



Kevin Merk Associates, LLC | P.O. Box 318, San Luis Obispo, CA 93406 | 805-748-5837

May 23, 2018

Mr. Hemant Patel
AZSA Hospitality, LLC
590 Morro Avenue
Morro Bay, California 93442

**Subject: Biological Resources Assessment for the Atascadero Road Hotel Project,
Morro Bay, San Luis Obispo County, California**

Dear Mr. Patel:

At your request, Kevin Merk Associates, LLC (KMA) conducted a biological resources assessment for the proposed development of a hotel on Atascadero Road west of Highway 1 in the City of Morro Bay, San Luis Obispo County, California. The proposed project, as shown on the Arris Studio Architects' site plan (1/12/2018), is sited on two parcels identified by Assessors Parcel Numbers 065-182-003 and -004. The purpose of the investigation was to evaluate the existing conditions of the proposed project area, assess the potential for special status species to occur in the study area, and provide an assessment of biological resources that may be affected by the construction of the proposed project to help support the City of Morro Bay's environmental review process.

The site is located on Atascadero Road, which is the terminus of Highway 41, immediately to the west of Highway 1. The property is an undeveloped flat lot situated in an existing developed area with Morro Bay High School located to the north, Highway 1 to the east, the entrance driveway to Morro Bay High School and a youth center to the west, and the Motel 6 located across the street to the south. The project would develop the entire study area with a hotel and associated parking and landscaping. Trees along the western and northern property boundaries are offsite and would not be removed. Please refer to the attached Site Location Map (Figure 1) and Aerial Overview Map (Figure 2) for additional location information. Following are the methods and results of the investigation.

METHODS

Prior to field work, a list of special-status plants and wildlife potentially occurring onsite was developed based on our knowledge of the region, review of biological reports prepared from the area, and a query of the California Natural Diversity Database maintained by the California Department of Fish and Wildlife (CDFW; reviewed in February and April 2018). In addition, the California Native Plant Society's On-Line Inventory of Rare and Endangered Vascular Plants of California (CNPS; *Inventory*) was reviewed to ensure a thorough list of rare plants was developed. The CNDDDB search range included three U.S. Geological Survey 7.5-minute topographic quadrangles: 1) Morro Bay North; 2) Morro Bay South; and 3) Cayucos. This was determined to be a sufficient search radius around the site to identify special status resources that could potentially be present. It should be noted that the CNDDDB and *Inventory* are based

solely on reported occurrences and do not constitute an exhaustive inventory of all special-status species that occur in a given area and thus, serve only as predictive tools. Special-status species included on the target list are those species known to occur in coastal habitats in the project region, and were the focus of the survey efforts.

Discussions of plant communities herein use the classifications and terminology included in the Manual of California Vegetation, second edition (Sawyer, Keeler-Wolf and Evens, 2009), and Robert F. Holland's *Preliminary Description of the Terrestrial Natural Communities of California* (1986), which are consistent with current CNDDDB classifications. Plant taxonomy follows the Jepson Manual, second edition (Baldwin et al., 2012) as updated online. In addition, the Consortium of California Herbaria and the Calflora online databases were searched for information on special status plants occurring in the region.

For the purpose of this report, special status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS under the federal Endangered Species Act (ESA); those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern," "Fully Protected," or "Watch List" by the CDFW; and plants occurring on California Rare Plant Ranks (CRPR) 1, 2, 3 and 4 developed by the CDFW working in concert with the CNPS. The specific code definitions are as follows:

- 1A = Plants presumed extinct in California;
- 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);
- 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);
- 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);
- 2 = Rare, threatened or endangered in California, but more common elsewhere;
- 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);
- 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened); and
- 4.3 = Plants of limited distribution (watch list), not very endangered in California.

During the field visits, all vascular plant species observed were identified primarily in accordance with the nomenclature presented in the Jepson Manual, second edition (Baldwin et al. 2012). Species not readily identifiable in the field were brought to the office for further analysis, and identified using dichotomous keys in the Jepson Manual and Hoover's *The Vascular Plants of San Luis Obispo County California* (1970). The surveys generally followed accepted protocol developed by the CDFW and CNPS, which means that the entire property was traversed on foot by walking evenly spaced meandering transects to ensure thorough coverage

of the area, and the survey was floristic in nature, and all plants observed were identified to a sufficient level to determine rarity. Seasonally timed botanical surveys were conducted to determine the presence or absence of rare plants within the study area, and the results are included herein.

KMA's Principal Biologist Kevin Merk conducted field reconnaissance of the property on February 9, 2018 and March 26, 2018. An additional visit was conducted on April 27, 2018 to identify all plants onsite. Weather during the field surveys was generally clear, temperatures averaged approximately 60° Fahrenheit with winds ranging from zero to five miles per hour out of the west. The site perimeter and proposed development area was inspected on foot to evaluate existing conditions and assess the potential occurrence of special status species. Binoculars were also used in the field to identify birds and wildlife activity onsite and adjacent to the site to help with the overall assessment of the property's potential to support special-status plant and animal species.

Aerial imagery obtained from Google Earth (2018) was also inspected prior to, during and following the field surveys to define the current extent of on-site plant community boundaries and assist in identifying potential habitat for special-status species. The National Wetland Inventory and Critical Habitat Portal maintained by the U.S. Fish and Wildlife Service (USFWS) were reviewed to identify the extent of mapped drainages, wetlands and critical habitat for federal threatened or endangered species in the immediate area. In addition, the Natural Resource Conservation Service's Web Soil Survey was queried to assist in our plant community and floristic survey effort.

The evaluation of special status species and identification of habitat conditions that could support these species was based on our field observations, knowledge of the particular species biology, and review of documented records included in the CNDDDB, resulting in the development of a habitat suitability analysis. Wildlife observations were made during each survey and were used to assist with the special status species assessment (refer to Table 1 included as an attachment).

To assess the potential occurrence of the federal endangered Morro shoulderband snail (*Helminthoglypta walkeriana*; MSS), all the property was thoroughly examined to search for suitable habitat and empty shells. Survey efforts searched for woody refuse, woody scrub vegetation, areas of detritus or debris, shrubs, fence lines, and ground cover plants that could potentially provide habitat or shelter for MSS.

The investigation also evaluated the site for the presence of Environmentally Sensitive Habitat Area (ESHA) pursuant to the California Coastal Act. A variety of plant communities within the Coastal Zone meet the definition of ESHA (Coastal Act Section 30107.5), including riparian areas, wetlands, maritime chaparral and special status species habitat. The California Coastal Commission (CCC), with technical assistance from the CDFW, is responsible for protecting ESHA within the Coastal Zone, and have required local agencies such as the City of Morro Bay to develop policies aimed at protecting and preserving these areas. For wetland habitats, the CCC and CDFW rely on the USFWS wetland definition and classification system developed by Cowardin et al. (1979) titled, *Classification of Wetlands and Deep Water Habitats of the United States*, as the methodology for wetland determinations. The CCC requires the presence of only

one wetland parameter (e.g., wetland hydrology, hydric soils, or predominance of hydrophytic vegetation) for an area to qualify as a coastal wetland. Section 30121 of the California Coastal Act, the statute governing the CCC, broadly defines wetlands as:

"Lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens."

The 1981 CCC Statewide Interpretive Guidelines define riparian habitats as areas of riparian vegetation. Riparian habitats may encompass wetland areas, but may also extend beyond those areas. Riparian vegetation is defined as

"an association of plant species which grows adjacent to freshwater watercourses, including perennial and intermittent streams, lakes, and other bodies of fresh water."

The City of Morro Bay CLUP Chapter XII provides definitions of ESHA within the City limits, and identifies coastal streams and riparian areas as follows:

"A Stream or a River is a natural watercourse as designated by a solid line or dash and three dots symbol as shown on the USGS Survey map most recently published, or any well-defined channel with distinguishable bed and bank that shows evidence of having contained flowing water as indicated by scour or deposit of rock, sand, gravel, soil, or debris."

Following are the results of the investigation:

RESULTS

The project is located on an undeveloped lot at the corner of Atascadero Road (Highway 41) and Highway 1, immediately adjacent to Morro Bay High School. The property is flat and composed of weedy annual grasses and forbs surrounded by chain link fence. The 2018 field surveys identified disturbed annual grassland as the primary habitat type onsite. A windrow of Monterey cypress (*Hesperocyparis macrocarpa*) is present just offsite of the western and northern sides of the property, and only the outer tree canopy extends onto the site. No special status plants were observed onsite, and none are expected to occur due to the regular cycle of disturbance from historic land uses onsite (i.e. annual mowing) and predominance of non-native weedy species. Given the site's proximity to existing development and being setback from the immediate coastline, no special status wildlife are expected to occur onsite. No habitats constituting ESHA were identified onsite. Review of the provided site plan confirmed the location of proposed development is confined to disturbed areas, and no special status biological resources would be directly impacted.

Included as attachments to this report are Figure 1, Site Location Map; Figure 2, Aerial Overview Map; Figure 3, Habitat Map; Figure 4, Soils Map; Figure 5, CNDDDB Plants Map; and Figure 6, CNDDDB Animals Map. Table 1 includes a list of special status biological resources evaluated in this investigation, and Table 2 provides a list of plants observed onsite during field surveys. A Photo Plate has also been included to aid in the existing conditions characterization.

The following discussion describes the existing conditions of the property and provides a special status species analysis.

Habitat Types

Annual Grassland (Disturbed)

The entire property consists of weedy non-native annual grasses and forbs typical of undeveloped lots along the coast that are regularly mowed. Some bare soils and old road fill and base material was present along the Atascadero Road frontage, which is more indicative of developed or ruderal (disturbed) areas. Patchy occurrences of horticultural plantings were also observed along the fenceline along Atascadero Road. Grasses observed during the surveys included wild oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and red brome (*Bromus madritensis* ssp. *rubens*). Broad-leaved forbs observed onsite included red-stemmed filaree (*Erodium cicutarium*), mallow (*Malva nicaeensis*), common plantain (*Plantago lanceolata*), summer mustard (*Hirschfeldia incana*), and prickly sow thistle (*Sonchus asper*).

While birds such as western gull (*Larus occidentalis*) were observed flying over the site, the only wildlife observed onsite was pocket gopher (*Thomomys bottae*). Several holes and old tailings were observed scattered across the site.

Monterey Cypress Windrow

A windrow of Monterey cypress trees is present just offsite along the western and northern boundaries of the study area. It was a monoculture of trees planted along the Morro Bay High School entrance driveway and parking lot. The Habitat Map shows the tree canopy (and some shading) extending over the fenceline. A bike path is also present just offsite under the cypress canopy, and little to no vegetation was present in the understory. Large trees in urban areas can provide habitat for numerous birds, but no nest sites, including raptor stick nests, were observed during the field work. Still the windrow could provide perching and foraging habitat for numerous bird species, as well as potentially support nesting activities during the spring and summer nesting season.

Soils

The USDA Soil Survey for the Coastal Part of San Luis Obispo County, California and the NRCS Web Soil Survey identify Psammments and Fluvents, occasionally flooded as the soil map unit on the subject property and surrounding area. This appears to be an old map unit apparently designated for the area when Morro Creek may have meandered through the area. Along the Atascadero Road/Highway 41 frontage, imported fill and road base was present. Elsewhere across the site, sandy loam material with a darker surface coloration was present.

Natural Drainage Features

The site is a flat lot with no natural drainage features present. The closest drainage feature with a defined bed and bank is Morro Creek further to the south, which is separated from the property by existing development, including two hotels and Lila Kieser Park.

Special-Status Plants and Plant Communities of Special Concern

No special status plants or plant communities were observed within the study area during the 2018 field work. The CNDDDB identifies numerous special-status plants and plant communities of special concern that have been found to occur within the general vicinity of the property. Special status plant communities known to occur in the area include: coastal dune scrub, coastal foredune, coastal and valley freshwater marsh, maritime chaparral, riparian and serpentine bunchgrass. No special status plants or plant communities are expected to occur onsite.

The rare plants known to occur in the project vicinity are primarily associated with coastal dune habitats further west along the immediate coastline. Others are found in aquatic habitats along drainages and in serpentine soils on hills and mountains surrounding Morro Bay. A list of the special-status plants identified by the CNDDDB within five miles of the project site is illustrated on the attached Figure 5, and further detail is provided in the attached Table 1, Special Status Biological Resources Known to Occur in the Project Vicinity. The disturbed nature of the site does not provide suitable habitat for any of the special status plants or plant communities evaluated in this study, and as stated above, none are expected to occur onsite.

Special Status Wildlife

The 2018 CNDDDB search conducted for this report contains records of numerous special status animal species within five miles of the site (refer to Figure 6 – CNDDDB Animals Map). Nearly all of these species have highly specialized habitat requirements that are not present onsite. The federal threatened California red-legged frog (*Rana draytonii*) for instance is a highly aquatic amphibian that is known to occur in nearby drainage features, but the project site is situated on a flat level lot surrounded by development. The site does not contain any natural drainage features or suitable aquatic habitat for the red-legged frog, and this species would not be expected to occur onsite. Similarly, other aquatic reptiles and fish (i.e., western pond turtle, two-striped garter snake, tidewater goby, and southern steelhead) are, therefore, not expected to occur within the study area or be affected by the proposed project based on the lack of suitable habitat.

Since the proposed development area is highly disturbed from years of mowing, coastal scrub habitat for species such as the legless lizard (*Anniella pulchra*) and coast horned lizard (*Phrynosoma blainvillii*) is not present, and therefore reptiles known to occur in scrub habitats are not expected to occur. Given the proximity of the site to the Pacific Ocean, the CNDDDB search identified numerous coastal species that are known from coastal sand dunes to the west and southwest of the study area. Therefore, species such as the California black rail (*Laterallus jamaicensis coturniculus*), Morro Bay blue butterfly (*Icaricia icarioides moroensis*), and western snowy plover (*Charadrius nivosus ssp. nivosus*) are also not expected to occur onsite based on

the lack of suitable habitat.

Monarch butterflies (*Danaus plexippus*) are known to overwinter in the Morro Bay area further south of the site, and historic occurrences were identified to the north and south of the site. Inspection of the cypress windrow on the study area confirmed that it did not have sufficient structure or proximity to food and water sources to create the micro-climate needed to provide suitable overwintering habitat. Windrows lack the more complex structure needed to protect butterflies and buffer them from wind and cold temperatures during winter storm events.

Other invertebrate species with known occurrences in the immediate area include the federal endangered Morro shoulderband snail (*Helminthoglypta walkeriana*; MSS). The MSS is associated with coastal dune and coastal sage scrub habitats occurring on sandy soils (Baywood fine sands) around the Los Osos and Morro Bay area. 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 is also commonly found in association with non-native plant species such as veldt grass (*Ehrharta calycina*) and ice plant (*Carpobrotus chiloensis* and *C. edulis*) that have overtaken historic dune scrub areas. MSS has also been found in and around anthropogenic structures or debris/garbage (i.e.: building foundations, woodpiles, cardboard, etc.) in the Los Osos area.

The site does not support suitable MSS habitat since coastal dune scrub/sage scrub habitat, iceplant mats or clumps of veldt grass are not present. In addition, the onsite soils are disturbed from their original sandy dune nature, and no suitable anthropogenic habitat (i.e., old debris piles) was present onsite that could provide shelter for this species. As stated above, fill material/road base was observed along the Atascadero Road frontage to the south, the bike trail to the west and north, and Highway 1 off ramp to the east. The February site visit occurred following rain events, and no old shells or live individuals were observed onsite. Moreover, the site is separated from known occurrences to the west by existing development and a windrow of Monterey cypress trees. Cypress trees are known to create a movement barrier for the species, especially when no understory vegetation is present. Therefore, based on the lack of suitable habitat and separation from known occurrences by existing development and a Monterey cypress windrow, MSS is not expected to occur onsite.

Although no special status wildlife were observed during the surveys, suitable habitat for nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code was present in the Monterey cypress windrow just offsite to the west and north. No nests were observed during the 2018 field work, but birds could utilize the trees offsite in the future.

IMPACT ANALYSIS AND RECOMMENDED MITIGATION MEASURE

The proposed project is the construction of a hotel and associated parking and landscaping that will cover the entire study area shown on Figure 3, the Habitat Map. The disturbed annual grassland is not a sensitive or special status plant community, and does not support special status species of plants or wildlife. Therefore, impacts to disturbed grassy areas on the property would be considered less than significant pursuant to the California Environmental

Quality Act (CEQA) and would not require mitigation. Based on review of the site plan prepared by Arris Studio Architects (January 2018), the project would not affect the Monterey cypress trees adjacent to the site. Still, nesting birds could be present on a seasonal basis in these trees, and construction activities as well as trimming or removing trees could adversely affect their nesting activities. The following mitigation measure is provided to avoid impacts to birds protected under the MBTA and CFGC.

Mitigation Measure for Nesting Birds. To avoid impacts to nesting birds, including raptors, for construction activities occurring between February 15th and August 31st, a pre-construction survey for active bird nests within the limits of the project extending into the neighboring tree canopies should be conducted by a qualified biologist. Surveys should be conducted within two weeks prior to construction activities. If no active nests are located, construction activities can proceed. If active nests are located, then all construction work should be conducted outside a non-disturbance buffer zone to be developed by the project biologist based on the species (i.e., 50 feet for common species and upwards of 250 feet for raptors), slope aspect and surrounding vegetation in proximity to the nest site. No direct disturbance to nests should occur until the young are no longer reliant on the nest site as determined by the project biologist. The biologist should conduct monitoring of the nest until all young have fledged.

Implementation of the above recommended avoidance and mitigation measure would be sufficient to ensure project related impacts to nesting birds are less than significant from a CEQA perspective.

CONCLUSION

The site consists of disturbed grassland dominated by weedy species that is mowed on a regular basis. The proposed project, consisting of the construction of a hotel, parking and associated landscaping, would be sited entirely within the disturbed grassy areas and would not affect any native habitat. The investigation determined that no special-status plants or plant communities (including ESHA), are present onsite. Based on the lack of suitable habitat and separation from native habitat areas to the south and west by existing development, no special status wildlife such as the Morro shoulderband snail are expected to occur on the property. With the presence of large Monterey cypress trees immediately adjacent to the west and north sides of the property, nesting birds could occur on a seasonal basis. As such, a mitigation measure is provided above that would avoid potential project related impacts to nesting birds and ensure impacts to biological resources are less than significant pursuant to CEQA.

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Thank you for the opportunity to provide environmental consulting services for this project. I trust the above information is sufficient to assist with your reporting requirements at this time. If you have any questions regarding the above findings, please contact me directly.

Sincerely,
Kevin Merk Associates, LLC

A handwritten signature in blue ink that reads "Kevin Merk".

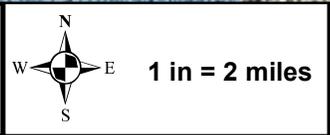
Kevin B. Merk
Principal Biologist

*Attachments: Figure 1 – Site Location Map;
Figure 2 – Aerial Overview Map;
Figure 3 – Habitat Map;
Figure 4 – Soils Map;
Figure 5 – CNDDDB Plants Map;
Figure 6 – CNDDDB Animals Map;
Table 1 – Special Status Biological Resources Known to Occur in the Project Vicinity;
Table 2 – List of Plants Observed Onsite During Field Surveys; and
Photo Plate*



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Figure 1
 Site Location



Study Area Boundary

NWI Wetland (February 2018)

Freshwater Forested/Shrub Wetland

Riverine

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Additional Sources: National Wetlands Inventory



1 in = 500 feet

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Figure 2

Aerial Overview



 Study Area Boundary
 Mowed Grassland

0 125 250 Feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community




1 in = 75 feet

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Figure 3
Habitat Map



Study Area Boundary

Soil Type

Concepcion loam, 2-5% slopes

Diablo and Cibo clays, 9-15% slopes

Dune land

Lodo clay loam, 15-30% slopes

Lodo clay loam, 50-75% slopes

Los Osos loam, 15-30% slopes

Psamments and Fluvents, occasionally flooded

Salinas silty clay loam, 2-9% slopes

Corducci-Typic Xerofluvents, 0-5% slopes



Additional Sources: United States Department of Agriculture Web Soil Survey

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



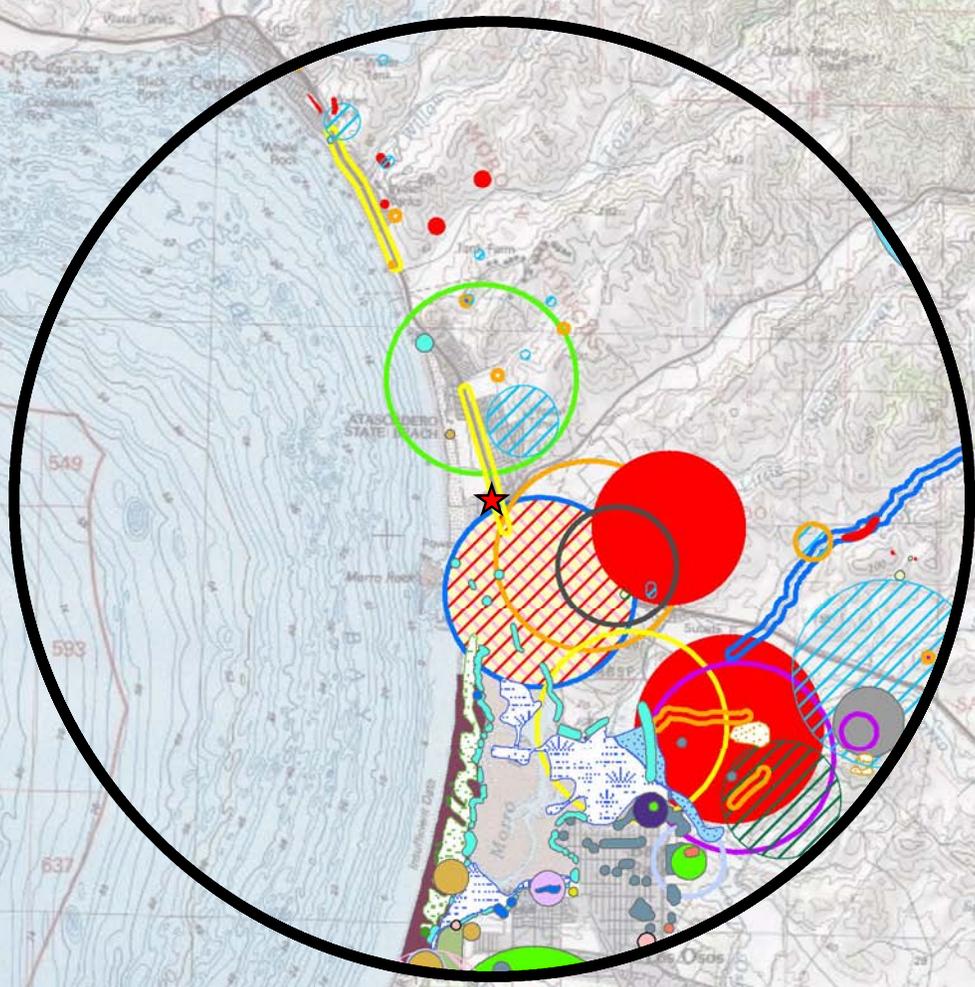
1 in = 500 feet

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Figure 4

Soils Map



Additional Sources: California Department of Fish and Wildlife (CNDDDB), January 2018

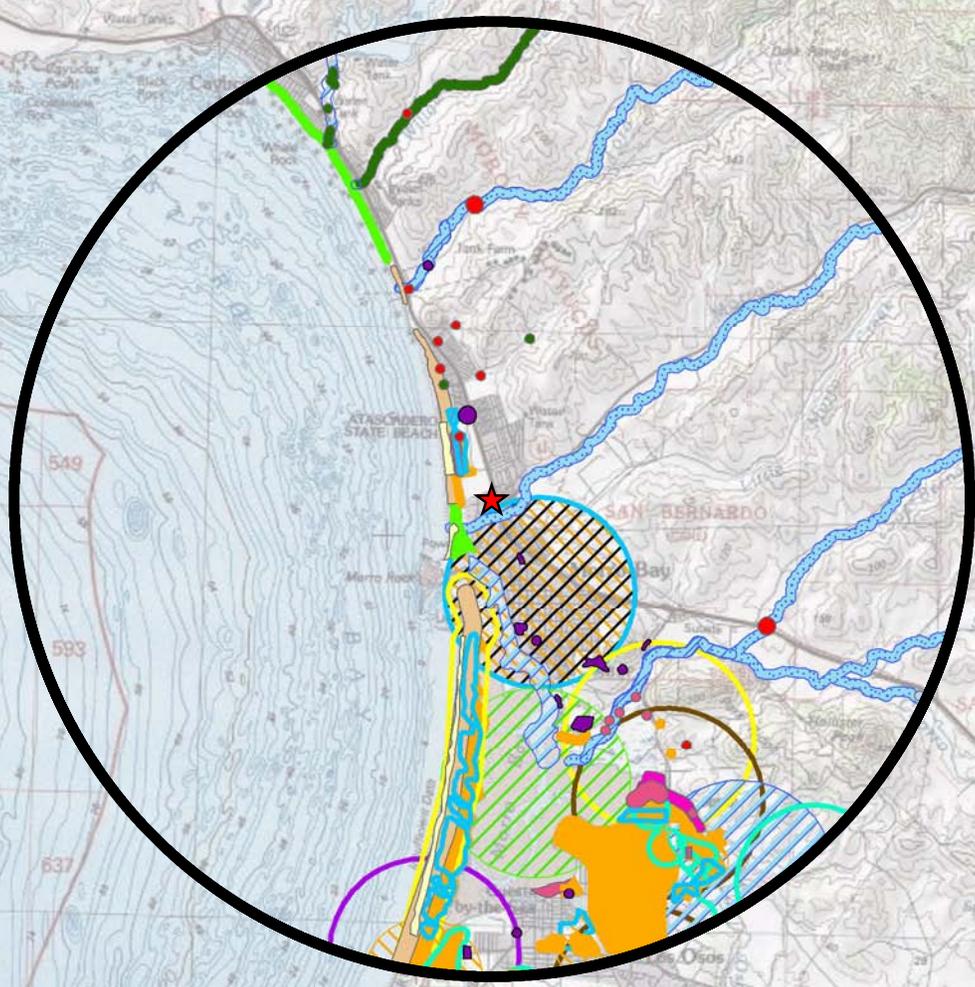
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Figure 5
CNDDDB Plants Map

- ★ Site Location
- ⬢ 5 Mile Buffer
- CNDDB Animals**
- ▨ California Ridgway's rail
- ▨ California black rail
- ▨ California red-legged frog
- ▨ Cooper's hawk
- ▨ Morro Bay blue butterfly
- ▨ Morro Bay kangaroo rat
- ▨ Morro shoulderband (=banded dune) snail
- ▨ Townsend's big-eared bat
- ▨ big free-tailed bat
- ▨ coast horned lizard
- ▨ globose dune beetle
- ▨ mimic tryonia (=California brackishwater snail)
- ▨ monarch - California overwintering population
- ▨ northern California legless lizard
- ▨ obscure bumble bee
- ▨ pallid bat
- ▨ sandy beach tiger beetle
- ▨ steelhead - south-central California coast DPS
- ▨ tidewater goby
- ▨ western pond turtle
- ▨ western snowy plover



Additional Sources: California Department of Fish and Wildlife (CNDDB), January 2018

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1 inch = 2 miles

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Figure 6

CNDDB Animals Map

Table 1. Special Status Biological Resources Known to Occur in the Project Vicinity:

Species	Status* Fed/CA/CDFW	Habitat Requirements	Project Site Suitability/Observations
LICHENS/BRYOPHYTES			
Firm cup lichen <i>Cladonia firma</i>	--/--/2B	Lichen known from maritime habitats in Europe and North America on stabilized sand dunes on the coast. Documented in the Morro Bay/Los Osos area on sands of marine origin.	No suitable habitat present onsite. Not expected to occur.
Splitting yarn lichen <i>Sulcaria isidiifera</i>	--/--/1B.1	Known from the Los Osos area growing on branches of coast live oak and maritime chaparral plants in sandy areas.	No suitable habitat present onsite. All reported collections are from the Baywood fine sands of Los Osos. Not expected to occur based on the lack of suitable habitat.
Twisted horsehair lichen <i>Bryoria spiralis</i>	--/--/1B.1	Largest known population is on the Samoa Peninsula in Humboldt Co. Possibly threatened by coastal development, air pollution, and climate change. Usually on <i>Picea sitchensis</i> , <i>Pinus contorta</i> var. <i>contorta</i> , <i>Pseudotsuga menziesii</i> , <i>Abies grandis</i> , and <i>Tsuga heterophylla</i> .	No suitable habitat present onsite. Not expected to occur.
PLANTS			
Arroyo de la Cruz manzanita <i>Arctostaphylos cruzensis</i>	--/--/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. It is only known to occur in Monterey and San Luis Obispo Counties.	No suitable habitat present. Perennial shrub would have been identifiable if present. Not observed during surveys. Not present in the study area.
Beach spectaclepod <i>Dithyrea maritima</i>	--/T/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.	Species only known to occur on sand dunes along the coast. No suitable habitat present. Not observed during surveys. Not expected to occur.
Betty's dudleya <i>Dudleya abramsii</i> ssp. <i>bettinae</i>	--/--/1B.2	Perennial succulent; blooms May through July 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.	No suitable habitat present due to lack of serpentine rock outcrops. Not observed during surveys, not expected to occur within study area or be affected by the project.
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	--/--/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.	No suitable habitat present. Not observed during surveys and not expected to occur within study area.
Blochman's leafy daisy <i>Erigeron blochmaniae</i>	--/--/1B.2	Rhizomatous perennial herb; blooms July through August; ranges from 3 to 45 meters in elevation and occurs in coastal dunes and coastal scrub.	This species is restricted to coastal dunes along the immediate coastline. Not observed during surveys, not expected to occur within study area or be affected by the project.

Table 1. Special Status Biological Resources Known to Occur in the Project Vicinity:

Species	Status* Fed/CA/CDFW	Habitat Requirements	Project Site Suitability/Observations
Brewer's spineflower <i>Chorizanthe breweri</i>	--/--/1B.3	Occurs in closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub habitats on serpentine derived soils and rock outcrops, mostly in rocky and gravelly areas; ranges in elevation from 45 to 800 meters; annual herb; blooms May through August.	No suitable habitat present due to lack of serpentine rock outcrops and thin rocky soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
California seablite <i>Suaeda californica</i>	E/--/1B.1	Perennial succulent shrub that grows along the margins of coastal salt marshes in a narrow elevation range from 0 to 5 meters; known to occur in the Morro Bay area.	No coastal salt marsh habitat present. Not observed during surveys, not expected to occur within study area or be affected by the project.
Cambria (San Luis Obispo County) morning-glory <i>Calystegia subacaulis</i> ssp. <i>episcopalis</i>	--/--/4.2	Rhizomatous, perennial herb; blooms from April to May; occurs in chaparral, cismontane woodland, and sparse to dense grassland covering sloped or flat areas in clay-rich soils; ranges from 60-500 meters; restricted to outer South Coast ranges in SLO and Santa Barbara Counties.	Onsite grasslands composed of weedy species, and not suitable for this species. Not observed during surveys and not expected to occur.
Chaparral ragwort <i>Senecio aphanactis</i>	--/--/2B.2	Annual herb known to occur in foothill woodland, northern coastal scrub and coastal sage habitats typically on serpentine soils; blooms January through April.	No suitable habitat present. Not observed during surveys, and not expected to occur onsite.
Coast woolly threads <i>Nemacaulis denudata</i> var. <i>denudata</i>	--/--/1B.2	Annual herb that grows in coastal sand dunes in open spaces of the coastal strand; known to occur in the Montana de Oro area in sandy soils.	No suitable habitat present. Not observed during surveys, and not expected to occur onsite.
Coastal goosefoot <i>Chenopodium littoreum</i>	--/--/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 Morro Bay estuary.	No coastal dune or salt marsh habitat present. Not observed during surveys, not expected to occur within study area or be affected by the project.
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	--/--/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.	No suitable habitat present. Not observed during surveys, not expected to occur within study area or be affected by the project.
Cuesta Ridge thistle <i>Cirsium occidentale</i> var. <i>lucianum</i>	--/--/1B.2	Perennial herb known to occur along the Cuesta Ridge in openings on steep rocky serpentine slopes from 500 to 750 meters.	Study area is outside the known range for this species. No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
Dacite manzanita <i>Arctostaphylos tomentosa</i> ssp. <i>daciticola</i>	--/--/1B.1	Perennial shrub known to occur 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	No suitable habitat for this species present onsite. Perennial shrub would have been identifiable if encountered onsite during the surveys. Not observed during surveys. Not present in the study area.
Dune larkspur <i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	--/--/1B.2	Perennial herb known to occur on sandy soils in coastal scrub, chaparral and strand habitats. Blooms from April through May.	No suitable habitat present onsite. Not observed during surveys and not expected to occur onsite.

Table 1. Special Status Biological Resources Known to Occur in the Project Vicinity:

Species	Status* Fed/CA/CDFW	Habitat Requirements	Project Site Suitability/Observations
Eastwood's larkspur <i>Delphinium parryi</i> ssp. <i>eastwoodiae</i>	--/--/1B.2	Perennial herb known to occur on serpentine based soils (clays) and outcrops in the general San Luis Obispo area with collections made on Camp San Luis Obispo. Blooms March to May.	No suitable habitat present due to lack of serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
Jones' layia <i>Layia jonesii</i>	--/--/1B.2	Annual herb; blooms March through May; occurs on clay soils in close association to serpentine outcrops in chaparral and valley and foothill grassland; ranges in elevation from 5 to 400 meters.	No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
Marsh sandwort <i>Arenaria paludicola</i>	E/E/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.	No freshwater marsh or swamp habitat present. Not observed during surveys, not expected to occur within study area or be affected by the project.
Miles' milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>	--/--/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.	No suitable habitat present. Not observed during surveys, not expected to occur within study area or be affected by the project.
Morro manzanita <i>Arctostaphylos morroensis</i>	T/--/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.	Project site is outside the known range of this species. Not observed during surveys. Not present onsite.
Most beautiful jewel-flower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	--/--/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 in elevation.	No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
Oso manzanita <i>Arctostaphylos osoensis</i>	--/--/1B.2	Perennial shrub known to occur in chaparral and cismontane woodland on the porphyry buttes east of Morro Bay.	No suitable habitat present. Shrub would have been identifiable if encountered during surveys. Not observed during surveys. Not present in the study area.
Palmer's monardella <i>Monardella palmeri</i>	--/--/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.	No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
Pecho manzanita <i>Arctostaphylos pechoensis</i>	--/--/1B.2	Perennial shrub; blooms November to March; occurs on siliceous shale in closed-cone coniferous forest, chaparral, and coastal scrub habitats, ranging from 170 to 1100 meters in elevation.	No suitable habitat present. Not observed during surveys. Not present in the study area.
Perennial goldfields <i>Lasthenia californica</i> ssp. <i>micrantha</i>	--/--/1B.2	Annual herb found typically in northern coastal scrub habitat along the immediate coast; blooms January through November.	No suitable habitat present. Not observed during surveys. Not present in the study area.

Table 1. Special Status Biological Resources Known to Occur in the Project Vicinity:

Species	Status* Fed/CA/CDFW	Habitat Requirements	Project Site Suitability/Observations
Salt marsh bird's-beak <i>Chloropyron maritimum</i> <i>ssp. maritimum</i>	E/E/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.	No salt marsh habitat present. Not observed during surveys, not expected to occur within study area or be affected by the project.
San Benito fritillary <i>Fritillaria viridea</i>	--/--/1B.2	Bulbiferous, perennial herb; blooms March to May; ranges from 200 to 1525 meters in elevation and occurs in chaparral on serpentine soils.	No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
San Joaquin spearscale <i>Atriplex joaquinana</i>	--/--/1B.2	Annual herb that grows in seasonal alkali wetlands and alkali sink scrub typically found in the San Joaquin Valley. One recorded occurrence of this species from 1899 in CNDDB was from the vicinity of Morro Bay.	No suitable habitat present. Not observed during surveys, and unlikely to occur onsite.
San Luis mariposa-lily <i>Calochortus obispoensis</i>	--/--/1B.2	Bulbiferous, perennial herb; blooms May to July; ranges from 75 to 730 meters on sandstone, serpentine and/or sandy soils in chaparral, coastal scrub and valley and foothill grassland; endemic to San Luis Obispo County.	No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
San Luis Obispo fountain thistle (Chorro Creek bog thistle) <i>Cirsium fontinale</i> var. <i>obispoense</i>	E/E/1B.2	Perennial herb; blooms February to July; ranges from 35 to 365 meters in elevation; occurs in chaparral and cismontane woodland habitats, often in serpentine seeps.	No suitable habitat present due to lack of serpentine seeps. Perennial plant was not observed during surveys, not expected to occur within study area or be affected by the project.
San Luis Obispo owl's clover <i>Castilleja densiflora</i> ssp. <i>obispoensis</i>	--/--/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.	Grassland habitat is disturbed and composed of dense non-native weedy species, which is not suitable for this species. Not observed during surveys during bloom period when it would have been identifiable. Not expected to occur onsite.
Southern curly-leaved monardella <i>Monardella undulata</i>	--/--/4.2	Annual herb; blooms May through September; occurs on dunes and sandy soils in coastal strand, chaparral, northern coastal scrub, coastal sage scrub, at elevations below 300 meters.	No suitable habitat present. Not observed during surveys. Not expected to occur within study area or be affected by the project.
Umbrella larkspur <i>Delphinium umbracolorum</i>	--/--/1B.3	Perennial herb; found in granite of cismontane woodlands, chaparral, and coastal scrub; 85-1,035 meters in elevation; blooms May to July.	No suitable habitat present due to lack of granite soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
INVERTEBRATES			
Globose dune beetle <i>Coelus globosus</i>	--/SA/--	Inhabits coastal sand dune habitat in foredunes and sand hummocks most common beneath dune vegetation.	No suitable habitat present. Not expected to occur.
Mimic tryonia (=California brackishwater snail) <i>Tryonia imitator</i>	--/SA/--	Found only in permanently submerged areas in coastal lagoons.	No suitable habitat present. Not expected to occur.

Table 1. Special Status Biological Resources Known to Occur in the Project Vicinity:

Species	Status* Fed/CA/CDFW	Habitat Requirements	Project Site Suitability/Observations
Monarch butterfly <i>Danaus plexippus</i>	--/SA/--	Wind-protected tree groves of eucalyptus, Monterey pine and cypress with nectar and water sources nearby.	No suitable overwintering habitat present. Species likely forages in study area, but is not expected to use the study area or neighboring windrow of cypress for overwintering.
Morro Bay blue butterfly <i>Plebejus icarioides moroensis</i>	--/SA/--	Inhabits stabilized dunes and adjacent areas of coastal San Luis Obispo and NW Santa Barbara counties.	No suitable habitat present. Not expected to occur.
Morro shoulderband snail <i>Helminthoglypta walkeriana</i>	E/--/--	Known to occur in coastal sage scrub and dune scrub habitats on Baywood fine sands near Morro Bay.	No suitable habitat present. Onsite soils are not suitable and no coastal scrub or large patches of iceplant or veldt grass are present that could potentially support this species. Site is separated from potentially suitable coastal dune scrub habitat further west by existing development, so no opportunity for this species to move onto the property during winter rain season. Not expected to occur or be affected by the project.
San Luis Obispo pyrg <i>Pyrgulopsis taylori</i>	--/SA/--	Freshwater habitats in San Luis Obispo County.	No suitable habitat present. Not expected to occur onsite or be affected by the project.
Sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	--/SA/--	Inhabits area adjacent to non-brackish water along the coast of California from San Francisco Bay to Northern Mexico.	No suitable habitat present. Not expected to occur.
FISH			
Steelhead – South/Central California ESU <i>Oncorhynchus mykiss irideus</i>	T/SSC/--	Fresh water, fast flowing, highly oxygenated, clear, cool stream where riffles tend to predominate pools.	No suitable habitat present. Known to occur south of the site in Morro Creek. Not expected to occur onsite or be affected by the project.
Tidewater goby <i>Eucyclogobius newberryi</i>	E/SSC/--	Brackish water habitats along the California coast from San Diego county to Del Norte county.	No suitable habitat present. Known to occur south of the site in Morro Creek. Not expected to occur onsite or be affected by the project.
AMPHIBIANS/REPTILES			
California red-legged frog <i>Rana draytonii</i>	T/SSC/--	Lowland and foothills in or near permanent or semi-permanent sources of deep water (at least 0.5 meter) bordered by emergent wetland and/or riparian vegetation. May use a variety of aquatic and upland habitats during the year for refugia and dispersal.	No suitable habitat present. Not expected to occur onsite or be affected by the project.
Coast horned lizard <i>Phrynosoma blainvillii</i>	--/SSC/--	Frequents a wide variety of habitat including sandy washes with scattered shrubs and open areas for sunning. Loose soils for burial.	No suitable habitat present. Not expected to occur onsite or be affected by the project.
Silvery/Black legless lizard <i>Anniella pulchra</i>	--/SSC/--	Sandy or loamy soils in valley and foothill woodlands, chaparral, coastal scrub and coastal dunes.	No suitable habitat present. No dune scrub habitat that could support this fossorial lizard. Not expected to occur onsite or be affected by the project.
Southern Pacific (western) pond turtle <i>Emys marmorata</i>	--/SSC/--	Basking sites such as partially submerged logs, vegetation mats, or open mud banks.	No suitable habitat present. Not expected to occur onsite or be affected by the project.

Table 1. Special Status Biological Resources Known to Occur in the Project Vicinity:

Species	Status* Fed/CA/CDFW	Habitat Requirements	Project Site Suitability/Observations
BIRDS			
California black rail <i>Laterallus jamaicensis coturniculus</i>	--/T/--	Freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that does not fluctuate and dense vegetation for nesting.	No suitable habitat present. Not expected to occur.
California clapper rail <i>Rallus longirostris obsoletus</i>	E/E/--	Occurs in salt-water and brackish marshes traversed by tidal sloughs with abundant growths of pickleweed.	No suitable habitat present. Not expected to occur.
Cooper's hawk <i>Accipiter cooperii</i>	--/WL/-- (nesting)	Wooded areas. Nests in tall trees and often hunts around human structures.	No suitable roosting or nesting habitat onsite. Windrow adjacent to site could support both roosting and nesting habitat for this species. Ornamental trees were searched during field work and no stick nests observed. Not expected to nest onsite, but could forage.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	T/SSC/-- (nesting)	Sandy beaches, salt pond levees or shores of large alkali lakes. Sandy, gravelly or friable soils required for nesting. Federal listing refers only to the Pacific coastal population.	No suitable habitat present. Not expected to occur.
MAMMALS			
American badger <i>Taxidea taxus</i>	--/SSC/--	Friable soils and open, uncultivated ground for denning. Preys on burrowing rodents such as ground squirrels.	No suitable habitat present onsite. Property is surrounded by chain link fence, and not significant prey base such as ground squirrels was observed. Not expected to occur.
Big free-tailed bat <i>Nyctinomops macrotis</i>	--/SSC/--	Occurs in low lying arid areas of Southern California. Needs high cliffs or rocky outcrops for roosting sites. Feeds primarily on large moths.	No suitable habitat present. Not expected to occur.
Morro Bay kangaroo rat <i>Dipodomys heermanni morroensis</i>	E/E/--	Coastal sage scrub on the south side of Morro Bay. Needs sandy soil on stabilized dunes with vegetation.	No suitable habitat present. Not expected to occur.
Pallid bat <i>Antrozous pallidus</i>	--/SSC/--	Occurs in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts under bridges and in some areas in old structures such as barns.	No suitable habitat present. Not expected to occur.
Townsend's western big-eared bat <i>Corynorhinus townsendii townsendii</i>	--/SSC/--	Requires caves, tunnels, mines, or similar man-made structures for roosting. This bat feeds primarily on moths, but will eat a variety of soft-bodied insects.	No suitable habitat present. Not expected to occur onsite or be affected by the project.
NATURAL COMMUNITIES			
	Central Dune Scrub		Not present
	Central Maritime Chaparral		Not present
	Coastal Brackish Marsh		Not present
	Northern Coastal Salt Marsh		Not present
	Bunchgrass Grassland (purple needlegrass)		Not present
	Central Coast Arroyo Willow Riparian Forest		Not present

*E = Endangered; T = Threatened; R = Rare CE = Candidate for Endangered Status; SSC = California Species of Special Concern; FP = Fully Protected; WL = Watch List; SA = Special Animal; '—' = no status; List 1B = Rare, threatened, or endangered in California and elsewhere; List 2 = Rare, threatened or endangered in California, but more common elsewhere; List 4 = Limited distribution (Watch List). Source: California Natural Diversity Database (CDFW, 2018); California Native Plant Society Online Inventory of Rare Plants, accessed April 2018 (online at www.cnps.org); Special Animals List (CDFW 2018); Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2018).

Table 2. List of Plants Observed During Field Surveys.

Scientific Name*	Common Name
<i>Agave sp.*</i>	Agave (planted outside fence)
<i>Aloe sp.*</i>	Aloe (planted outside fence)
<i>Ambrosia psilostachys</i>	Ragweed
<i>Avena barbata*</i>	Slender wild oats
<i>Baccharis pilularis</i>	Coyote brush (young plants are mowed regularly)
<i>Brassica nigra*</i>	Black mustard
<i>Bromus diandrus*</i>	Ripgut brome
<i>Bromus hordeaceus*</i>	Soft chess
<i>Bromus madritensis ssp. rubens*</i>	Red brome
<i>Carduus pycnocephalus*</i>	Italian thistle
<i>Conyza canadensis</i>	Horseweed
<i>Cynodon dactylon*</i>	Bermuda grass
<i>Erodium botrys*</i>	Filaree
<i>Erodium cicutarium*</i>	Red-stemmed filaree
<i>Festuca perenne (=Lolium multiflorum)*</i>	Italian ryegrass
<i>Foeniculum vulgare*</i>	Fennel
<i>Gnaphalium californica</i>	California everlasting
<i>Hesperocyparis (=Cupressus) macrocarpa*</i>	Monterey cypress (planted individuals offsite)
<i>Hirschfeldia incana*</i>	Summer mustard
<i>Hordeum murinum ssp. leporinum*</i>	Foxtail
<i>Lactuca serriola*</i>	Wild lettuce
<i>Lavandula sp.*</i>	Lavender (planted along fence)
<i>Limonium sp.*</i>	Sea statice (planted along fence)
<i>Malva nicaeensis*</i>	Bull mallow
<i>Matricaria matricarioides*</i>	Pineapple weed
<i>Medicago polymorpha*</i>	Bur clover
<i>Melilotus sativa*</i>	Sweet cicily
<i>Osteospermum sp.*</i>	African daisy (planted outside fence)
<i>Oxalis pes-caprae*</i>	Bermuda buttercup
<i>Plantago lanceolata*</i>	English plantain
<i>Rumex acetosella*</i>	Sheep sorrel
<i>Sonchus asper*</i>	Prickly sow thistle
<i>Vicia villosa ssp. villosa*</i>	Hairy vetch
<i>Vulpia myuros*</i>	Rattail fescue

*Asterisk identifies non-native species.

Photo Plate

Photo 1. Northerly view of site in February 2018 showing annual grasses and weedy vegetation across the site. Monterey cypress windrow is planted offsite to west and north.



Photo 2. Northerly view of site taken in March 2018 showing grasses and weeds dominating site.



Photo 3. Westerly view showing Atascadero Road frontage and chain link fence surrounding site.



Photo 4. Northerly view of Highway 1 off ramp and chain link fence along eastern property boundary.



Photo 5. Road base was observed along perimeters of site associated with past development of roads. Ornamental plantings also present along fence.



Photo 6. Southerly view of Monterey cypress located just offsite of western property line. Note bike path and entrance driveway to Morro Bay High School. Understory was bare dirt and leaf litter.



Photo 7. Easterly view of northern property line. Old limbs and fence line was inspected for Morro shoulderband snail. No old shells, live individuals or suitable soils were identified.



Photo 8. Northerly view of study area taken in May following annual mowing activities.