database (California Department of Fish and Game 2020), California Native Plant Society Online Inventory of Rare Plants, accessed January 2021 (online at www.cnps.org); Special Vascular Plants, Bryophytes, and Lichens List (California Department of Fish and Game January 2021, https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline).*

Federal Listing Status:
FE = Federal Endangered
FT = Federal Threatened
State Listing Status:
SE = State Endangered

ST = State Threatened
SR = State Rare
CE = State Candidate for Endangered Status
California Rare Plant Ranks:
List 1B – Rare, threatened, or endangered in California and elsewhere
List 2 – Rare, threatened or endangered in California, but more common elsewhere
List 2A - Presumed extirpated in California, but more common elsewhere
List 2B - Rare or Endangered in California, but more common elsewhere
List 3 - Plants for which we need more information – Review list
List 4 – Limited distribution (Watch List).

Appendix B: Habitat Requirements and Potential for Occurrence of Special-Status Animals Occurring in the Vicinity of the Subject Parcel

Appendix B. CNDDB List of Special-Status Animal Species Within a Five Mile Radius of the Subject Parcels

Species	Status* Fed/State/ CDFW	Habitat Requirements	Project Site Suitability/Observations
AMPHIBIANS			
California tiger salamander *Ambystoma californiense*	FT/ST/WL	Occurs in grasslands or oak woodlands that support natural ephemeral pools or ponds that mimic them. Species requires seasonal water for breeding and small mammal burrows, crevices in logs, piles of lumber, and shrink-swell cracks in the ground for refuges.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
San Simeon slender salamander *Batrachoseps incognitus*	--/--/-- Special Animal	Inhabits open and closed forests of yellow pine, laurel, sycamore, and oak woodland. From sea level to near 3,280 ft. (1,000 m.)	Species not known from the Los Osos area.
Lesser slender salamander *Batrachoseps minor*	--/--/SSC	Known only from the Black Mtn. area of San Luis Obispo County, along the Paso Robles, Santa Rita and Old Creeks. Type specimens are known from a variety of wooded habitats.	Species not known from the Los Osos area.
Foothill yellow-legged frog *Rana boylii*	--/--/SSC	Inhabits partly shaded, shallow streams with a rock substrate. Requires cobble-sized substrate for egg laying.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
California red-legged frog *Rana draytonii*	FT/--/SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation; requires 11-20 weeks permanent water for larval development and needs access to aestivation habitat.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
Western spadefoot *Spea hammondii*	--/--/SSC	Inhabits vernal pools primarily in grassland, but also in valley and foothill hardwood woodlands. Requires seasonal pools for breeding and egg-laying.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
Coast Range newt *Taricha torosa*	--/--/SSC	Coastal drainages; live in terrestrial habitats and will migrate over 1 km to breed in ponds, reservoirs and slow-moving streams.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
BIRDS			
Cooper's hawk *Accipiter cooperii*	--/--/WL	Deciduous riparian woodland habitat throughout California. Cooper's Hawks nest in deciduous, mixed-deciduous, and evergreen forests, as well as in suburban and urban environments. Cooper's Hawks tend to nest in more open areas that have older and larger trees.	Species is known to and may forage in the area, but parcel does not contain nesting habitat. Species not observed during surveys.

Appendix B. CNDDB List of Special-Status Animal Species Within a Five Mile Radius of the Subject Parcels

Species	Status* Fed/State/ CDFW	Habitat Requirements	Project Site Suitability/Observations
Tricolored blackbird *Agelaius tricolor*	--/--/SSC	Freshwater marshes and swamps, riparian scrub, and riparian forest. Forages in valley and foothill grassland and agricultural fields.	Suitable habitats absent. Species unlikely to occur on site.
Southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	--/--/WL	Grassy or steep rocky slopes with sparse low bushes; open pine-oak woods. Habitat varies in different parts of range, but always in brushy areas. In Southwest, usually in rocky areas of foothills and lower canyons, in understory of pine-oak woods, or in chaparral or coastal scrub.	Suitable habitats absent. Species unlikely to occur on site.
Grasshopper sparrow *Ammodramus savannarum*	--/--/SSC	Nests in relatively extensive patches of short to medium stature grassland with scattered open areas and shrubs. Absence of trees is critical in habitat preference.	Suitable habitats absent. Species unlikely to occur on site.
Golden eagle *Aquila chrysaetos*	--/--/FP, WL	Cliffs and escarpments or tall trees for nesting; annual grasslands, chaparral, and oak woodlands for hunting. Foothills and mountains throughout California; uncommon nonbreeding visitor to lowlands such as the Central Valley.	Suitable habitats absent. Species unlikely to occur on site.
Great egret *Ardea alba*	--/--/-- Special Animal	Nests and breeds in colonies in trees close to large lakes with reed beds or other extensive wetlands.	Suitable habitats absent. Species unlikely to occur on site.
Great blue heron *Ardea herodias*	--/--/-- Special Animal	Marshes, lake margins, tide-flats, rivers, and wet meadows. Nests communally in large trees and cliff sides, typically adjacent to marshes and water bodies. Rookery site are in close proximity to foraging areas.	Suitable habitats absent. Species unlikely to occur on site. Species could forage in the general area, but is unlikely to nest due to the absence of aquatic habitats.
Burrowing owl *Athene cunicularia*	--/--/SSC	Forages in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Nests in old burrow of ground squirrel, or other small mammal. Typically breeds March through August.	Suitable habitats absent. Species unlikely to occur on site.
Brant *Branta bernicla*	--/--/SSC	Black Brant Geese are rarely found inland. They winter along Pacific coast of North America as well as the Aleutian Islands. Their main habitat is estuaries and large bays where they can find food. They can often be seen as an off-shore migrant. Salt bays, oceans, mudflats, and tundra are favorite hangouts during the summer.	Suitable habitats absent. Species unlikely to occur on site.

Appendix B. CNDDB List of Special-Status Animal Species Within a Five Mile Radius of the Subject Parcels

Species	Status* Fed/State/ CDFW	Habitat Requirements	Project Site Suitability/Observations
Ferruginous hawk *Buteo regalis*	--/--/WL	Forages in open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon-juniper habitats. Nests in foothills or prairies; on low cliffs, buttes, cut banks, shrubs, trees, or in other elevated structures, natural or human-made. Typically breeds from mid-April to mid-July.	Suitable habitats absent. Species unlikely to occur on site.
Mountain plover *Charadrius montanus*	--/--/SSC	(Nesting) Open plains at moderate elevations. Winters in short-grass plains and fields, plowed fields, and sandy deserts in southern and central California. It breeds in the high plains of North America from extreme southeastern Alberta and southwestern Saskatchewan to northern New Mexico and the Texas panhandle, as well as an isolated site in the Davis Mountains of West Texas.	Suitable habitats absent. Species unlikely to occur on site.
Western snowy plover *Charadrius alexandrinus nivosus*	FT/--/SSC	(Nesting) Sandy or gravelly beaches along coast, on estuarine salt ponds and shores of large alkali lakes. Sandy, gravelly or friable soils for nesting. Coastal areas from Del Norte County to San Diego County.	Suitable habitats absent. Species unlikely to occur on site.
Northern harrier *Circus cyaneus*	--/--/SSC	(Nesting) Coastal salt and freshwater marsh, wet and lightly grazed pastures, old fields, dry uplands, upland prairies, mesic grasslands, drained marshlands, croplands, shrub steppe, meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands. Occurs from annual grassland up to lodgepole pine and alpine meadow habitats.	Suitable habitats absent. Species unlikely to occur on site.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT/SE/--	Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow almost always a dominant component of the vegetation	Suitable habitats absent. Species unlikely to occur on site.
Snowy egret *Egretta thula*	--/--/-- Special Animal	Marshes, swamps, ponds, shores. Widespread in many types of aquatic habitats, including fresh and salt water. Sometimes forages in dry fields. Nests in colonies in trees, shrubs, mangroves, and in marshes.	Suitable habitats absent. Species unlikely to occur on site.
White-tailed kite *Elanus leucurus*	--/--/FP	Forages in open grasslands, meadows, or marshlands. Nest placed near top of dense oak, willow, or other tree stand. Typically breeds from February to October.	Subject parcel contains small areas of suitable habitat, but species is unlikely to utilize the site for foraging or nesting due to the residential uses in adjacent areas. Impacts to species unlikely to occur.

Appendix B. CNDDB List of Special-Status Animal Species Within a Five Mile Radius of the Subject Parcels

Species	Status* Fed/State/ CDFW	Habitat Requirements	Project Site Suitability/Observations
California horned lark *Eremophila alpestris actia*	--/--/WL	Forages within short grass prairies, coastal plains, fallow grain fields and alkali flats. Nests in depression on ground in the open. Typically breeds from March through July.	Suitable habitats absent. Species unlikely to occur on site.
American peregrine falcon *Falco peregrinus anatum*	--/--/FP	Nests consist of scrape on a depression or ledge of an open site associated with cliffs, banks, dunes, mounds, and man-made structures near wetlands, lakes, rivers, or other water. Open habitats, including tundra, marshes, seacoasts, savannahs and high mountains. Breeds mostly in woodland, forest, and coastal habitats.	Suitable habitats absent. Species unlikely to occur on site.
Common loon *Gavia immer*	--/--/SSC	Wooded lakes, tundra ponds, coastal waters. In summer mainly on lakes in coniferous forest zone, also beyond treeline onto open tundra. Chooses large lakes with ample room for takeoff and with good supply of small fish.	Suitable habitats absent. Species unlikely to occur on site.
California condor *Gymnogyps californianus*	FE/SE/FP	Arid foothills and mountains including chaparral, coniferous forest, and oak savanna habitats. Nests in cliff cavities rock outcrops and ledges, and large trees.	Suitable habitats absent. Species unlikely to occur on site.
Bald eagle *Haliaeetus leucocephalus*	--/SE/FP	Nests in large, old-growth, or dominant live tree with open branchwork, especially ponderosa pine. Requires large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches.	Suitable habitats absent. Species unlikely to occur on site.
Caspian tern *Hydroprogne caspia*	--/--/--	Nests on sandy or gravelly beaches and shell banks along coasts or large inland lakes; sometimes with other water birds.	Suitable habitats absent. Species unlikely to occur on site.
Yellow breasted chat *Icteria virens*	--/--/SSC	Summer resident. Inhabits dense shrubbery, including abandoned farm fields, clearcuts, powerline corridors, forest edges and openings, swamps, and edges of streams and ponds. During migration, stays in low, dense vegetation.	Suitable habitats absent. Species unlikely to occur on site.
Least bittern *Ixobrychus exilis*	--/--/SSC	Fresh marshes, reedy ponds. Mostly freshwater marsh but also brackish marsh, in areas with tall, dense vegetation standing in water. May be over fairly deep water, because it mostly climbs in reeds rather than wading. Sometimes in salt marsh or in mangroves.	Suitable habitats absent. Species unlikely to occur on site.

Appendix B. CNDDB List of Special-Status Animal Species Within a Five Mile Radius of the Subject Parcels

Species	Status* Fed/State/ CDFW	Habitat Requirements	Project Site Suitability/Observations
Loggerhead shrike *Lanius ludovicianus*	--/--/SSC	Occurs in lowlands and foothills throughout California, preferring open habitat with scattered shrubs, trees, posts, fences, utility lines, or other perches. Nests in dense foliage 1.3 to 50 feet above ground.	Suitable habitats absent. Species unlikely to occur on site.
California gull *Larus californicus*	--/--/WL	Seacoasts, lakes, farms, urban centers. Breeds in the interior at lakes and marshes, often foraging for insects around farms, plowed fields. Some winter inland around major lakes and rivers, but most are coastal at that season, frequenting beaches, docks, garbage dumps, fields.	Suitable habitats absent. Species unlikely to occur on site.
California black rail *Laterallus jamaicensis coturniculus*	--/ST/FP	Tidal salt marshes associated with heavy growth of pickleweed; also occurs in brackish marshes or freshwater marshes at low elevations. Northern reaches of the San Francisco Bay estuary, especially the tidal marshland of San Pablo Bay and associated rivers; several small, fragment subpopulations still existed at Tomales Bay, Bolinas Lagoon, Morro Bay, and in southeastern California.	Suitable habitats absent. Species unlikely to occur on site.
Long-billed curlew *Numenius americanus*	--/--/FP	Breed mainly in the native grasslands of arid western regions, and are often found in farm fields and grasslands during migration and on their wintering grounds. Occur in coastal marshes and mudflats in winter. Nests on the ground in the open, on dry prairie. Breeding grounds include northeastern California. Winters along entire Pacific Coast of California.	Suitable habitats absent. Species unlikely to occur on site.
Black-crowned night heron *Nycticorax nycticorax*	--/--/-- Special Animal	Found in a wide variety of aquatic habitats, in both fresh and salt water marshes, rivers, ponds, mangrove swamps, tidal flats, canals, ricefields. Nests in groves of trees, in thickets, or on ground, usually on islands or above water.	Suitable habitats absent. Species unlikely to occur on site.
Bryant's savannah sparrow *Passerculus sandwichensis alaudinus*	--/--/SSC	Occupies low tidally influenced habitats, adjacent ruderal areas, moist grasslands within and just above the fog belt, and, infrequently, drier grasslands.	Suitable habitats absent. Species unlikely to occur on site.
Belding's savannah sparrow *Passerculus sandwichensis beldingi*	--/FE/--	Ecologically associated with dense pickleweed, particularly Salicornia virginica, within which most nests are found. Breeding territories can be very small and nests are semicolonial or locally concentrated within a larger block of habitat.	Suitable habitats absent. Species unlikely to occur on site.

Appendix B. CNDDB List of Special-Status Animal Species Within a Five Mile Radius of the Subject Parcels

Species	Status* Fed/State/ CDFW	Habitat Requirements	Project Site Suitability/Observations
California brown pelican *Pelecanus occidentalis californicus*	--/--/FP	Estuarine, marine subtidal, and marine pelagic waters along the California coast. Specifically, they are found on rocky shores and cliffs, in sloughs, and coastal river deltas. Colonial nester and rooster on small islands just outside the surf line. Forages (piscivorous diver) over open water along the coast. Ranges along entire California coast. Breeds on Channel Islands (Santa Barbara, Anacapa, and Santa Cruz). Also occasionally can be found on Salton Sea.	Suitable habitats absent. Species unlikely to occur on site.
Double-crested cormorant *Phalacrocorax auritus*	--/--/WL	Coasts, bays, lakes, rivers. Very adaptable, may be found in almost any aquatic habitat, from rocky northern coasts to mangrove swamps to large reservoirs to small inland ponds. Nests in trees near or over water, on sea cliffs, or on ground on islands.	Suitable habitats absent. Species unlikely to occur on site.
Purple martin *Progne subis*	--/--/SSC	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.	Suitable habitats absent. Species unlikely to occur on site.
California clapper rail *Rallus longirostris obsoletu*	FE/SE/FP	Found in salt marshes traversed by tidal sloughs that provide tidal circulation, and shallow water and mud flats on low tides intermittent with sparse vegetation. Currently limited to San Francisco Bay, San Pablo Bay, Suisun Bay, and tidal marshes associated with estuarine sloughs draining into these bays.	Suitable habitats absent. Species unlikely to occur on site.
California least tern *Sternula antillarum browni*	FE/SE/FP	Nests on sand dunes, beach strand, and sparsely vegetated coastal scrub communities that are relatively free of human or predatory disturbance. Forages in shallow estuaries, lagoons, bay mouths, and near shore open waters.	Suitable habitats absent. Species unlikely to occur on site.
California Spotted Owl *Strix occidentalis occidentalis*	--/--/SSC	Mature old-growth fir and redwood forests, conifers, wooded canyons along Pacific seaboard. In southwest, in forested mountains and canyons, especially where tall trees grow close to rocky cliffs. Breeds and roosts in forests and woodlands with large old trees and snags, high basal areas of trees and snags, dense canopies.	Suitable habitats absent. Species unlikely to occur on site.
Elegant tern *Thalasseus elegans*	--/--/WL	Nests on open sandy disturbed beaches and on salt-evaporating pond dikes in association with the Caspian tern. Only 3 known breeding colonies in the southern California region.	Suitable habitats absent. Species unlikely to occur on site.

Appendix B. CNDDB List of Special-Status Animal Species Within a Five Mile Radius of the Subject Parcels

Species	Status* Fed/State/ CDFW	Habitat Requirements	Project Site Suitability/Observations
CRUSTACEANS			
Vernal pool fairy shrimp *Branchinecta lynchi*	FT/--/--	Vernal pools and other seasonally inundated, closed or non-linear wetland features. Requires cold temperatures. Forms a cyst during the dry season.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
California fairy shrimp *Linderiella occidentalis*	--/--/--	Seasonal ponds in grasslands, sandstone depressions, and alluvial flats with hardpan beneath.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
FISH			
Pacific lamprey *Entosphenus tridentatus*	--/--/SSC	Marine, freshwater, or brackish water along the entire coast of California. Larvae need soft sediment in shallow areas along stream banks; silt, mud, and sand of shallow eddies and backwaters of streems. Spawning adults are found in gravel riffles and runs of clear coastal streams. Parasitic adults often found on fish and sperm whales.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
Tidewater goby *Eucyclogobius newberryi*	FE/--/SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon in San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, requiring fairly still but not stagnant water, with high oxygen levels.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
Monterey Roach *Lavinia symmetricus subditus*	--/--/SSC	Found in small streams and are particularly well adapted to life in intermittent watercourses, where dense populations are frequently observed in isolated pools.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
Ssteelhead - south-central California coast DPS *Oncorhynchus mykiss irideus*	FT/--/--	Steelhead inhabit riparian, emergent, palustrine habitat. Perennial streams usually characterize spawning and rearing habitat with clear, cool to cold, fast flowing water with high dissolved oxygen content and abundant gravels and riffles.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
INSECTS			
Obscure bumble bee ***Bombus caliginosus***	**--/--/-- Special Animal**	**The Pacific Coast from Santa Barbara County north to Washington state. Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia, and Phacelia.**	**Potentially present within the general area. This species could occur almost anywhere in the region and is included in the CNDDB due to a general decline in bee populations in recent years.**

Appendix B. CNDDB List of Special-Status Animal Species Within a Five Mile Radius of the Subject Parcels

Species	Status* Fed/State/ CDFW	Habitat Requirements	Project Site Suitability/Observations
Crotch bumble bee *Bombus crotchii*	--/--/-- Special Animal	Inhabits open grassland and scrub habitats; nesting occurs underground. Feeds on Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, Eriogonum, and Salvia, amongst others. Coastal California east towards the Sierra-Cascade Crest in open grasslands and scrub habitats.	Unlikely to be present. Species is not known to the Los Osos area. All CNDDB occurrences within SLO County are inland, not coastal
Western bumble bee *Bombus occidentalis*	--/--/-- Special Animal	Occurs along the Pacific coast and western interior of North America. Generalist foragers who need meadows and flowers.	Unlikely to be present. Only one occurrence from SLO County and is from 1936.
Sandy beach tiger beetle *Cicindela hirticollis gravida*	--/--/-- Special Animal	Inhabits area adjacent to non-brackish water along the coast of California from San Francisco Bay to Northern Mexico.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
Wawona riffle beetle *Atractelmis wawona*	--/--/-- Special Animal	Occurs in riffles of rapid clear mountain streams at moderate elevations (2,000 to 5,000 ft.).	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
Morro Bay blue butterfly *Plebejus icarioides moroensis*	--/--/--	Occurs within coastal sage and coastal dune scrub habitats that support silver dune lupine (Lupinus chamissonis), and suitable nectar sources such as deerweed (Acmispon glaber). The typical adult flight season occurs from early April to June. Restricted to the immediate coast in San Luis Obispo and western Santa Barbara counties.	Suitable habitats absent. Coastal scrub habitat comprised of silver lupine is not present on site.
Monarch butterfly - California overwintering population *Danaus plexippus*	--/SA/--	Occurs along the coast from northern Mendocino to Baja California, Mexico. Winter roosts in wind protected tree groves (eucalyptus, Monterey pine and cypress), with nectar and water sources nearby.	Suitable habitats absent. No potential or known overwintering sites are located on site.
Atascadero June beetle *Polyphylla nubila*	--/--/--	Known only from active sand dunes in San Luis Obispo County.	Suitable Conditions Absent: No suitable habitat was observed on or adjacent to the surveyed areas.
Globose dune beetle *Coelus globosus*	--/--/--	Coastal dunes, forming tunnels underneath native vegetation. Found in California's coastal dune system. Have colonized on the California Channel Islands.	Suitable Conditions Absent: No suitable habitat was observed on or adjacent to the surveyed areas.
MAMMALS			

Appendix B. CNDDB List of Special-Status Animal Species Within a Five Mile Radius of the Subject Parcels

Species	Status* Fed/State/ CDFW	Habitat Requirements	Project Site Suitability/Observations
Pallid bat *Antrozous pallidus*	--/--/SSC	Found in rocky, mountainous areas and near water, and more open, sparsely vegetated grasslands for foraging. Occurs throughout California with the exception of the high Sierra Nevada.	Suitable habitats absent. Species unlikely to occur on site.
Northern fur-seal *Callorhinus ursinus*	--/--/-- Special Animal	Marine mammal found along the coast.	Species not present.
Townsend's big-eared bat *Corynorhinus townsendii*	--/SC/SSC	Found in rocky, mountainous areas and near water, and more open, sparsely vegetated grasslands for foraging. Occurs throughout California.	Suitable habitats absent. Species unlikely to occur on site.
Morro Bay kangaroo rat *Dipodomys heermanni morroensis*	FE/SE/FP	Coastal sage scrub throughout the southern side of Morro Bay. Typically occurs in habitats associated with stabilized dunes and coastal dune scrub communities with dominant vegetation including mock heather, buck brush, and deer weed.	No potentially suitable burrows observed during surveys. Species historically known to the Los Osos area; however, species is considered extirpated and has not been observed since 1986.
Southern sea otter *Enhydra lutris nereis*	FT/--/FP	Marine mammal found along the coast.	Species not present.
Steller (=northern) sea-lion *Eumetopias jubatus*	--/--/SSC	Marine mammal found along the coast.	Species not present.
Western mastiff bat *Eumops perotis californicus*	--/--/SSC	Occurs in a variety of semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, valley and foothill grassland, and chaparral. Roosts in crevices on cliff faces, high buildings, and in trees and tunnels.	Suitable habitat present. Species could forage in the general area, but no roosting habitat is present on site. Impacts to species not expected to occur.
Yuma myotis *Myotis yumanensis*	--/--/-- Special Animal	Coastal conifer and broad-leaf forests, oak and conifer woodlands, arid grasslands and desert, and high-elevation forests and meadows. Roost and hibernate in caves, tunnels, buildings, and other structures. Throughout California; prefer humid, coastal regions of northern and central California.	Suitable habitats absent. Species unlikely to occur on site.
San Diego desert woodrat *Neotoma lepida intermedia*	--/--/SSC	Ranges from Baja California northward to northern San Luis Obispo County. Typically occurs in woodlands and coastal scrub habitats with moderate to dense canopy cover and rock outcrops or rocky cliffs.	Wood stick nests observed on site believed to be Monterey dusky-footed woodrat (see below) and potential impacts are provided in this report.

Appendix B. CNDDB List of Special-Status Animal Species Within a Five Mile Radius of the Subject Parcels

Species	Status* Fed/State/ CDFW	Habitat Requirements	Project Site Suitability/Observations
Monterey dusky-footed woodrat *Neotoma macrotis luciana*	--/--/SSC	Forest habitats of moderate canopy and moderate to dense understory; also in chaparral habitats. Nests constructed of grass, feathers and misc debris. Population may be limited by availability of nest material.	Suitable habitats absent. Species unlikely to occur on site.
Big free-tailed bat *Nyctinomops macrotis*	--/--/SSC	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.	Suitable habitats absent. Species unlikely to occur on site.
American badger *Taxidea taxus*	--/--/SSC	Requires open, arid habitats, but are most commonly associated with grasslands, savannahs, mountain meadows, and open areas of desert scrub. Soils must be friable for burrow excavation.	Suitable habitats absent. Species unlikely to occur on site.
San Joaquin kit fox *Vulpes macrotis mutica*	FE/ST/--	Found in grassland, open shrubby areas, and some agricultural settings. Needs loose textured sandy-soils for burrowing, and suitable prey base consisting of ground squirrels, other small mammals, birds and insects.	Suitable habitats absent. Species unlikely to occur on site.
MOLLUSKS			
Morro shoulderband (=banded dune) snail ***Helminthoglypta walkeriana***	**FE/--/--**	**Coastal dune and scrub communities dominated by mock heather (Ericameria ericoides). Known within the southern portion of Morro Bay and endemic to the western portion of San Luis Obispo County.**	**Presence/Absence protocol surveys conducted in 2014/2015 identified empty Morro shoulderband snail shells onsite. Species is potentially present.**
San Luis Obispo pyrg *Pyrgulopsis taylori*	--/--/-- Special Animal	Freshwater habitats in San Luis Obispo County.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
Mimic tryonia (=California brackishwater snail) *Tryonia imitator*	--/--/-- Special Animal	Inhabits coastal lagoons, estuaries and salt marshes from Sonoma to San Diego County. Specifically known from coastal lagoons and where creek mouths join tidal marshes. Found only in permanently submerged areas in a variety of sediment types, able to withstand a wide range of salinities.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
California floater *Anodonata californiensis*	--/--/-- Special Animal	Occurs in shallow freshwater, mainly in big and medium rivers, creeks, and pools. Documented hosts include pit sculpin, Sacramento pikeminnow, tule perch, and green sunfish. Relatively sedentary filter feeders.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
REPTILES			

Appendix B. CNDDB List of Special-Status Animal Species Within a Five Mile Radius of the Subject Parcels

Species	Status* Fed/State/ CDFW	Habitat Requirements	Project Site Suitability/Observations
Northern California legless lizard ***Anniella pulchra***	**--/--/SSC**	**Occurs in moist warm loose soil with plant cover. Occurs in sparsely vegetated beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces. Leaf litter under trees and bushes and dunes stabilized with bush lupine and mock heather often indicate suitable habitat.**	**Suitable habitats present on site. Species was not observed during surveys, but is likely present; common species in Los Osos. Potential impacts to species from the project may occur.**
Western pond turtle *Emys marmorata*	--/--/SSC	Quiet waters of ponds, lakes, streams, and marshes. Typically, in the deepest parts with an abundance of basking sites.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
Two-striped gartersnake *Thamnophis hammondii*	--/--/SSC	Associated with permanent or semi-permanent bodies of water bordered by dense vegetation in a variety of habitats.	Suitable aquatic habitats not present. No wetlands, vernal pools, creeks, streams, reservoirs or ponds are present on site.
Coast horned lizard ***Phrynosoma blainvillii***	**--/--/SSC**	**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.**	**Suitable habitats present on site. Species was not observed during surveys. Species has been observed in nearby areas. Potential impacts to species from the project may occur.**

**Sources: California Natural Diversity Database (California Department of Fish and Wildlife January 2021); Special Animals List (California Department of Fish and Wildlife April 2021, https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406).*

Federal Listing Status:
- *FE = Federal Endangered*
- *FT = Federal Threatened*

State Listing Status:
- *SE = State Endangered*
- *ST = State Threatened*
- *SR = State Rare*
- *CE = State Candidate for Endangered Status*
- *CT = State Candidate for Threatened Status*

California Department of Fish and Wildlife
- *SSC -= Species of Special Concern*
- *FP = Fully Protected*
- *WL = Watch List*
- *Special Animal*

Appendix C: List of Plant Species Observed on the Subject Parcel

Appendix C – List of Plant Species Observed within the Subject Parcel

Scientific Name	Common Name
Acmispon glaber (Lotus scoparius)	Deerweed
Adenostoma fasiculatum	Chamise
*Avena barbata**	Slender wild oats
*Bromus diandrus**	Ripgut brome
Cardionema ramosissimum	Sand mat
*Carpobrotus edulis**	Ice plant
Ceanothus cuneatus	Buckbrush
*Conicosia pugioniformis**	Narrow-leaved ice plant
Croton californicus	California croton
Diplacus aurantiacus	Sticky monkey flower
*Ehrharta calycina**	Veldt grass
Ericameria ericoides	Mock heather
*Festuca myuros**	Rattail sixweeks grass
Gamochaeta ustulata	Featherweed
Heterotheca grandiflora	Telegraph weed
*Hordeum murinum**	Foxtail barley
Horkelia cuneata	Horkelia
Lupinus arboreus	Coastal bush lupine
Marah fabacea	California man-root
*Oxalis pes-caprae**	Bermuda buttercup
Pseudognaphalium californicum	Cudweed
Quercus agrifolia var. agrifolia	Coast live oak
*Sonchus asper**	Sow thistle

*Non-native species

Appendix D: List of Animal Species Observed on the Subject Parcel

Appendix D – List of Animal Species Observed During Site Visits to the Subject Parcel

Scientific Name	Common Name
Birds	
Corvus brachyrhynchos	America crow
Haemorhous mexicanus	House finch
Melozone crissalis	California towhee
Psaltriparus minimus	Bushtit
Zenaida macroura	Mourning dove
Mammals	
Odocoileus hemionus columbianus	Black-tailed deer (tracks)
Sylvilagus bachmani	Brush rabbit (scat)
Thomomys bottae	Botta's pocket gopher (dirt mounts)

Appendix E: Photo Documentation

- **4 Photos**

Photo 1: Photo viewing east through Subject Parcel. Note veldt grass, areas of bare sand, and scattered individual shrubs. Note, white truck in background is the cul-de-sac of Madera Street. March 16, 2021

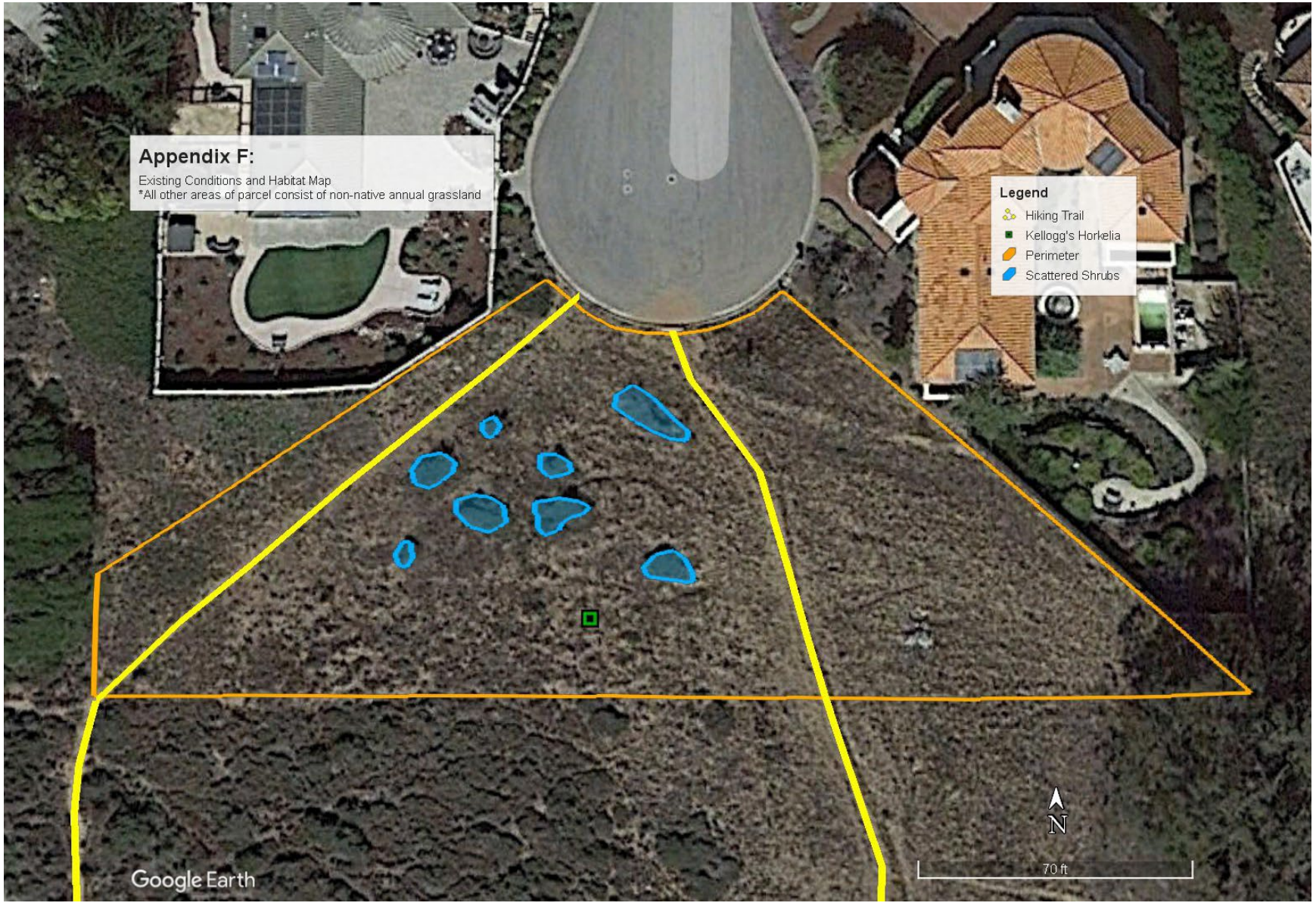
Photo 2: Photo viewing southwest along in western portion of Subject Parcel. April 14, 2021

Photo 3: Photo viewing east from the center of the Subject Parcel. April 14, 2021

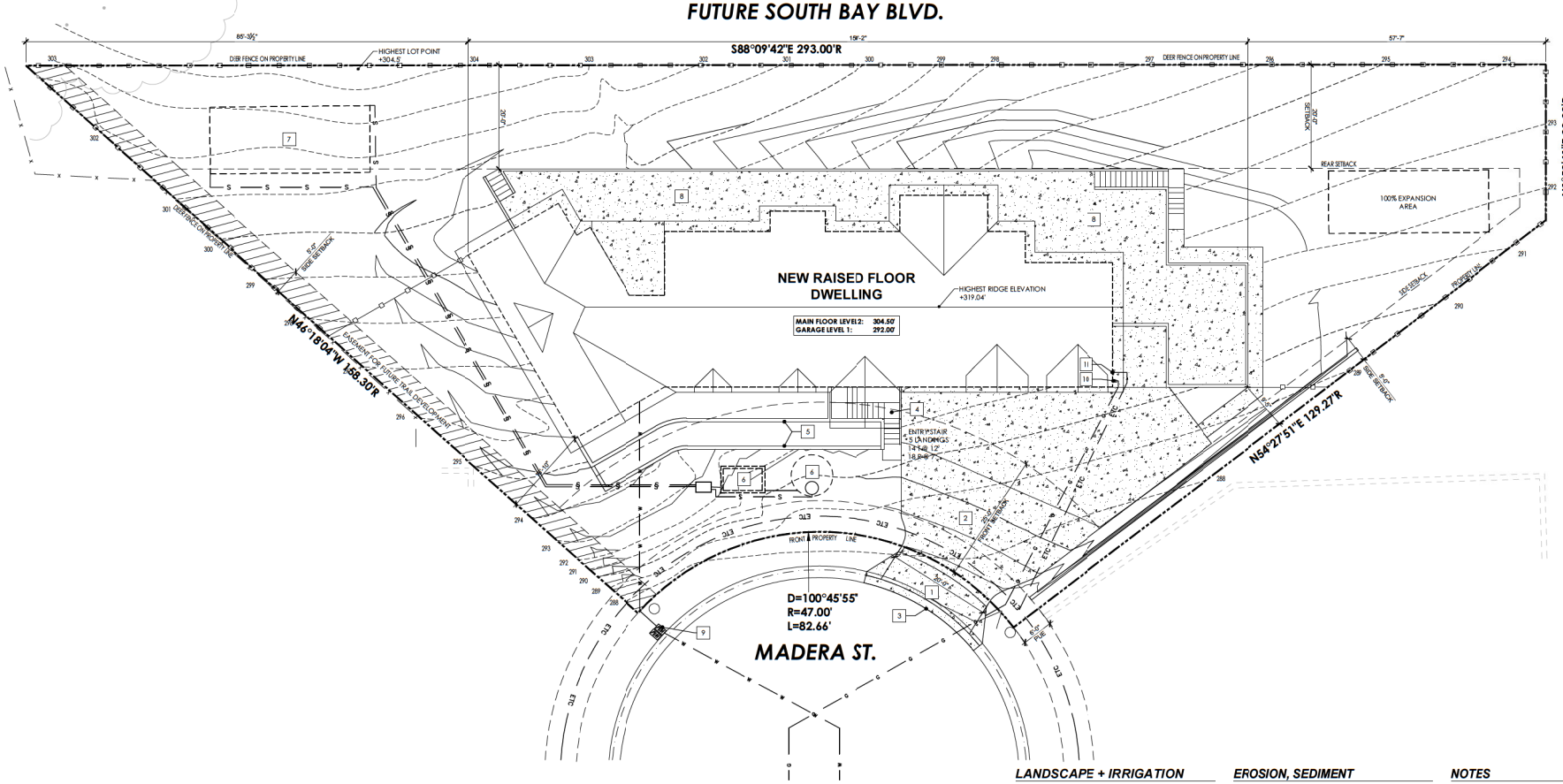
Photo 4: Photo viewing south through Subject Parcel. April 14, 2021

Appendix F: Existing Conditions and Habitat Map

*Locations are approximate


Appendix F:
Existing Conditions and Habitat Map
*All other areas of parcel consist of non-native annual grassland
Legend
Hiking Trail
Kellogg's Horkelia
Perimeter
Scattered Shrubs
N
70 ft
Google Earth

Appendix G: Proposed Site Plan



SITE PLAN
SCALE: 1" = 10'

LANDSCAPE + IRRIGATION

LANDSCAPING + IRRIGATION BY OWNER

NEW CONSTRUCTION SHALL COMPLY WITH CAL GREEN TIER 1 FOR OUTDOOF WATER REQUIREMENTS.

CAL GREEN TIER 1:

INSTALL A LOW-WATER CONSUMPTION IRRIGATION SYSTEM WHICH MINIMIZES THE USE OF SPRAY-TYPE HEADS. PROVIDE A WATER-EFFICIENT LANDSCAPE IRRIGATION DESIGN THAT REDUCES THE USE OF POTABLE WATER AND DOES NOT EXCEED 65 PERCENT OF ETo TIMES THE LANDSCAFE AREA.

OPTIONAL: RAINWATER CAPTURE, STORAGE AND RE-USE SYSTEM

IRRIGATION CONTRCLLERS:

AUTOMATIC IRRIGATON SYSTEM CONTROLLERS FOR LANDSCAPING PROVIDED BY THE BUILDER AND INSTALLED AT THE TIME OF FINAL INSPECTION SHALL COMPLY WITH THE FOLLOWING:

A. CONTROLLERS S-HALL BE WEATHER OR SOIL MOISTURE BASED CONTROLLERS THAT AUTOMATICALLY ADJUST IRRIGATION IN RESPONSE TO CHANGES IN PLANTS' NEEDS AS WEATHER CONDITIONS CHANGE.
B. WEATHER BASED CONTROLLERS WITHOUT INTEGRAL RAIN SENSORS OR COMMUNICATIONS SYSTEMS THAT ACCOUNT FOR LOCAL RAINFALL SHALL HAVE A SEPARATE WIRED OR WIRELESS RAIN SENSOR WHICH CONNECTS OR COMMUNICATES WITH THE CONTROLLER(S). SOIL MOISTURE BASED CONTROLLERS ARE NOT REQUIRED TO HAVE RAIN SENSOR INPUT.

EROSION, SEDIMENT

1. ALL DISTURBED NATIVE SOIL SURFACES OR ANY CUT AND FILL SLOPES SHALL BE PROTECTED, STABILIZED, AND SEEDED AS SOON AS POSSIBLE PER SEED MIX REQUIREMENT NOTE SHOWN ON THESE PLANS. SEEDING CAN BE BY HAND OR BY HYDROSEEDING.
2. ANY ON-SITE AREAS OF CONCENTRATED RUNOFF SHALL BE PROTECTED BY A TEMPORARY SILT FENCE
3. ANY NATIVE OR IMPORTED SOILS, SEDIMENT, OR DEBRIS IS NOT ALLOWED TO LEAVE THE PROPOSED CONSTRUCTION SITE (E.G. THROUGH EXISTING OR PROPOSED CULVERTS, PIPES, DROP INLETS, NATURAL OR GRADED SURFACE DRAINAGE AREAS, ETC.).
4. WHEN VEHICLES ENTER OR LEAVE THE PROPOSED CONSTRUCTION SITE, NO NATIVE OR IMPORTED SOILS, SEDIMENT, OR DEBRIS IS ALLOWED TO ENTER ANY PUBLIC OR PRIVATE DRIVEWAY, ACCESS ROAD, OR STREET.
5. THE CONTRACTOR IS TO PREVENT ANY OFFSITE SOILS, SEDIMENT, DEBRIS OR RUNOFF, INCLUDING STREET RUNOFF FROM ENTERING THE PROPOSED CONSTRUCTION SITE.
6. A PLAN IS DEVELOPED AND IMPLEMENTED TO MANAGE STORM WATER DRAINAGE DURING CONSTRUCTION.
7. THE SITE PLAN SHALL BE PLANNED AND DEVELOPED TO KEEP SURFACE WATER AWAY FROM BUILDINGS. CONSTRUCTION PLANS SHALL INDICATE HOW SITE GRADING OR A DRAINAGE SYSTEM WILL MANAGE ALL SURFACE WATER FLOWS.
8. VAPOR RETARDER AND CAPILLARY BREAK IS INSTALLED A SLAB-ON-GRADE FOUNDATIONS

NOTES

PROVIDE ORANGE CONSTRUCTION FENCING

STRAW WATTLE

CONTROL MEASURES SHALL PROVIDE PROTECTION AGAINST EROSION OF ADJACENT PROPERTY AND PREVENT SEDIMENT OR DEBRIS FROM ENTERING THE CITY RIGHT OF WAY, ADJACENT PROPERTIES, ANY HARBOR WATERWAY, OR ECOLOGICALLY SENSITIVE AREA.

KEYNOTES

1. NEW 20'-0"+ WIDE DRIVEWAY ENTRANCE AND CURB-CUT; PER CITY STANDARDS
2. NEW SLOPED DRIVEWAY SURFACED WITH PERMEABLE PAVERS OR CONCRETE
3. EDGE OF EXISTING PAVEMENT (E.O.P.), AND BEGINNING OF CONCRETE DRIVEWAY MAINTAIN STREET DRAINAGE.
4. NEW WOOD AND STEEL STAIR
5. NEW 8" CONC. RETAINING WALL
6. PROPOSED SEPTIC SYSTEM PER CIVIL DRAWINGS
7. PROPOSED LEACH FIELD PER CIVIL DRAWINGS
8. NEW CONC. REAR DECK
9. WATER METER
10. GAS METER
11. ELECTRICAL PANEL

LEGEND

CONCRETE

CRIZER DESIGN
EST. 1993
Ph. (805)528-4812
P.O. Box 6952
Los Osos, CA 93412

PUREWAL RESIDENCE

Owner/Site Address:
Sarj Purewal
200 Madera St
Los Osos, CA 93402

APN: 074-483-009
County of
San Luis Obispo
California

Revisions

No.	Description	Date

Date: 04/12/22

Drawn By: TP

Scale: 1/4"=1'-0" U.N.O.

SITE PLAN

C1.0

Appendix H:

H-A: No-Take Request and Morro Shoulderband Snail Protocol Survey Report for 200 Madera Street (APN 074-483-009), Los Osos, San Luis Obispo County, California, September 30, 2015

H-B: Updated Morro Shoulderband Snail Protocol Survey Report for 200 Madera Street (APN 074-483-009), Los Osos, California

EAM
Ecological Assets Management, LLC

U.S. Fish and Wildlife Service
Attn. Julie Vanderweir
2493 Portola Road, Suite B
Ventura, CA 93003

September 30, 2015

Subject: Submittal of Morro Shoulderband Snail Protocol Survey Report for 200 Madera Street, Los Osos, San Luis Obispo County, California (APN 074-483-009).

Ms. Julie Vanderweir:

Ecological Assets Management has recently completed five Morro shoulderband snail (MSS) protocol surveys for Mr. Rick Kirk's at his 0.45-acre parcel located at 200 Madera , Los Osos, San Luis Obispo County, California (Assessor's Parcel Number 074-483-009). An MSS survey results report has been prepared and is attached to this letter for your review.

In summary, three empty class B MSS shells were found during the five MSS protocol surveys of the subject parcel. The approximately 0.45-acre parcel is triangularly shaped and is bordered by two single family residences on each side and the southern cul-de-sac of Madera Street to the northwest, north and northeast. To south and southwest are two large undeveloped parcels. The Madera Street cul-de-sac is an asphalt paved street with curbs that receives little vehicle traffic. The subject parcel moderately slopes downward from the south to the north and is composed of Baywood fine sand with a 9 to 15 percent (%) slope as mapped by the UC Davis SoilWeb website.

Due to the documented presence of MSS on the subject parcel, Mr. Rick Kirk is not requesting a "no take concurrence authorization" at this time and instead will be exploring his options to obtain an Incidental Take Permit through the preparation and execution of a Low Effect Habitat Conservation Plan.

If you have any questions or comments concerning the attached report please contact me at 805.440.6137 or e-mail at dwayne@ecologicalmgmt.com.

Sincerely,

Dwayne Oberhoff

Dwayne Oberhoff
Project and LLC Manager
Ecological Assets Management, LLC

Morro Shoulderband Snail Protocol Survey Report for 200 Madera Street (APN 074-483-009), Los Osos, San Luis Obispo County, California

Prepared for:

Mr. Rick Kirk

Prepared by:

EAM
Ecological Assets Management, LLC

September 30, 2015

PO Box 6840, Los Osos, CA 93412 | 805.440.6137
http://www.ecologicalmgmt.com | dwayne@ecologicalmgmt.com

Introduction

The following Morro shoulderband snail (MSS) protocol survey report has been prepared by Ecological Assets Management LLC (EAM) for Mr. Rick Kirk. This report presents the methods and results of five protocol-level MSS surveys conducted from November 30, 2014 , to February 7, 2015, at Mr. Kirk's 0.45-acre (19,600 square feet) undeveloped parcel located at 200 Madera Street, Los Osos, San Luis Obispo County, California (Assessor's Parcel Number 074-483-009).

In summary, three empty class B MSS shells were found during the five protocol surveys in various locations on the parcel. Take of MSS could potentially occur if a project was conducted on the subject parcel and any proposed project would likely be required to obtain an Incidental Take Permit by preparing a Habitat Conservation Plan.

Survey Methods

The 2003 United States Fish and Wildlife Service (USFWS) Protocol Survey Guidelines for MSS require that five protocol surveys be performed during or immediately following a rain event to establish the presence or absence of MSS at a location. Rainfall data used to document suitable survey conditions is obtained from either the Pacific Gas & Electric Diablo Canyon Power Plant weather forecast, (http://www.tenera.com/weather/) or from the rain gauge at EAM's Los Osos office. Site specific weather conditions (i.e. temperature and wind speed) are collected on site with a Kestrel 3000 wind meter.

Following these requirements, biologists Dwayne Oberhoff and Bob Sloan conducted five protocol surveys on the subject parcel during or immediately following rainfall events (refer to Table 1), between December 3rd, 2014 and February 8th, 2015. Dwayne Oberhoff is permitted to conduct MSS habitat assessments and protocol surveys under federal recovery permit TE-180579-1. During these surveys Bob Sloan did not have a federal recovery permit, but did receive a federal recovery permit TE-43937B-0 for the species on March 6, 2015. All five surveys were conducted on foot and covered all areas of the subject parcel to determine the presence/absence of live MSS, empty MSS shells and suitable MSS habitat. Survey efforts focused on all areas of the site, including non-native habitat, anthropogenic debris, and edges of fence lines and other manmade structures that could provide habitat or shelter for MSS.

Description of Morro Shoulderband Snail and its Habitat

MSS is found in western San Luis Obispo County within the vicinity of Morro Bay. Specifically, it is found south from the northern portion of the city of Morro Bay, west of Los Osos Creek and north of Hazard Canyon. Within this area, MSS is found on sandy soils within both coastal dune and coastal scrub plant communities. Key native plant species associated with MSS include mock heather (*Ericameria ericoides)*, coast

buckwheat (*Eriogonum parvifolium*), dune bush lupine (*Lupinus chamissonis*), deerweed (*Acmispon glaber*), California croton (*Croton californicus*), seaside golden yarrow (*Eriophyllum staechadifolium*), black sage (*Salvia mellifera*) and California sagebrush (*Artemisia californica*). MSS are also commonly found in association with non-native plant species such as veldt grass (*Ehrharta calycina*), ice plant (*Carpobrotus edulis*), and anthropogenic structures or debris/garbage (i.e. plywood, cardboard, etc).

Due to threats from habitat destruction, colonization of invasive plant species, aging habitat, and off-road vehicle use, MSS was listed as endangered by the USFWS on December 15, 1994. In 2006, following the five year review conducted by the USFWS, the USFWS recommended MSS be downlisted from endangered to threatened, however the final rulemaking process for this downlisting has not been completed.

Site Location and Proposed Project

The subject parcel is located in western San Luis Obispo County, California, within the community of Los Osos (refer to Figure 1). The property is located at 200 Madera Street, and the closest main cross street is Rodman Drive, located approximately 0.15-mile to the north of the subject parcel. The subject parcel is located within the Cabrillo Estates development, which consists of large parcels with single-family residences. The subject parcel is located in a newer portion of the development known as Tract 1342 with newer residences and more vacant parcels when compared to other areas of the development. The subject parcel is located at an elevation of 260 feet above sea level within an that is gently sloping when compared to the other portions of the development that extend up the steeper slopes to the east and southeast.

The 0.45-acre parcel is proposed to be developed with a single family residence, which would include an attached garage, paved driveway and minimal landscaping.

Existing Conditions

The approximately 0.45-acre parcel is triangularly shaped and is bordered by two single family residences on each side and the southern cul-de-sac of Madera Street to the northwest, north and northeast. To south and southwest are two large undeveloped parcels. The Madera Street cul-de-sac is an asphalt paved street with curbs that receives little vehicle traffic. The subject parcel moderately slopes downward from the south to the north and is composed of Baywood fine sand with 9 to 15 percent (%) slope as mapped by the UC Davis SoilWeb website (http://casoilresource.lawr.ucdavis.edu/gmap/). During the surveys both straw waddles and silt fencing were observed and appeared to have

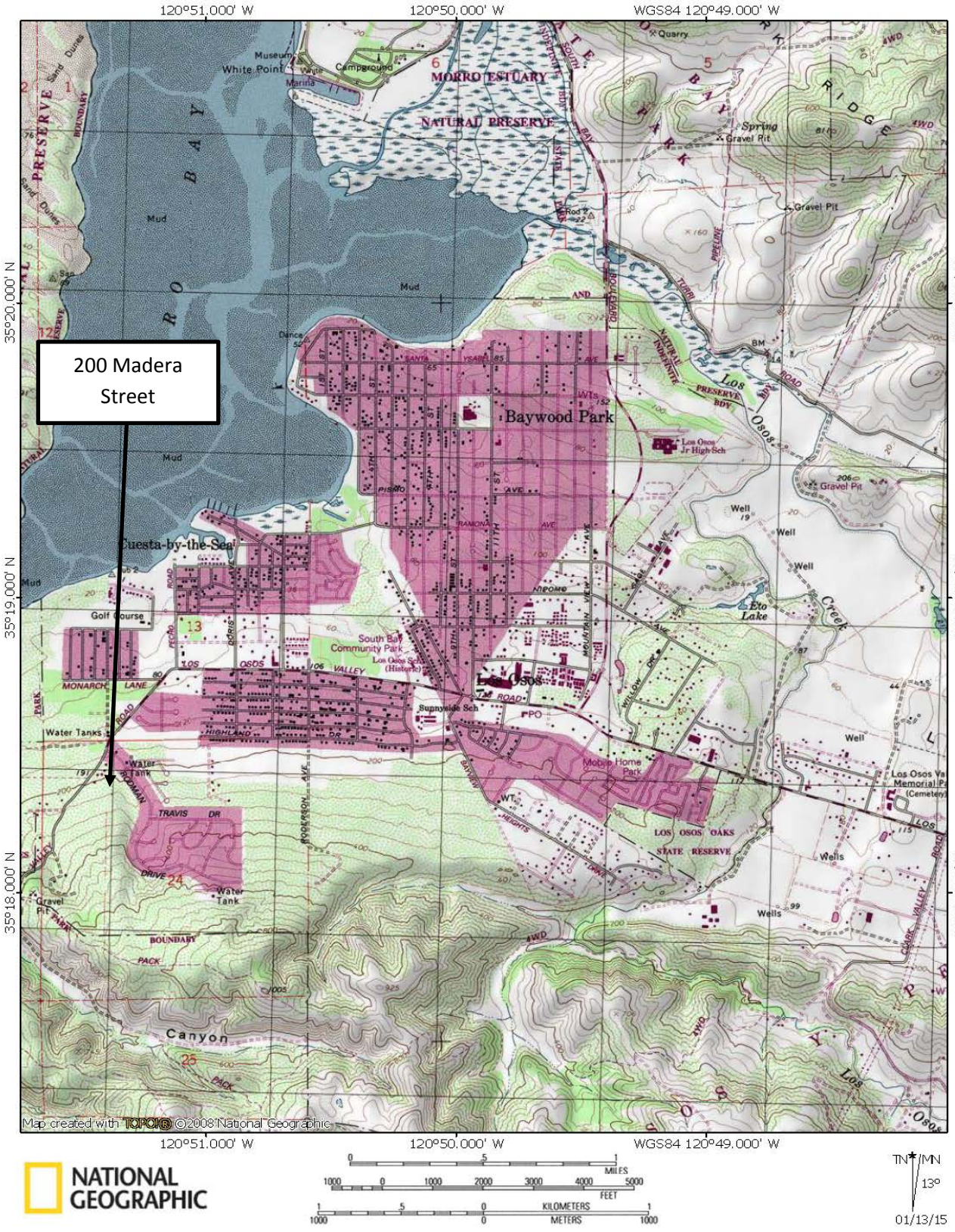


FIGURE 1. Location map of subject parcel in Los Osos, CA.

been installed to slow erosion and capture any sediment that originated on the subject parcel. The subject parcel is dominated with veldt grass and contains large areas of bare sand that surround a few scattered remnants of native habitat consisting primarily of buckbrush (*Ceanothus cuneatus*). The subject parcel appears to be mowed annually for weed abatement and fire safety purposes over the last several years, and thus has reduced and removed some of the native shrubs. The dominant woody shrub on the parcel is buckbrush, which provides limited habitat for MSS. Small amounts of leaf litter are present in association with native shrubs, but very few branches were observed touching the ground that could provide habitat for MSS. In general, the site contains limited cover of native woody shrubs, sparse cover of non-native plants. Appendix A includes three site photos taken during the protocol surveys.

The subject parcel is outside the boundary of critical habitat units for MSS designated on February 7, 2001. The nearest critical habitat unit to the subject parcel is Unit 1, which is immediately adjacent to and borders the subject parcel's western perimeter.

Results

Dwayne Oberhoff and Bob Sloan conducted five focused, protocol-level surveys for MSS on the subject parcel from November 30, 2014 , to February 7, 2015, (refer to Table 1). All areas and habitats located on the subject parcel were surveyed by walking transects, visual observation, and carefully sifting through soil and leaf litter by hand under vegetation, around woody debris, and other areas where MSS could be present. A total of 3.4 person-hours (18.7 person-hours/hectare) were spent conducting the five surveys. During the five protocol-level surveys, three empty class B MSS shells were observed (refer to Figure 2).

Table 1. Results of MSS Protocol Surveys for 200 Madera Street, Los Osos, CA

Survey #	Survey Date and Time	Surveyor	Weather Conditions	Protocol Survey	Results
1	11/30/2014 1535-1615 hrs	D. Oberhoff	64°F, 0.15" of precip day of survey, overcast w/ scattered showers	Yes	No MSS observed Numerous live and empty Helix shells
2	12/11/2014 1445-1525 hrs	D. Oberhoff	66°F, 0.20" of precip night prior to and day of survey, overcast w/ scattered showers during survey	Yes	1 class B empty MSS shell 1 live Helix and 2 empty shells
3	12/17/2014 0915-0945 hrs	D. Oberhoff	57°F, 1.30" of precip night before survey, overcast w/ rain shower just before survey	Yes	Numerous live and empty Helix shells
4	1/27/2015 1045-1120 hrs	D. Oberhoff	68°F, 0.11" of precip night before survey, overcast with light scattered showers during survey	Yes	2 live Helix
5	2/7/2015 1230-1300 hrs	D. Oberhoff & B. Sloan	69°F, 0.67" of precip prior to and light showers during survey	Yes	2 class B empty MSS shells


Figure 2.
Existing Conditions and Survey Results Map
Legend
Approx Property Perimeter
Empty MSS Shell
San Ricardo Ln
Google earth
© 2015 Google
N
100 ft

One of the empty MSS shells observed was located in the center of the parcel in a dense clump of veldt grass and was broken into a couple of large fragments, but all of the fragments of the original shell appeared to be located at the location where observed. Another empty MSS shell was located under a buck brush in the northwestern portion of the parcel. The third empty MSS shell was observed in the northeast portion of the subject parcel on a north facing slope. No live MSS were observed during the five protocol surveys. Numerous live and empty shells of brown garden snail (*Helix aspera*) were observed during the survey in locations nearest the existing residences. Figure 2 illustrates the location of all empty MSS shells observed on the subject parcel during the five protocol surveys.

The nearest MSS occurrence to the subject parcel was documented during previous survey efforts conducted by EAM under an Incidental Take Permit authorization located at 216 Madera Street, which is approximately 0.10-mile north of the subject parcel. During the pre-activity surveys conducted by EAM at this parcel, a total of four live MSS were located and were captured and relocated to the approved receptor site at the Morro Dunes Ecological Reserve.

Discussion

The survey results documented above describe the dispersed presence of empty MSS shells and consequently live MSS may occupy the subject parcel. Due to these results "take" of MSS could potentially occur if a project was conducted on the subject parcel. As a result and since avoidance is not a practical option, any proposed project would likely be required to obtain an Incidental Take Permit (ITP) by preparing a Habitat Conservation Plan (HCP) prior to project approval.

Due to the potential presence of MSS on the subject parcel, a "no take concurrence authorization" will not be requested. An ITP through the preparation and execution of a Habitat Conservation Plan would likely need to be prepared in order to develop the subject parcel. The 0.45-acre parcel is ideally suited to receive an ITP through the preparation and subsequent USFWS approval of a "Low Effect" HCP. The following Low Effect HCP information is from the USFWS (https://www.fws.gov/endangered/esa-library/pdf/HCP_Incidental_Take.pdf):

> *"Low Effect" HCPs are those involving minor effects on federally listed, proposed, or candidate species and their habitats covered under the HCP and minor effects on other environmental values or resources. These HCPs do not require a NEPA document, and the target permit processing time is 3 months.*

In addition, due to the observation of empty MSS shells on the subject parcel and the potential presence of live MSS, the owner should contact Cal Fire and request an exemption from future vegetation clearing activities to prevent "take" of MSS.

References

Roth. 1985. Status Survey of the Banded Dune Snail, (Helminthoglypta walkeriana). Prepared for the U.S. Fish and Wildlife Service. Sacramento, California.

SWCA Environmental Consultants. 2012. Annual Construction Monitoring Report for the Los Osos Wastewater Project, San Luis Obispo, California.

SWCA Environmental Consultants. 2013. Annual Construction Monitoring Report for the Los Osos Wastewater Project, San Luis Obispo, California.

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U.S. Fish and Wildlife Service. 1998. Recovery Plan for the Morro Shoulderband Snail and Four Plants from Western San Luis Obispo County, California. U.S. Fish and Wildlife Service, Portland, Oregon.

U.S. Fish and Wildlife Service. 2003. Protocol Survey Guidelines for the Morro Shoulderband Snail. U.S. Fish and Wildlife Service, Portland, Oregon.

U.S. Fish and Wildlife Service. 2006. Morro Shoulderband Snail 5-Year Review. U.S. Fish and Wildlife Service. Ventura Fish and Wildlife Field Office, Ventura California.

Appendix A: Photo Pages

- **3 Photos**

Photo 1

Photo viewing northwest toward cul-de-sac of Madera Street.

November 30, 2014

PO Box 6840, Los Osos, CA 93412 | 805.440.6137
http://www.ecologicalmgmt.com | dwayne@ecologicalmgmt.com

Photo 2

Photo viewing west from Madera Street cul-de-sac.

November 30, 2014

PO Box 6840, Los Osos, CA 93412 | 805.440.6137
http://www.ecologicalmgmt.com | dwayne@ecologicalmgmt.com

Photo 3

Photo viewing north from southwest corner of subject parcel.

November 30, 2014

Updated Morro Shoulderband Snail Protocol Survey Report for 200 Madera Street (APN 074-483-009), Los Osos, California

July 19, 2017

Introduction

The following memo provides an update to the original Morro shoulderband snail (*Helminthoglypta walkeriana*) protocol surveys report prepared by Ecological Assets Management LLC (EAM) in 2015 for Mr. Rick Kirk's parcel located at 200 Madera Street (APN 074-483-009), Los Osos, San Luis Obispo County, California. The purpose of this memo is to provide an update to the previously prepared Morro Shoulderband Snail Protocol Survey Report with current information and conditions.

This report presents the methodology and results of one focused survey for Morro shoulderband snail (MSS) conducted during protocol conditions on January 9, 2017, to assess the current conditions and presence of MSS at Mr. Rick Kirk's parcel located at 200 Madera Street. In summary, the single protocol survey and habitat assessment conducted on the subject parcel observed no live MSS, empty MSS shells, and observed habitats were similar to the conditions observed during the previous protocol surveys and habitat assessment conducted in 2015.

Survey Methods

The 2003 United States Fish and Wildlife Service (USFWS) Protocol Survey Guidelines for MSS require that five protocol surveys be performed during or immediately following a rain event to establish the presence or absence of MSS at a location. Rainfall data used to document suitable survey conditions is obtained from either the Pacific Gas & Electric, Diablo Canyon Power Plant weather forecast (http://www.tenera.com/weather/) or from the rain gauge at EAM's Los Osos office. Site specific weather conditions (i.e. temperature and wind speed) are collected on site with a Kestrel 3000 wind meter.

For this report, only one focused MSS survey during protocol conditions was conducted. Biologist Dwayne Oberhoff conducted one protocol survey on the subject parcel immediately following a rainfall event on January 9, 2017. The rain event prior to this survey effort consisted of 1.48 inches of rain the day prior to the survey date.

Dwayne Oberhoff is permitted to conduct MSS habitat assessments and protocol surveys under federal recovery permit TE-180579-1.

The single protocol survey of the subject parcel was conducted on foot and covered all areas of both subject parcel to determine the presence/absence of live MSS, empty MSS shells and suitable MSS habitat. Survey efforts focused on all areas of the site, including non-native habitat, anthropogenic debris, and edges of fence lines and other manmade structures that could provide habitat or shelter for MSS.

Description of Morro Shoulderband Snail and its Habitat

MSS is found in western San Luis Obispo County within the vicinity of Morro Bay. Specifically, it is found south from the northern portion of the city of Morro Bay, west of Los Osos Creek and north of Hazard Canyon. Within this area, MSS is found on sandy soils within both coastal dune and coastal scrub plant communities. Key native plant species associated with MSS include mock heather (Ericameria ericoides), coast buckwheat (*Eriogonum parvifolium*), dune bush lupine (*Lupinus chamissonis*), deerweed (*Acmispon glaber*), California croton (*Croton californicus*), seaside golden yarrow (*Eriophyllum staechadifolium*), black sage (*Salvia mellifera*) and California sagebrush (*Artemisia californica*). MSS are also commonly found in association with non-native plant species such as veldt grass (*Ehrharta calycina*), ice plant (*Carpobrotus edulis*), and anthropogenic structures or debris/garbage (i.e. plywood, cardboard, etc).

Due to threats from habitat destruction, colonization of invasive plant species, aging habitat, and off-road vehicle use, MSS was listed as endangered by the USFWS on December 15, 1994. In 2006, following the five year review conducted by the USFWS, the USFWS recommended MSS be downlisted from endangered to threatened, however the final rulemaking process for this downlisting has not been completed.

Site Location

The subject parcel is located in western San Luis Obispo County, California, within the community of Los Osos (refer to Figure 1). The property is located at 200 Madera Street, and the closest main cross street is Rodman Drive, located approximately 0.15-mile to the north of the subject parcel. The subject parcel is located within the Cabrillo Estates development, which consists of large parcels with single-family residences. The subject parcel is located in a newer portion of the development known as Tract 1342 with newer residences and more vacant parcels when compared to other areas of the development. The subject parcel is located at an elevation of 260 feet above sea level within an that is gently sloping when compared to the other portions of the development that extend up the steeper slopes to the east and southeast.

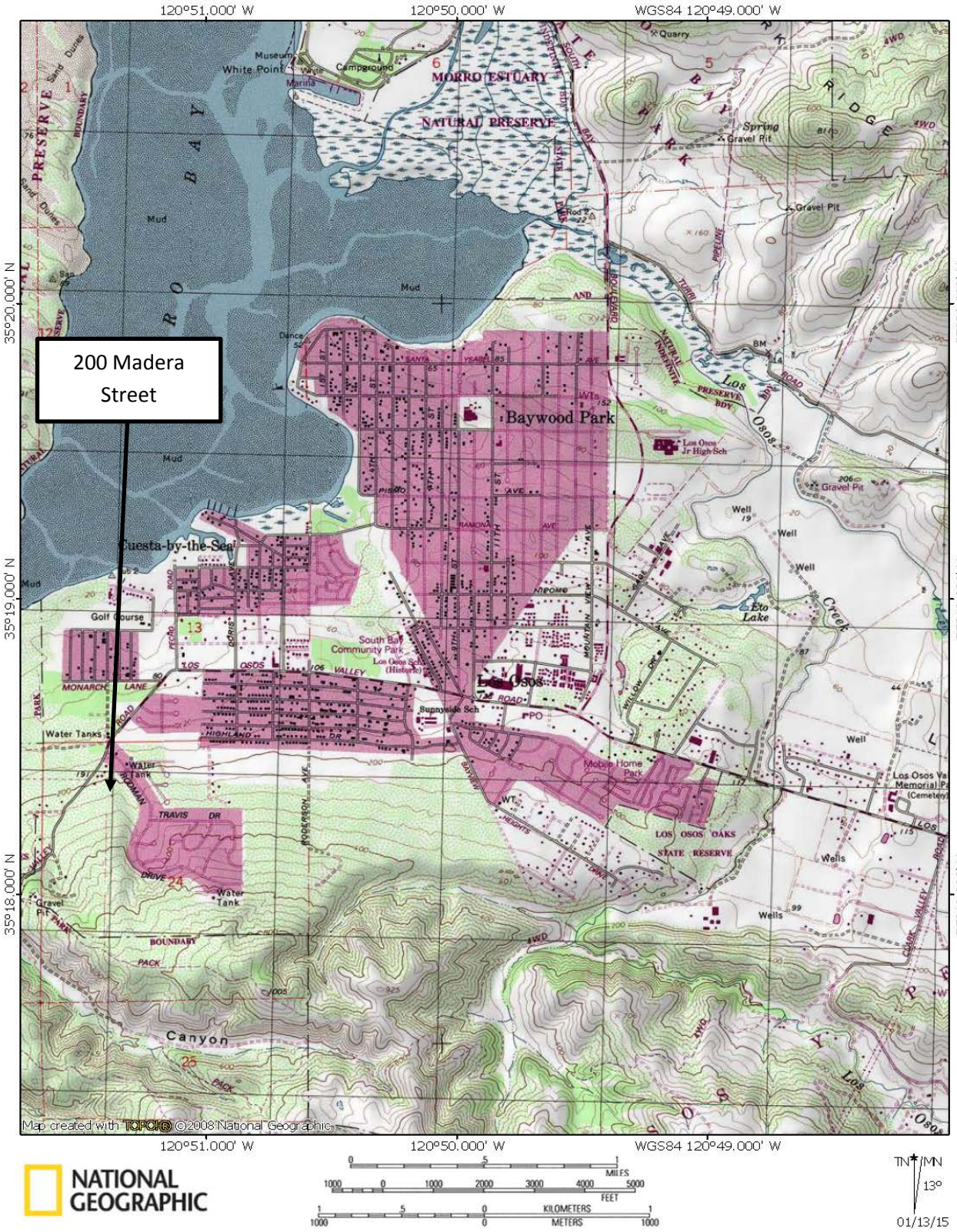

FIGURE 1. Location map of subject parcel in Los Osos, CA.

Existing Conditions

Observed conditions on the subject parcel were generally similar to the previous survey efforts presented in the 2015 report. Since the previous surveys in 2015, and due to the high precipitation in early 2017, annual grasses have grown quite tall when compared to the 2015 observed conditions (refer to Photo Documentation). No additional site disturbances since the 2015 surveys were observed on the subject parcel during the site visit.

Results

Dwayne Oberhoff conducted one focused protocol-level survey for MSS on the subject parcel on January 9, 2017 (refer to Table 1). No live MSS or empty MSS shells were observed on the subject parcel during the one protocol survey. One live and two empty shells from the common brown garden snail (*Helix aspera*) were observed during the survey on the subject parcel.

Discussion

As stated in the "Results" section, no live MSS or empty MSS shells were observed on the subject parcel during the single protocol survey on January 9, 2017. In addition, the observed habitats and existing conditions were similar to the observations made in 2015.

Appendix A: Photo Pages

- **3 Photos**

Photo 1

Photo viewing northeast toward cul-de-sac of Madera Street.

January 9, 2017

PO Box 6840, Los Osos, CA 93412 | 805.440.6137
http://www.ecologicalmgmt.com | dwayne@ecologicalmgmt.com

Photo 2

Photo viewing west from center of subject parcel.

January 9, 2017

PO Box 6840, Los Osos, CA 93412 | 805.440.6137
http://www.ecologicalmgmt.com | dwayne@ecologicalmgmt.com

Photo 3

Photo viewing east from center of subject parcel

January 9, 2017

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http://www.ecologicalmgmt.com | dwayne@ecologicalmgmt.com