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Project 984.01

Siemens Planning
5210 Carpinteria Avenue #103
Carpinteria, CA 93013

Via Email: Jennifer <Siemensjennifer@siemensplanning.com>

Re: Biological Letter for Coleman - 607 Sand Point Road, Carpinteria, Santa Barbara County, California.

Dear Jennifer:

This letter report provides the results of biological surveys for an approximately 1-acre parcel (Study Area) located at 607 Sand Point Road, south of Santa Claus Lane in unincorporated Santa Barbara County, California. Carpinteria Salt Marsh (CSM) is adjacent to Sand Point Road to the north. The property boundary contains a single-family residence with a landscaped front and back yard, two sea walls (revetments) to the south, and extends into the Pacific Ocean. Approximate coordinates for the Study Area are 34.399509° N, 119.540054° W (WGS 84) in the USGS 7.5-minute topographic quadrangle (Figure 1). The Study Area consists of assessor's parcel number (APN) 004-098-006 (Figure 2). Elevation ranges from approximately 0 to 16 feet above mean sea level. The Study Area is located within the Coastal Zone.

Methods

The Study Area was surveyed for biological resources on December 22, 2017, and May 7, 2018, by Althouse and Meade, Inc. biologist Darcee Guttilla. Biological surveys were conducted on foot to search for special status plants and animals, map habitats and biological resources, and photograph the Study Area. The general vegetation survey included meandering transects with an emphasis on identifying naturally occurring, non-landscaped plant species. The terrestrial portion of the 1-acre Study Area was surveyed. Identification of botanical resources included field observations and laboratory analysis of collected material. Botanical nomenclature used in this document follows the Jepson Manual, Second Edition (Baldwin et al. 2012).

Wildlife documentation included observations of animal presence and other wildlife sign (e.g., tracks and scat). Observations of wildlife were recorded during field surveys in all terrestrial areas of the Study Area. Birds were identified by sight or by vocalizations. Results of the botanical and wildlife surveys are summarized below.

Prior to the site visit, searches of the California Natural Diversity Database (CNDDB; November 15, 2017) and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (November 15, 2017) were conducted for the seven USGS 7.5-minute quadrangles surrounding the site, including Carpinteria, Santa Barbara, Little Pine Mountain, Hildreth Peak, Old Man Mountain, White Ledge Peak, and Pitas Point.

Results

Potential Special Status Species

The CNDDB and CNPS Inventory of Rare and Endangered Plants of California listed six special status plant species, subspecies, and varieties (Table 1; Figure 3) and two special status animal species known to occur in the vicinity of the Study Area (Table 2; Figure 4). Each of these species is addressed in the Discussion Section.

Botanical Survey Results

Biological surveys conducted on December 22, 2017, and May 7, 2018, identified three species of naturally occurring vascular plants at the south end of the property between the two revetments: beach saltbush (*Atriplex leucophylla*), beach bur sage (*Ambrosia chamissonis*), and salt heliotrope (*Heliotropium curassavicum* var. *oculatum*). The area between the two revetments is the only portion of the property with naturally occurring dune species. However, this area is dominated by ice plant mats (Sawyer et al. 2009) that consist of freeway ice plant (*Carpobrotus edulis*), showy dewflower (*Drosanthemum floribundum*), and sea lavender (*Limonium perezii*) which have spread from the soil-filled interior revetment. The outer revetment and the intertidal zone, south of the outer revetment, were void of vegetation. Both the back and front yard consist of cultivated species of trees, shrubs, subshrubs and herbaceous vascular plants. Non-native cultivated species account most plants on-site. No special status species were detected in the Study Area.

The 1-acre parcel includes the following components: anthropogenic (e.g., buildings, paved areas; 0.16 acre), landscaped vegetation (0.21 acre), bare ground (0.01 acre), iceplant mats (0.06 acre), revetment (0.05 acre), intertidal zone (0.09 acre), and ocean (0.47 acre).

Wildlife survey results

Wildlife species detected in the vicinity of the Study Area include 4 mammals, 2 reptiles, 15 birds, and no amphibians. Mammals include: domestic dog (*Canis lupus familiaris*), raccoon (*Procyon lotor*), rat (*Rattus* sp.), and brush rabbit (*Sylvilagus bachmani*). Reptiles onsite include western side-blotched lizard (*Uta stansburiana elegans*) and coast range fence lizard (*Sceloporus occidentalis bocourtii*). Birds include: spotted sandpiper (*Actitis macularius*), great egret (*Ardea alba*), great blue heron (*Ardea herodias*), Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), house finch (*Haemorhous mexicanus*), California towhee (*Melospiza crissalis*), Northern Mockingbird (*Mimus polyglottos*), California brown pelican (*Pelecanus occidentalis californicus*), double-crested cormorant (*Phalacrocorax auratus*), blue-gray gnatcatcher (*Poliophtila caerulea*), American bushtit (*Psaltiriparus minimus*), Say's phoebe (*Sayornis saya*), willet (*Tringa semipalmata*), and house wren (*Troglodytes aedon*).

Three nests were found on the property (Figure 5); a stick nest (approximately 8 inches diameter) was observed in a hedge on eastern property boundary approximately 73 feet from the house

(Photo 3), and two black phoebe (*Sayornis nigricans*) mud and vegetated fiber nests (approximately 4 to 5 inches diameter) located under the west-facing balcony in the back yard (Photo 9). Black phoebes often reuse nests and nest sites each year. The nest on the left (north) appears to be from a previous season; The nest on the right (south) is likely from the 2018 nesting season, as indicated by fresh vegetative materials lining the nest. No birds were observed visiting nests during the spring 2018 survey. See the Discussion Section for impact avoidance and minimization recommendations for nesting birds.

To determine presence of potential bat roosts on the property, the biologist inspected the exterior of the house for gaps in shingles and bat scat along the base of house. A few shingles have a large enough gap to provide a day or night roost for individual California myotis (*Myotis californicus*), but could not support day/night roosts or maternal roosts for Townsend's big-eared bat (*Corynorhinus townsendii*), which is known to occur in CSM (CNDDDB 2017). Townsend's big-eared bat prefers cavernous roosts such as mines, caves, and attic spaces. Please refer to the Discussion Section for impact avoidance and minimization recommendations for bats.

Regulatory Framework

CEQA guidance

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

Federal resource protections

Endangered Species Act (ESA) – The ESA provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a ‘take’ under the Endangered Species Act. Take of a federally listed threatened or endangered species is prohibited without a special permit. The Endangered Species Act allows for take of a threatened or endangered species incidental to development activities once a habitat conservation plan has been prepared to the satisfaction of the USFWS and an incidental take permit has been issued. The Endangered Species Act also allows for the take of threatened or endangered species after consultation has deemed that development activities will not jeopardize the continued existence of the species. The federal Endangered Species Act also provides for a Section 7 Consultation when a federal permit is required, such as a Clean Water Act Section 404 permit.

Section 404 Clean Water Act Regulations – The Clean Water Act provides wetland regulation at the federal level and is administered by the United States Army Corps of Engineers (USACE). The purpose of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting is required for filling waters of the U.S. (including wetlands). Permits may be issued on an individual basis, or may be covered under approved nationwide permits.

Migratory Bird Treaty Act (MBTA) – All MBTA species that are native to the U.S. or its territories are protected under the federal Migratory Bird Treaty Act, as amended under the Migratory Bird Treaty Reform Act of 2004. The Migratory Bird Treaty Act is generally protective of migratory birds.

State resource protections

California Coastal Act Section 30107.5 – Environmentally sensitive habitat (ESH) is any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

California Coastal Act Section 30231 – The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored though, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

California Coastal Act Section 30240 – (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

California Code of Regulations Title 14 (14 CCR) Section 13577 – Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats.

California Fish and Game Code – The California Fish and Game Code regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as natural resources such as wetlands and waters of the state. It includes the California Endangered Species Act, Streambed Alteration Agreement regulations, and California Native Plant Protection Act. Fish and Game Code states that it is “unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto,” and “unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird” unless authorized.

California Endangered Species Act (CESA) – CESA, similar to the federal Endangered Species Act, contains a process for listing of species and regulating potential impacts to listed species. State threatened and endangered species include both plants and wildlife, but do not include invertebrates. The designation “rare species” applies only to California native plants. State

threatened and endangered plant species are regulated largely under the Native Plant Preservation Act in conjunction with the California Endangered Species Act. State threatened and endangered animal species are legally protected against “take.” The CESA authorizes California Department of Fish and Wildlife (CDFW) to enter into a memorandum of agreement for take of listed species to issue an incidental take permit for a state-listed threatened and endangered species only if specific criteria are met. Section 2080 of the CESA prohibits the take of species listed as threatened or endangered pursuant to the Act. Section 2081 allows CDFW to authorize take prohibited under Section 2080 provided that: 1) the taking is incidental to an otherwise lawful activity; 2) the taking will be minimized and fully mitigated; 3) the applicant ensures adequate funding for minimization and mitigation; and 4) the authorization will not jeopardize the continued existence of the listed species.

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

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

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

Natural Community Conservation Planning (NCCP) Act of 1991 – The NCCP Act is designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. CDFW is the primary state agency that implements the NCCP. The NCCP plan provides for the comprehensive management and conservation of multiple wildlife species. It identifies and provides for regional protection of natural wildlife diversity while allowing for compatible and appropriate development and growth.

Local regulations

Santa Barbara County Coastal Plan Policy 9-1. Prior to the issuance of a development permit, all projects on parcels shown on the land use plan and/or resource maps with a Habitat Area overlay designation or within 250 feet of such designation or projects affecting an environmentally sensitive habitat area shall be found to be in conformity with the applicable habitat protection policies of the land use plan. All development plans, grading plans, etc., shall show the precise

location of the habitat(s) potentially affected by the proposed project. Projects which could adversely impact an environmentally sensitive habitat area may be subject to a site inspection by a qualified biologist to be selected jointly by the County and the applicant.

Santa Barbara County Coastal Plan Policy 9-2. Because of their State-wide significance, coastal dune habitats shall be preserved and protected from all but resource dependent, scientific, educational, and light recreational uses. Sand mining and oil well drilling may be permitted if it can be shown that no alternative location is feasible and such development is sited and designed to minimize impacts on dune vegetation and animal species.

Disturbance or destruction of any dune vegetation shall be prohibited, unless no feasible alternative exists, and then only if re-vegetation is made a condition of project approval. Such re-vegetation shall be with native California plants propagated from the disturbed sites or from the same species at adjacent sites.

Santa Barbara County Coastal Plan Policy 9-11. Wastewater shall not be discharged into any wetland without a permit from the Regional Water Quality Control Board finding that such discharge improves the quality of the receiving water.

Santa Barbara County Coastal Plan Policy 9-14. New development adjacent to or in close proximity to wetlands shall be compatible with the continuance of the habitat area and shall not result in a reduction in the biological productivity or water quality of the wetland due to runoff (carrying additional sediment or contaminants), noise, thermal pollution, or other disturbances.

Santa Barbara County Coastal Plan Policy 9-16b. The County shall request the Department of Fish and Game to identify the extent of degradation which has occurred in the Carpinteria Estero and Goleta Slough pursuant to Section 30411 of the Coastal Act. As part of the study, the Department, working jointly with the Santa Barbara Flood Control Department and the Soil Conservation Service, will also identify the most feasible means of restoration and the area of wetlands to be restored.

Santa Barbara County Coastal Plan Policy 9-30. In order to prevent destruction of organisms which thrive in intertidal areas, no unauthorized vehicles shall be allowed on beaches adjacent to intertidal areas.

Santa Barbara County Coastal Plan Policy 9-32: Shoreline structures, including piers, groins, breakwaters, drainages, and seawalls, and pipelines, should be sited or routed to avoid significant rocky points and intertidal areas.

Santa Barbara County Coastal Plan Policy 9-36. When sites are graded or developed, areas with significant amounts of native vegetation shall be preserved. All development shall be sited, designed, and constructed to minimize impacts of grading, paving, construction of roads or structures, runoff, and erosion on native vegetation. In particular, grading and paving shall not adversely affect root zone aeration and stability of native trees.

Santa Barbara County Coastal Zoning Ordinance (Article 2, Section 35-97.9.4) provides an exemption for lots that abut the El Estero (Carpinteria Salt Marsh) from the requirement of maintaining a minimum 100-foot buffer around wetland habitats in which no permanent structures are permitted.

Santa Barbara County Coastal Zoning Ordinance (Article 2, Section 35-97.9.6). Wastewater shall not be discharged into any wetland without a permit from the California Regional Water Quality Control Board finding that such discharge improves the quality of the receiving water.

Santa Barbara County Coastal Zoning Ordinance (Article 2, Section 35-97.9.9). New development adjacent to or in close proximity to wetlands shall be compatible with the continuance of the habitat area and shall not result in a reduction in the biological productivity or water quality of the wetland due to runoff (carrying additional sediment or contaminants), noise, thermal pollution, or other disturbances.

Discussion

Wetland Habitat Recommendations

Due to the close proximity (15 feet) of the northern parcel boundary of the Study Area to the Carpinteria Salt Marsh which is recognized by Santa Barbara County as environmentally sensitive habitat (ESH), it is recommended that a 50-ft. ESH buffer extend south from the edge of the salt marsh and north from the higher-high tide line south of the revetment. In addition, it is recommended that the following erosion control measures and best management practices (BMP) be employed to prevent sediment or contaminants from entering coastal waters.

- BR-1.** Prior to work beginning, a program shall be established which identifies how disturbed surface soils will be stabilized during and after construction (e.g., use of mulch, soil stabilizers, etc. that are compatible with salt marsh habitat/ sensitive species) to minimize soil erosion.
- BR-2.** Prior to approval of construction permit, a sedimentation and erosion control plan shall be prepared that minimizes project sediment from reaching the salt marsh. At a minimum, burlap straw wattles (no monofilament netting wattles) or comparably effective devices shall be placed on the downslope sides of the proposed work which would direct flows into temporary sedimentation basins. This shall be checked and maintained regularly and after all larger storm events. All remedial work shall be done immediately after discovery, so sedimentation control devices remain in good working order.
- BR-3.** During construction, no vehicles, equipment, activities, or staging shall be permitted within 50 feet of wetland habitat and the high-high tideline.
- BR-4.** Appropriate sediment control structures shall be in place to minimize construction runoff into Carpinteria Salt Marsh and the Pacific Ocean and prevent degradation of habitat. Only non-monofilament (e.g., burlap) straw wattles shall be employed onsite to protect wildlife from being ensnared.
- BR-5.** Any disturbed areas shall be restored as soon as possible, and prior to final inspection. If the area is within 50 feet of the salt marsh or ocean, a compatible native seed mix shall be used to revegetate the restored area. The same vegetation treatment shall apply for any areas to be left undisturbed for more than 30 days. A shipping label or seed mix bag tags of the native seed/plants used shall be provided to the county prior to final inspection.
- BR-6.** Storm Water BMPs. To minimize pollutants impacting downstream waterbodies or habitat, the parking area and associated driveway shall be designed to minimize degradation of storm water quality. Best Management Practices (BMPs) such as landscaped areas for infiltration (vegetated filter strips, bioswales, or bioretention areas),

designed in accordance with the California Stormwater BMP Handbook for New Development and Redevelopment (California Stormwater Quality Association) or other approved method shall be installed to intercept and remove pollutants prior to discharging to the storm drain system, wetland, or ocean. The BMPs selected shall be maintained in working order. The landowner is responsible for the maintenance and operation of all improvements and shall maintain annual maintenance records. A maintenance program shall be specified in an inspection and maintenance plan and include maintenance inspections at least once a year. Long-term maintenance shall be the responsibility of the landowner. A maintenance program shall be specified in the covenants, conditions and restrictions (CC&Rs) submitted by the landowner and recorded with the Clerk of the Board. The plans and a copy of the long-term maintenance program shall be submitted to Planning and Development (P&D) and Public Works, Water Resources Division staff, for review prior to approval of coastal development permits. BMP maintenance is required for the life of the project and transfer of this responsibility is required for any subsequent sale of the property. The condition of transfer shall include a provision that the property owners conduct maintenance inspection at least once a year and retain proof of inspections. **PLAN REQUIREMENTS:** The BMPs shall be described and detailed on the site, grading and drainage and landscape plans, and depicted graphically. The location and type of BMP shall be shown on the site, building and grading plans. **TIMING:** The plans and maintenance program shall be submitted to P&D for approval prior to issuance of coastal development permit. **MONITORING:** P&D compliance monitoring staff shall site inspect for installation prior to Final Building Inspection Clearance. The landowner shall make annual maintenance records available for review by P&D upon request.

Special Status Plants

The only naturally occurring plant species in the Study Area are in the sandy soils between the two revetments where no construction is planned. No special status plant species were detected in the Study Area during the December 22, 2017, and May 7, 2018 surveys. The following six special status plant species have low potential to occur in the Study Area based on analysis of ecological requirements and habitat conditions in the Study Area. For each species, a general overview of habitat, range restrictions, known occurrences, and survey results are provided (CNPS 2017, CNDDDB 2017).

Red Sand-Verbena (*Abronia maritima*) is a CRPR 4.2 species that occurs from the San Francisco Bay Area to Baja California. It is known to occur in coastal dune habitat between 0 and 100 meters elevation. It is a perennial herb that typically blooms between February and November. Sandy soils between the revetments provide suitable habitat for this species. No red sand-verbena was detected in the Study Area.

Coulter's Saltscale (*Atriplex coulteri*) is a CRPR 1B.2 species that occurs from southern California to Baja California. It is known to occur in coastal bluff scrub, coastal scrub, coastal dune, and grassland habitats; often on alkaline or clay soils between 3 and 460 meters elevation. It is a perennial herb that typically blooms between March and October. The closest known record is approximately 0.4 miles east of the Study Area (CNDDDB element 15). Sandy soils between the revetments provide suitable habitat for this species, however, escaped landscaped vegetation reduces the potential for this species to occur within the Study Area. Coulter's saltscale was not detected within the Study Area.

Southern Tarplant (*Centromadia parryi* ssp. *australis*) is a CRPR 1B.1 subspecies that occurs from Santa Barbara County south to Baja California. It is known to occur in coastal areas in marshes, swamps, and mesic areas within grassland habitats between 0 and 480 meters. It is an annual herb that is associated with disturbance and typically blooms between May and November. The closest known CNDDDB record is approximately 9.9 miles southeast of the Study Area (CNDDDB element 42) and is reported as possibly extirpated. A historical record from 1875 is reported 9.3 miles northwest of the Study Area (CCH [GH414574]). However, due to a low level of disturbance between the two revetments, there is low potential for this species to occur in the Study Area. Seasonally timed floristic surveys should be conducted to determine whether this species occurs in the Study Area.

Paniculate Tarplant (*Deinandra paniculata*) is a CRPR 4.2 species that occurs from the San Francisco Bay area south to northern Baja California and occurs on sandy soils in grassland, coastal scrub, vernal pool and wetland habitats between 25 and 940 meters elevation. It is an annual herb that typically blooms between June and September. The closest known record is approximately 11.8 miles northwest of the Study Area from 1947 (CCH 2017 [SBBG8420]). This species has a low potential to occur in the area between the revetments. Seasonally timed floristic surveys should be conducted to determine whether this species occurs in the Study Area.

Black-Flowered Figwort (*Scrophularia atrata*) is a CRPR 1B.2 species endemic to Santa Barbara and San Luis Obispo Counties. It is known to occur in coastal dune, coastal scrub, riparian scrub, chaparral, and closed-cone coniferous forest habitats between 10 and 500 meters elevation. It is a perennial herb that typically blooms between March and July. The closest known record is approximately 9.3 miles west of the Study Area (CNDDDB 67). Sandy soils between the revetments provide marginal habitat for this species, as this it lacks typical habitat associates such as oak woodland and coastal scrub vegetation. Black-flowered figwort was not detected in the Study Area and is not expected to occur onsite.

Woolly Seablite (*Suaeda taxifolia*) is a CRPR 4.2 species that occurs from San Luis Obispo County south to Baja California. It occurs in coastal bluff and dune habitats, margins of salt marshes and swamp habitats, and is found in the adjacent Carpinteria Salt Marsh. Woolly seablite is a perennial subshrub or shrub that flowers year around. This species has a low potential to occur in the area between the revetments and was not observed in the Study Area.

Special Status Animals

No special status animal species were detected in the Study Area during the December 22, 2017, and May 7, 2018, surveys. However, surveys have identified suitable habitat for some animal species to occur within the Study Area. For each species, a general overview of habitat, range restrictions, known occurrences, and survey results are provided.

Western Snowy Plover (*Charadrius alexandrinus nivosus*) is a federally listed threatened species and a California Species of Special Concern (nesting) that nests on marine and estuarine sandy shores (CNDDDB 2017, CDFW 2014, Page et al. 1991). It is found along the entire coast of California and inland (CDFW 2014). Western snowy plovers nest from early March through late September with fledging occurring about 1 month after hatching occurs (USFWS 2001). Suitable habitat for snowy plover nesting is in sandy, gravelly and friable soils, with some cover from vegetation or debris, such as logs, and far from anthropogenic disturbances (CDFW 2014, Powell and Collier 2000). The coastline on the south end of the Study Area was historically considered western snowy plover nesting habitat until 1978 when it was converted to a seawall and is no

longer considered suitable habitat (CNDDDB element 43; Figure 3). A review of eBird documented observations from 2007 to 2017 showed 203 observations of western snowy plover in the Carpinteria Salt Marsh (eBird 2012). No western snowy plovers were observed on the property during the December 2017 survey, but they may be found foraging in the intertidal zone. Construction activities should have no effect on western snowy plover.

Townsend's Big-eared Bat (*Corynorhinus townsendii*) is a California Species of Special Concern. It is found in most habitats throughout California but prefers mesic habitats and is not found in subalpine or alpine habitats. It is found within its range during all seasons but in low numbers in California where it is uncommon (CDFW 2014). The preferred roosting habitat for Townsend's big-eared bat is cave dwellings, but on the Pacific coast they have an affinity for abandoned buildings, tunnels and bridges. Roosting sites must be spacious with a minimum length of 30 m and located at least 2 m above the ground (Pierson et al. 1999). In northern Utah it was found that entrances to roosts are more likely to be occupied by Townsend's big-eared bat if they have a single entrance with a low height of less than 1.5 m (Sherwin et al. 2000). Townsend's big-eared bat distribution is correlated with the availability of preferred roosting habitat and is sensitive to human disturbance (CNDDDB 2017, Pierson et al. 1999). Mating occurs from October to February and maternity colonies can start to form as early as March with young being born August and October (Pierson et al. 1999). Townsend's big-eared bat feeds primarily on small moths but also eat a variety of soft-bodied insects (CDFW 2014). The closest reported occurrence of Townsend's big-eared bat is CSM (CNDDDB Occurrence 313; 1941) with a 1-mile radius for accuracy which overlaps the Study Area. J. Von Bloeker collected a male bat from CSM, approximately 1.5 miles south-southwest of the Santa Monica debris dam. Townsend's big-eared bat is presumed extant. Due to the Project's proximity to CSM and residence onsite, there is a low potential for Townsend's big-eared bat roosting in the attic space of the residence. Townsend's big-eared bat (or sign) was not observed on the property during December 2017 and May 2018 site surveys and is not likely to be present.

BR-7. The applicant shall ensure the following actions are undertaken to avoid and minimize potential impacts to roosting bats:

- Prior to issuance of grading permits, a qualified biologist shall conduct a survey of existing structures at the Project site to determine if roosting bats are present. The survey shall be conducted during the non-breeding season (November through March). The biologist shall have access to all interior attics, as needed. If a colony of bats is found roosting in any structure, further surveys shall be conducted sufficient to determine the species present and the type of roost (day, night, maternity, etc.). If the bats are not part of an active maternity colony, passive exclusion measures may be implemented in close coordination with CDFW. These exclusion measures must include one-way valves that allow bats to exit the structure but are designed so that the bats may not re-enter the structure.
- If a bat colony is excluded from the project site, appropriate alternate bat habitat as determined by a qualified biologist shall be installed on the project site or at an approved location offsite near CSM.

Nesting Birds

Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take (as defined therein) of all native birds and their active nests, including raptors and other migratory non-game birds (as listed under the Federal MBTA).

BR-8. Within one week of ground disturbance activities, if work occurs between February 1 and August 31 (March 1 through September 30 for western snowy plover), nesting bird surveys shall be conducted. If surveys do not locate nesting birds, construction activities may begin. If nesting birds are located, no construction activities shall occur within 100 feet of active nests, 300 feet for western snowy plover, and 500 feet for raptors until chicks have fledged. A pre-construction survey report shall be submitted to the lead agency immediately upon completion of the survey. The report shall detail appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements. A map of the Project site and nest locations shall be included in the report. The Project biologist conducting the nesting survey shall have the authority to reduce or increase the recommended buffer depending upon site conditions.

Best Management Practices

BR-9. Pre-construction survey. A P&D-approved, qualified biological monitor shall perform a preconstruction survey within one week of Project commencement to ensure special status animals are not observed onsite. If any special status species are located during the pre-construction survey, consultation will be conducted with the CDFW and USFWS as appropriate to the species' status prior to commencement of project activities.

BR-10. Worker Environmental Awareness Program Training. Prior to the initiation of construction activities (including staging and mobilization), the Owner/Applicant shall ensure all personnel associated with Project construction attend a Worker Environmental Awareness Program (WEAP) training. The training shall be conducted by a qualified biologist, to aid workers in recognizing special status resources and ESH that occur in the project area. The Training program shall include:

- a. Identification of the sensitive species and habitats;
- b. A description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and avoidance measures required to reduce impacts to biological resources within the work area;
- c. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employees, and other personnel involved with construction of the project; and
- d. All employees shall sign a form confirming that they have received WEAP training provided by a qualified biologist documenting they have attended the WEAP and understand the information presented to them.

- BR-11. Monitoring.** The Owner/Applicant shall submit to Santa Barbara County P&D compliance monitoring staff the names and contact information for approved biologists prior to commencement of construction/pre-construction meeting. Compliance monitoring staff shall site inspect as appropriate. Biologist to be onsite for grading and vegetation clearance activities, all construction activities which may impact ESH resources, and any night work in proximity to Carpinteria Salt Marsh. The qualified biologist will be approved to relocate common wildlife should they enter work area during construction activities. Duties include the responsibility to ensure compliance with County conditions of approval. The Owner/Applicant shall submit to P&D compliance monitoring staff the name and contact information for the approved biologists prior to commencement of construction/pre-construction meeting. Planning & Development compliance monitoring staff shall site inspect as appropriate.
- BR-12.** During construction, heavy equipment and vehicles shall be operated in accordance with standard Best Management Practices (BMPs). All equipment used onsite shall be properly maintained such that no leaks of oil, fuel, hydraulic fluid or residues occur. Provisions shall be in place to remediate any accidental spills, in both the terrestrial and marine environments.
- BR-13. Equipment Storage-Construction.** The Owner/Applicant shall designate one construction equipment filling and storage areas within the designated development to contain spills, facilitate clean-up and proper disposal and prevent contamination from discharging to the storm drains, street, drainage ditches, wetlands, or ocean. The areas shall be no larger than 50 x 50 feet unless otherwise approved by P&D and shall be located at least 50 feet from any storm drain, wetland, or water body. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D-approved location on all [LAND USE PERMIT/ COASTAL DEVELOPMENT PERMIT/ ZONING CLEARANCE / GRADING / BUILDING PERMIT] plans. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction. **MONITORING:** P&D compliance monitoring staff shall ensure compliance prior to and throughout construction. Storage of all chemicals, fuels, and paints shall be contained in properly secured containers that prevent leakage into the environment. Spill kits shall be onsite as a protective measure to address toxic chemical/fuel leaks in both, terrestrial and marine environments.

Thank you for allowing us to be of assistance. If you have any questions or concerns, please call me at (805) 237-9626.

Sincerely,



Principal Scientist

Attachments:

- References
- Photographs
- Figures
- CNDDDB/CNPS Special Status Species Lists
- Custom Soil Resource Report for 607 Sand Point Road

References

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Photographs



Photo 1. Driveway and front yard of 607 Sand Point Road located on north end of property. Property is landscaped with cultivated and native species, view southwest. December 22, 2017.



Photo 2. Landscaped shrubs in front yard with hedgerow marking northwest boundary of property, view northwest. December 22, 2017.



Photo 3. An 8-inch diameter stick nest was observed in the hedge along the northeast boundary of the property in the front yard. The nest was located approximately 8 feet off the ground and approximately 73 feet from the northeast corner of the garage. No activity was observed at the nest, view north. May 7, 2018.



Photo 4. East side of residence consists of bare ground and landscaped shrubs along the eastern boundary, view north. December 22, 2017.



Photo 5. Gaps in shingles provide potential day roosting sites for bats. December 22, 2017.



Photo 6. Interior north side of the inner revetment in back yard landscaped with rosemary (*Rosmarinus* sp.), European beachgrass (*Ammophila Arenaria*), and sea lavender (*Limonium perezii*) in the foreground, view northwest. December 22, 2017.



Photo 7. View of back yard wooden deck and pathway surrounded by rosemary (*Rosmarinus* sp.), lavender (*Lavandula* sp.), and freeway daisy (*Dimorphotheca fruticosa*), view southeast. Interior revetment begins at base of stairs. December 22, 2017.



Photo 8. The west side of residence is landscaped with dense shrub hedges and a relatively open tree canopy; views north. December 22, 2017.



Photo 9. The west-facing balcony in backyard has two black phoebe nests (red arrows) under the deck, view east. May 7, 2018. The mud and grass nest (left) is likely a from a previous nesting season. The nest with fresh plant materials (right) is from the 2018 nesting season.



Photo 10. Nonnative species, short pod mustard (*Hirschfeldia incana*), New Zealand spinach (*Tetragonia tetraonoides*), castor bean (*Ricinus communis*), and sea rocket (*Cackile maritima*) emerge between revetments. December 22, 2017.

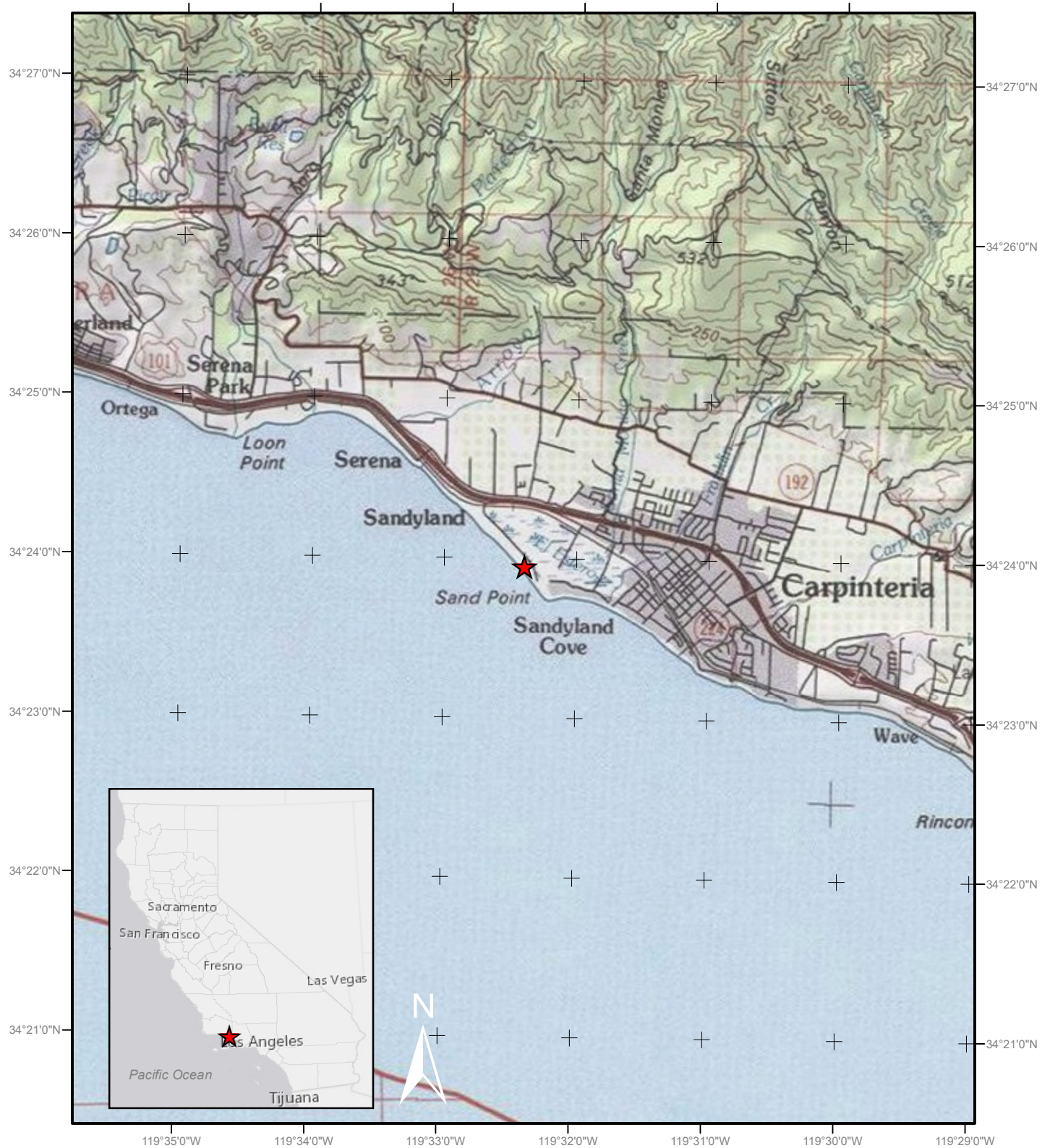


Photo 11. Outer revetment rocks were void of intertidal plant and animal species, view southeast. December 22, 2017.

Figures

- Figure 1. USGS Topographic Map
- Figure 2. Aerial Photograph
- Figure 3. CNDDDB and USFWS Critical Habitat Map – Plants
- Figure 4. CNDDDB and USFWS Critical Habitat Map – Animals
- Figure 5. Biological Resources

Figure 1. United States Geological Survey Topographic Map

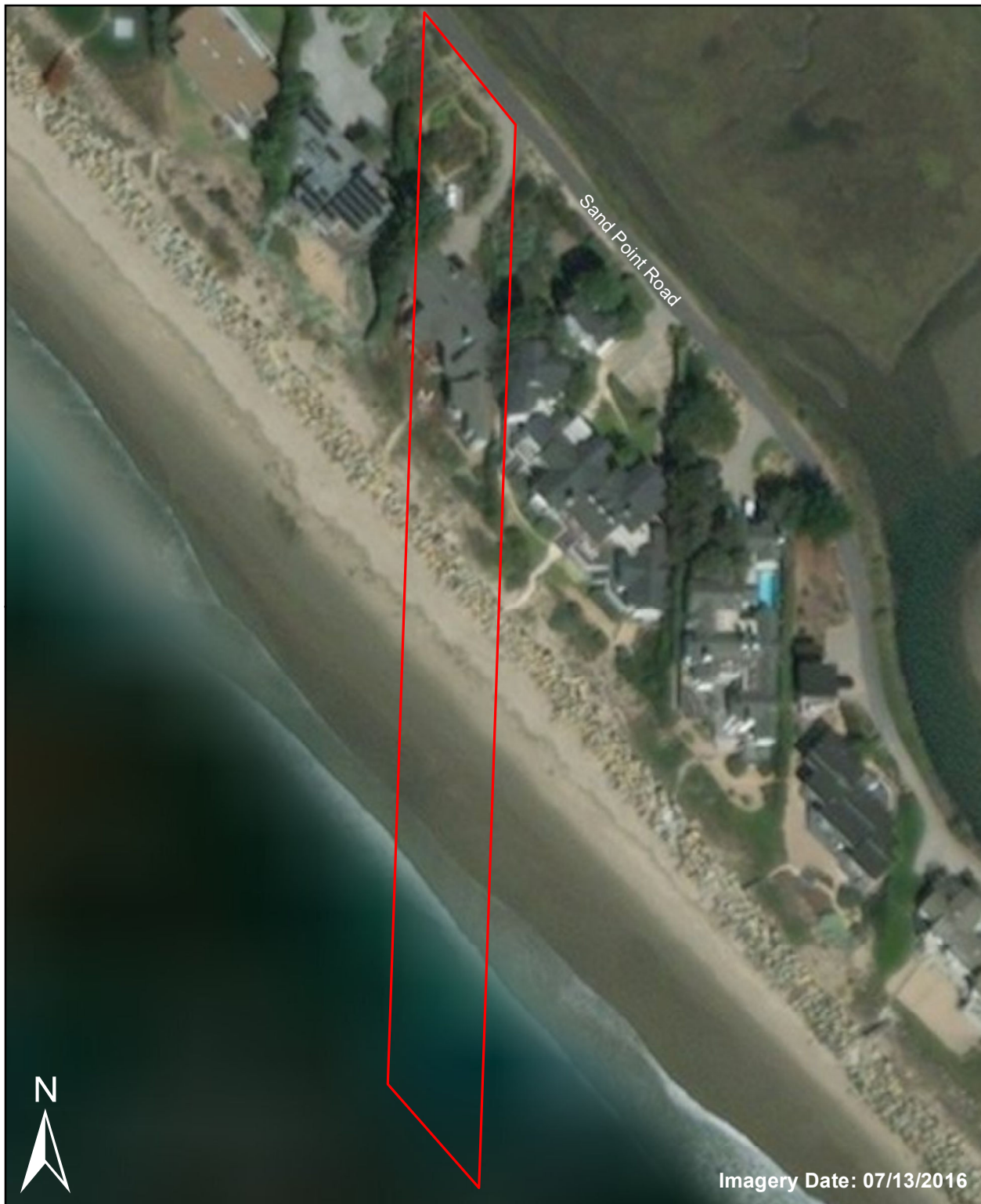


★ Project Location

0 0.5 1 2 Miles

Updated March 30, 2018 11:25 AM by MMP

Figure 2. Aerial Photograph

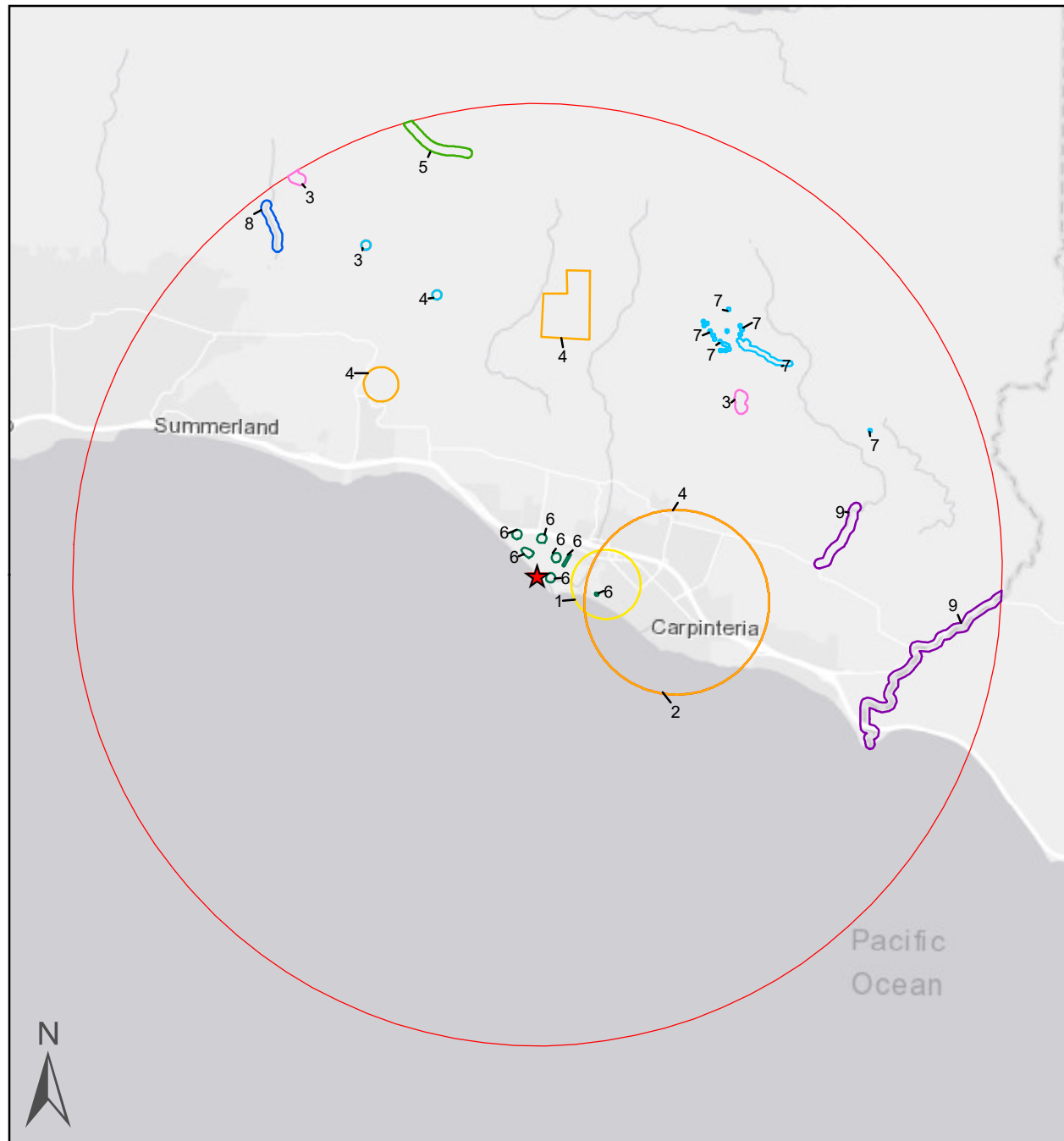


 APN 004-098-006

0 50 100 200
Feet

Updated March 30, 2018 11:23 AM by JBB

Figure 3. California Natural Diversity Database Plant Records

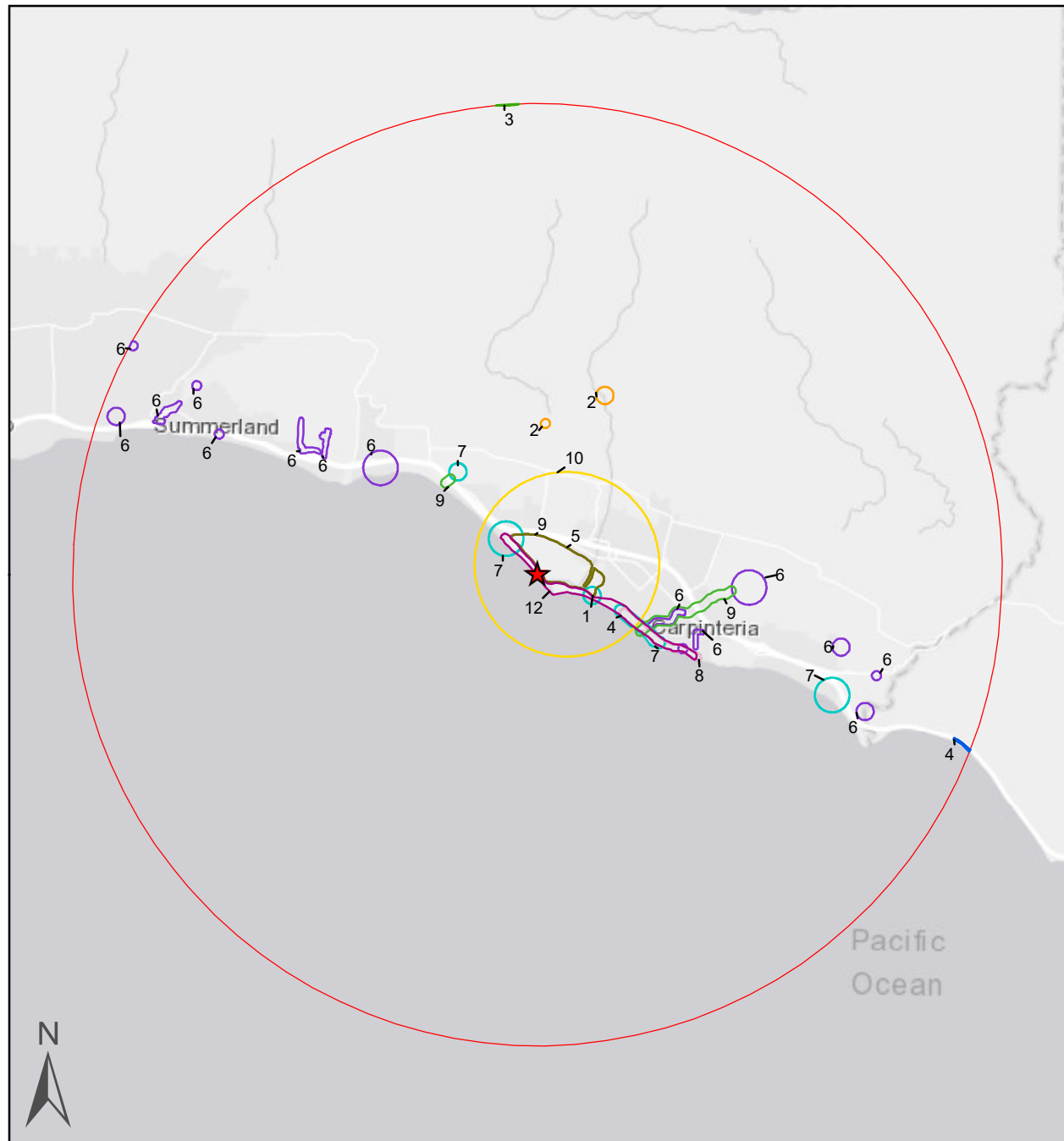


Label	Common Name	Federal/State Status	Rare Plant Rank	★ Project Location
1	Coulter's goldfields	None	1B.1	
2	Coulter's saltbush	None	1B.2	
3	Late-flowered mariposa-lily	None	1B.3	
4	Nuttall's scrub oak	None	1B.1	
5	Palmer's mariposa-lily	None	1B.2	
6	Salt marsh bird's-beak	FE/SE	1B.2	
7	Santa Barbara honeysuckle	None	1B.2	
8	Sonoran maiden fern	None	1B.2	
9	White-veined monardella	None	1B.3	

5-Mile Radius

0 0.5 1 2 3 Miles

Updated April 09, 2018 11:34 AM by: MMP

Figure 4. California Natural Diversity Database Animal Records

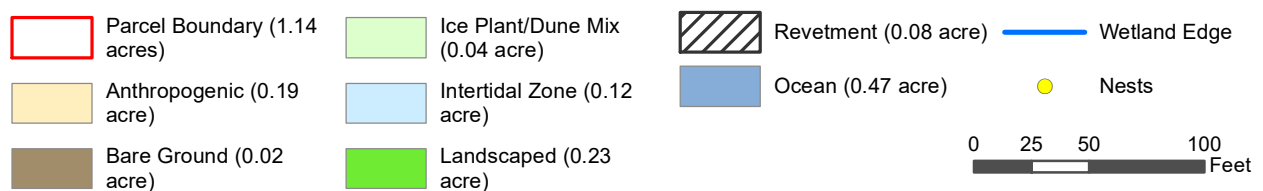
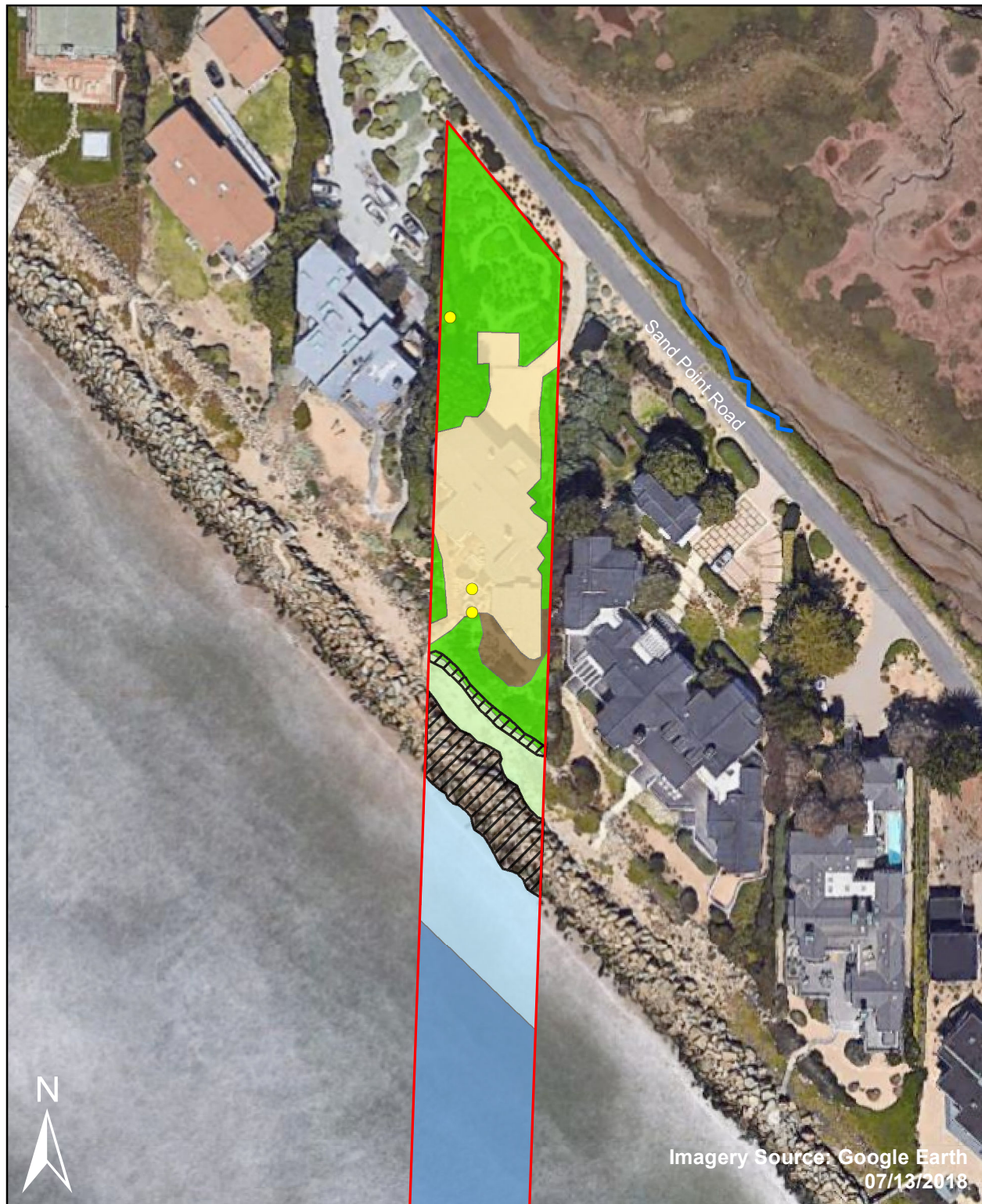
Label	Common Name	Federal/State Status	Global/State Rank	★ Project Location
1	Belding's savannah sparrow	None/SE	G5T3/S3	
2	California red-legged frog	FT/None	G2G3/S2S3	
3	Foothill yellow-legged frog	None/SCT	G3/S3	
4	Globose dune beetle	None	G1G2/S1S2	
5	Light-footed Ridgway's rail	FE/SE	G5T1T2/S1	
6	Monarch - California overwintering population	None	G4T2T3/S2S3	
7	Northern California legless lizard	None	G3/S3	
8	Sandy beach tiger beetle	None	G5T2/S2	
9	Tidewater goby	FE/None	G3/S3	
10	Townsend's big-eared bat	None	G3G4/S2	
11	Wandering (=saltmarsh) skipper	None	G4G5/S2	
12	Western snowy plover	FT/None	G3T3/S2S3	

5-Mile Radius

0 0.5 1 2 3 Miles

Updated April 09, 2018 11:50 AM by: MMP

Figure 5. Biological Resources



Updated February 12, 2020 01:44 PM by JBB

CNDDDB/CNPS Special Status Species Lists

Potential Special Status Plant List

Table 1 lists # special status plant species reported from the region. Federal status, California State status, and CNPS ranking for each species are given. Typical blooming period, habitat preference, potential to occur on site, and whether the species was observed in the Study Area are also provided.

TABLE 1. SPECIAL STATUS PLANT LIST. Listed are the 46 special status plants reported from the region. Potentially suitable habitat is present on the Study Area for five special status plant species.

	Common and Scientific Names	Federal/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected Within Study Area?	Effect of Proposed Activity
1.	Red Sand-Verbena <i>Abronia maritima</i>	None/None 4.2	February – November	Coastal dunes; <100m CCo, SCo, ChI; Baja CA	Low. Marginal habitat within the Study Area.	No	No Effect
2.	Douglas' Fiddleneck <i>Amsinckia douglasiana</i>	None/None 4.2	March - May	Monterey shale, dry. Cismontane woodland, valley and foothill grassland	No. Suitable habitat is not present in the Study Area.	No	No Effect
3.	Refugio Manzanita <i>Arctostaphylos refugioensis</i>	None/None 1B.2	December – March (May)	Chaparral (sandstone)	No. Suitable habitat is not present in the Study Area.	No	No Effect
4.	Marsh Sandwort <i>Arenaria paludicola</i>	FE/CE/ 1B.1	May - August	Boggy meadows, marshes; <300 m. s CCo (Nipomo Mesa, SLO County, Santa Ana River, SCo)	No. Suitable habitat is not present in the Study Area.	No	No Effect
5.	Miles' Milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>	None/None 1B.2	March - June	Clay or serpentine soils in coastal scrub, grassy areas near coast. 0-90 m. Endemic to SLO County	No. Suitable habitat is not present in the Study Area.	No	No Effect
6.	Ventura Marsh Milk-Vetch <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	FE/CE 1B.1	June - October	Coastal salt marsh. Within high tide or protected by barrier beaches, rarely near seeps on sandy bluffs; 1-35 m. c SCo	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common and Scientific Names	Federal/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected Within Study Area?	Effect of Proposed Activity
7.	Coulter's Saltscale <i>Atriplex coulteri</i>	None/None 1B.2	March - October	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland	Low. Marginal habitat is present in the Study Area.	No	No Effect
8.	Davidson's Saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	None/None 1B.2	April - October	Coastal bluffs; <200 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
9.	Catalina Mariposa Lily <i>Calochortus catalinae</i>	None/None 4.2	(February) March - June	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland	No. Suitable habitat is not present in the Study Area.	No	No Effect
10.	Late-Flowered Mariposa-Lily <i>Calochortus fimbriatus</i>	None/None 1B.3	June – August	Dry, open coastal woodland, chaparral; <900m. SCoRO, WTR	No. Suitable habitat is not present in the Study Area.	No	No Effect
11.	Palmer's Mariposa-Lily <i>Calochortus palmeri</i> var. <i>palmeri</i>	None/None 1B.2	May - July	Meadows, vernal moist places in yellow-pine forest, chaparral; 1200-2200 m. Teh, s CW, TR, SnJt	No. Suitable habitat is not present in the Study Area.	No	No Effect
12.	Santa Barbara Morning-Glory <i>Calystegia sepium</i> ssp. <i>Binghamiae</i>	None/None 1A	April - May	Coastal marshes and swamps	No. Suitable habitat is not present in the Study Area.	No	No Effect
13.	Southern Tarplant <i>Centromadia parryi</i> ssp. <i>australis</i>	None/None 1B.1	May - November	Often disturbed sites, near coast, along marsh edges, and on alkaline soils.	Low. Marginal habitat is present in Study Area.	No	No Effect
14.	Island Mountain-Mahogany <i>Cercocarpus betuloides</i> var. <i>blancheae</i>	None/None 4.3	February - May	Closed-cone coniferous forest, chaparral	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common and Scientific Names	Federal/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected Within Study Area?	Effect of Proposed Activity
15.	Salt Marsh Bird's-Beak <i>Chloropyron maritimum</i> ssp. <i>Maritimum</i>	FE/CE 1B.2	May - October	Coastal salt marshes;<10 m. SCo, n Baja CA	No. Suitable habitat is not present in the Study Area.	No	No Effect
16.	Palmer's Spineflower <i>Chorizanthe palmeri</i>	None/None 4.2	April – August	Chaparral, cismontane woodland, valley and foothill grassland; rocky, serpentinite	No. Suitable habitat is not present in the Study Area.	No	No Effect
17.	Long-Spined Spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>	None/None 1B.2	April – July	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools; often clay	No. Suitable habitat is not present in the Study Area.	No	No Effect
18.	Monkey-Flower Savory <i>Clinopodium mimuloides</i>	None/None 4.2	June – October	Chaparral, north coast coniferous forest; streambanks, mesic	No. Appropriate habitat is not present in the Study Area.	No	No Effect
19.	Small-Flowered Morning-Glory <i>Convolvulus simulans</i>	None/None 4.2	March – July	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, serpentinite seeps	No. Suitable habitat is not present in the Study Area.	No	No Effect
20.	Rattan's Cryptantha <i>Cryptantha rattanii</i>	None/None 4.2	April – July	Cismontane woodland, riparian woodland, valley and foothill grassland	No. Suitable habitat is not present in the Study Area.	No	No Effect
21.	Paniculate Tarplant <i>Deinandra paniculata</i>	None/None 4.2	(March) April – November	Coastal scrub, valley and foothill grassland, vernal pools; usually vernal mesic, sometimes sandy	Low. Suitable habitat is present in the Study Area.	No	No Effect
22.	Mt. Pinos Larkspur <i>Delphinium parryi</i> ssp. <i>Purpureum</i>	None/None 4.3	May - June	Chaparral, mojavean desert scrub, pinyon and juniper woodland	No. Suitable habitat is not present in the Study Area.	No	No Effect

Common and Scientific Names	Federal/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected Within Study Area?	Effect of Proposed Activity
23. Umbrella Larkspur <i>Delphinium umbraculorum</i>	None/None 1B.3	April - June	Moist oak forest; 400-1600 m. SCoRO, WTR.	No. Suitable habitat is not present in the Study Area.	No	No Effect
24. Ojai Fritillary <i>Fritillaria ojaiensis</i>	None/None 1B.2	March - May	Rocky slopes, river basins; 300-500 m. SCoRO, WTR	No. Suitable habitat is not present in the Study Area.	No	No Effect
25. Mesa Horkelia <i>Horkelia cuneata</i> var. <i>puberula</i>	None/None 1B.1	February - September	Dry, sandy coastal chaparral; gen 70-700 m. SCoRO, SCo.	No. Suitable habitat is not present in the Study Area.	No	No Effect
26. Southern California Black Walnut <i>Juglans californica</i>	None/None 4.2	March – August	Chaparral, cismontane woodland, coastal scrub, riparian woodland; alluvial	No. Suitable habitat is not present in the Study Area.	No	No Effect
27. Contra Costa Goldfields <i>Lasthenia conjugens</i>	None/None 1B.1	March - June	Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools; mesic	No. Suitable habitat is not present in the Study Area.	No	No Effect
28. Coulter's Goldfields <i>Lasthenia glabrata</i> ssp. <i>Coulteri</i>	None/None 1B.1	February - June	Coastal marshes, swamps, saline places, vernal pools; <1000 m. s SCoRO, SCo, n ChI, PR, w DMoj	No. Suitable habitat is not present in the Study Area.	No	No Effect
29. Ocellated Humboldt Lily <i>Lilium humboldtii</i> ssp. <i>Ocellatum</i>	None/None 4.2	March – July (August)	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland; openings	No. Suitable habitat is not present in the Study Area.	No	No Effect
30. Santa Barbara Honeysuckle <i>Lonicera subspicata</i> var. <i>subspicata</i>	None/None 1B.2	May - August	Chaparral, cismontane woodland, coastal scrub; 35-1000 m. Santa Barbara and Los Angeles Counties	No. Suitable habitat is not present in the Study Area.	No	No Effect

Common and Scientific Names	Federal/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected Within Study Area?	Effect of Proposed Activity
31. Carmel Valley Malacothrix <i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	None/None 1B.2	(March) June - December	Chaparral (rocky), coastal scrub	No. Suitable habitat is not present in the Study Area.	No	No Effect
32. White-Veined Monardella <i>Monardella hypoleuca</i> ssp. <i>Hypoleuca</i>	None/None 1B.3	April - December	Chaparral and cismontane woodland; 50-1525 m.	No. Suitable habitat is not present in the Study Area.	No	No Effect
33. San Joaquin Woollythreads <i>Monolopia congdonii</i>	None/None 1B.2	February - May	Chenopod scrub, valley and foothill grassland (sandy)	No. Suitable habitat is not present in the Study Area.	No	No Effect
34. Gambel's Water Cress <i>Nasturtium gambelii</i>	FE/CT 1B.1	April - September	Marshes, stream banks, lake margins; <1250 m. s CCo, SCo, to Mexico	No. Suitable habitat is not present in the Study Area.	No	No Effect
35. Ojai Navarretia <i>Navarretia ojaiensis</i>	None/None 1B.1	May - July	Chaparral (openings), coastal scrub (openings), valley and foothill grassland	No. Suitable habitat is not present in the Study Area.	No	No Effect
36. Chaparral Nolina <i>Nolina cismontana</i>	None/None 1B.2	May – July	Chaparral, coastal scrub. Primarily on sandstone and shale substrates; also known from Gabbro.	No. Suitable habitat is not present in the Study Area.	No	No Effect
37. Hubby's Phacelia <i>Phacelia hubbyi</i>	None/None 4.2	April – July	Chaparral, coastal scrub, valley and foothill grassland; gravelly, rocky, talus	No. Suitable habitat is not present in the Study Area.	No	No Effect
38. Michael's Rein Orchid <i>Piperia michaelii</i>	None/None 4.2	April – August	Coastal scrub, closed-cone coniferous forest, chaparral, cismontane woodland, lower montane coniferous forest	No. Suitable habitat is not present in the Study Area.	No	No Effect

	Common and Scientific Names	Federal/State Status CRPR	Blooming Period	Habitat Preference	Potential to Occur	Detected Within Study Area?	Effect of Proposed Activity
39.	Nuttall's Scrub Oak <i>Quercus dumosa</i>	None/None 1B.1	February - April	Closed-cone coniferous forest, chaparral, coastal scrub. Sandy or clay-loam soils near the coast;	No. Suitable habitat is not present in the Study Area.	No	No Effect
40.	Hoffmann's Sanicle <i>Sanicula hoffmannii</i>	None/None 4.3	March - May	Broadleafed upland forest, coastal scrub, chaparral, cismontane woodland, lower montane coniferous forest. Often serpentinite or clay.	No. Suitable habitat is not present in the Study Area.	No	No Effect
41.	Black-flowered Figwort <i>Scrophularia atrata</i>	None/None 1B.2	March - July	Closed-cone coniferous forest, riparian scrub, dune habitats; in sand, diatomaceous shales, calcareous and other soil types. 10-250 m. s SCoRO	Low. Marginal habitat is present in the Study Area.	No	No Effect
42.	San Gabriel Ragwort <i>Senecio astephanus</i>	None/None 4.3	May - July	Coastal bluff scrub, chaparral. Rocky slopes.	No. Suitable habitat is not present in the Study Area.	No	No Effect
43.	Southern Jewelflower <i>Streptanthus campestris</i>	None/None 1B.3	May - July	Open rocky areas in chaparral, lower montane coniferous forest, pinon-juniper woodland;	No. Suitable habitat is not present in the Study Area.	No	No Effect
44.	Woolly Seablite <i>Suaeda taxifolia</i>	None/None 4.2	January - December	Coastal bluff scrub, coastal dunes, marshes and swamps (margins of coastal salt).	Low. Marginal habitat is present in the Study Area.	No	No Effect
45.	Sonoran Maiden Fern <i>Thelypteris puberula</i> var. <i>sonorensis</i>	None/None 2B.2	January - September	Meadows and seeps along streams; 50-550 m. SCo, WTR, SnGb, SnJt, to AZ.	No. Suitable habitat is not present in the Study Area.	No	No Effect
46.	Santa Ynez False Lupine <i>Thermopsis macrophylla</i>	None/CR 1B.3	April - June	Chaparral, often in open areas such as fuel breaks, after burns, on sandstone;	No. Suitable habitat is not present in the Study Area.	No	No Effect

Habitat Preference Abbreviations:

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

State/Rank Abbreviations:

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

California Rare Plant Ranks:

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

CRPR Threat Ranks:

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

Potential Special Status Animals List

Table 2 lists # special status animal species reported from the region. Federal status, California State status, and CDFW listing status for each species are given. Typical nesting or breeding period, habitat preference, to occur, and whether the species was observed in the Study Area are also provided.

TABLE 2. SPECIAL STATUS ANIMAL LIST. Listed are the 29 special status animals known or reported from the region. Three special status animals have a low to moderate potential, and one species has a high potential to occur within the Study Area based on review of preferred habitat types.

Common and Scientific Names	Federal/State Status CDFW Rank	Global/State Rank	Nesting/Breeding Period	Habitat Preference	Potential Habitat?	Detected Within Study Area?	Effect of Proposed Activity
1. Cooper's Hawk <i>Accipiter cooperii</i>	None/None WL	G5 / S4	March 15 - August 15	Oak woodland, riparian, open fields. Nests in dense trees, esp. coast live oak.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
2. Arroyo Toad <i>Anaxyrus californicus</i>	FE/None SSC	G2G3 / S2S3	Spring	Rivers with sandy banks, willows, cottonwoods, and sycamores. Prefers loose gravelly soils in drier portions of their range.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
3. Obscure Bumble Bee <i>Bombus caliginosus</i>	None/None	G4? / S1S2	Spring	Coastal areas, open grassy coastal prairies and Coast Range meadows.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
4. Western Snowy Plover <i>Charadrius alexandrinus nivosus</i>	FT/None SSC	G3T3 / S2S3	March 15 - August 15	Sandy beaches, salt pond levees, & shorelines of large alkali lakes. Needs friable soils for nesting.	Moderate. Appropriate foraging habitat is present in the Study Area.	No	No Effect

Common and Scientific Names	Federal/State Status CDFW Rank	Global/State Rank	Nesting/Breeding Period	Habitat Preference	Potential Habitat?	Detected Within Study Area?	Effect of Proposed Activity
5. Sandy Beach Tiger Beetle <i>Cicindela hirticollis grvida</i>	None/None	G5T2 / S2	N/A	Adjacent to non-brackish water near the coast from San Francisco to N. Mexico. Clean, dry, light-colored sand in the upper zone.	Low. Marginal habitat is present in the Study Area.	No	No Effect
6. Globose Dune Beetle <i>Coelus globosus</i>	None/None	G1G2 / S1S2	N/A	Coastal sand dune habitat. Inhabits foredunes and sand hummocks.	Low. Marginal habitat is present in the Study Area.	No	No Effect
7. Townsend's Big-eared Bat <i>Corynorhinus townsendii</i>	None/None SSC	G3G4 / S2	Spring - Summer	Caves, buildings, and mine tunnels. Cave like attics as day roosts. On coast roosts are normally within 100 m. of creeks.	Moderate. Appropriate habitat is present in the Study Area.	No	Potentially Adverse Effect, But Mitigable
8. Yellow Rail <i>Coturnicops noveboracensis</i>	None/None SSC	G4 / S1S2	May-September	Densely vegetated marshes; sedge marshes/meadows with moist soil or shallow standing water.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
9. Monarch Butterfly <i>Danaus plexippus</i> -California overwintering population	None/None SA	G4T2T3 / S2S3	September - March (aggregations)	Roosts located in wind-protected tree groves with nectar and water nearby.	No. Appropriate overwintering habitat is not present in the Study Area.	No	No Effect

Common and Scientific Names	Federal/State Status CDFW Rank	Global/State Rank	Nesting/Breeding Period	Habitat Preference	Potential Habitat?	Detected Within Study Area?	Effect of Proposed Activity
10. Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i>	FE/CE	G5T2 / S1	March 1 through August 31	Riparian woodlands in Southern California.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
11. Western Pond Turtle <i>Emys marmorata</i>	None/None SSC	G3G4 / S3	April - August	Permanent or semi-permanent streams, ponds, lakes.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
12. Tidewater Goby <i>Eucyclogobius newberryi</i>	FE/None SSC	G3 / S3	N/A	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
13. California Condor <i>Gymnogyps californianus</i>	FE/CE FP	G1 / S1	March 15 - August 15	Wide-ranging over Coast Ranges from Ventura to Big Sur. High Mtn Condor Lookout located in Pozo.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
14. California Black Rail <i>Laterallus jamaicensis coturniculus</i>	None/CT FP	G3G4T1 / S1	March 15 - August 15	Occurs in tidal salt marsh heavily grown to pickleweed, also in freshwater and brackish marshes near the coast.	No. Appropriate habitat is not present in the Study Area.	No	No Effect

Common and Scientific Names	Federal/State Status CDFW Rank	Global/State Rank	Nesting/Breeding Period	Habitat Preference	Potential Habitat?	Detected Within Study Area?	Effect of Proposed Activity
15. San Diego Desert Woodrat <i>Neotoma lepida intermedia</i>	None/None SSC	G5T3T4 / S3S4	N/A	Moderate to dense canopies preferred. Abundant in rocky areas, outcrops. Ranges from San Diego to SLO Counties.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
16. Big Free-tailed Bat <i>Nyctinomops macrotis</i>	None/None SSC	G5 / S3	Spring - Summer	Low lying arid areas in Southern California with rock outcrops or cliffs.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
17. Steelhead Southern California DPS <i>Oncorhynchus mykiss irideus</i>	FE/None SA	G5T1Q / S1	February - April	Fed listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek, San Diego County)	No. Appropriate habitat is not present in the Study Area.	No	Not Likely to Adversely Affect
18. Wandering (salt marsh) skipper <i>Panoquina errans</i>	None/None SA	G4G5 / S2	November to March	Found in coastal salt marshes with water nearby. Larvae feed on salt grass and other salt marsh species	No. Appropriate habitat is not present in Study Area.	No	No Effect
19. Belding's Savannah Sparrow <i>Passerculus sandwichensis beldingi</i>	None/CE	G5T3 / S3	March 15 - August 15	Coastal salt marshes. Nests in Salicornia on or about margins of tidal flats. Santa Barbara to San Diego Counties	No. Appropriate habitat is not present in the Study Area.	No	No Effect

	Common and Scientific Names	Federal/State Status CDFW Rank	Global/State Rank	Nesting/Breeding Period	Habitat Preference	Potential Habitat?	Detected Within Study Area?	Effect of Proposed Activity
20.	Coast Horned Lizard <i>Phrynosoma blainvillii</i>	None/None SSC	G3G4 / S3S4	May - September	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
21.	Light-footed Ridgway's Rail <i>Rallus obsoletus levipes</i>	FE/CE FP	G5T1T2 / S1	March 15 - August 15	Salt marshes traversed by tidal sloughs, with dense pickleweed and cordgrass	No. Appropriate habitat is not present in the Study Area.	No	No Effect
22.	Foothill Yellow-legged Frog <i>Rana boylei</i>	None/C and CT SSC	G3 / S3	March - September	Partly shaded, shallow streams and riffles with rocky substrate. Min. 15 weeks for larval development.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
23.	California Red-legged Frog <i>Rana draytonii</i>	FT/None SSC	G2G3 / S2S3	January - September	Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks for larval development.	No. Appropriate habitat is not present in the Study Area.	No	No Effect

Common and Scientific Names	Federal/State Status CDFW Rank	Global/State Rank	Nesting/Breeding Period	Habitat Preference	Potential Habitat?	Detected Within Study Area?	Effect of Proposed Activity
24. Bank Swallow <i>Riparia riparia</i>	None/CT	G5 / S2	March 15 - August 15	Nests colonially in riparian and other lowland habitats west of the desert. Requires vertical banks or cliffs with sandy soils (to dig cavities) near streams, lakes, or the ocean.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
25. Yellow Warbler <i>Setophaga petechia brewsteri</i>	None/None SSC	G5 / S3S4	March 15 - August 15	Nests in riparian plant associations, including willows, cottonwoods, etc.	No. Appropriate habitat is not present in Study Area.	No	No Effect
26. California Least Tern <i>Sternula antillarum browni</i>	FE/CE FP	G4T2T3Q / S2	March 15 - August 15	Nests on sand beaches, alkali flats, bare flat ground from San Francisco Bay to N. Baja California. Colonial breeder.	No. Appropriate habitat is not present in the Study Area.	No	No Effect
27. Coast Range Newt <i>Taricha torosa</i>	None/None SSC	G4 / S4	December - May	Slow moving streams, ponds, and lakes with surrounding evergreen/oak forests along coast.	No. Appropriate habitat is not present in the Study Area.	No	No Effect

Common and Scientific Names	Federal/State Status CDFW Rank	Global/State Rank	Nesting/Breeding Period	Habitat Preference	Potential Habitat?	Detected Within Study Area?	Effect of Proposed Activity
28. Two-striped Gartersnake <i>Thamnophis hammondi</i>	None/None SSC	G4 / S3S4	Spring	Coastal California from Salinas to Baja, sea level to 7000', aquatic, in or near permanent water, streams with rocky beds and riparian growth	No. Appropriate habitat is not present in the Study Area.	No	No Effect
29. Least Bell's Vireo <i>Vireo bellii pusillus</i>	FE/CE	G5T2 / S2	March 15 - August 15	Riparian habitat, near water or dry streambed, <2000 ft. Nests in willows, mesquite, Baccharis.	No. Appropriate habitat is not present in the Study Area.	No	No Effect

Habitat characteristics are from the Jepson Manual and the CNDDB.

Abbreviations:

FE: Federally Endangered

FT: Federally Threatened

PE: Proposed Federally Endangered

PT: Proposed Federally Threatened

G1: Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2: Imperiled—At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.

G3: Vulnerable—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.

G4: Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.

CE: California Endangered

CT: California Threatened

Cand. CE: Candidate for California Endangered

Cand. CT: Candidate for California Threatened

G5: Secure—Common; widespread and abundant.
T-rank: Attached to the G-rank or S-rank reflects only the subspecies' global or state status.

S1: Critically Imperiled—Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.

S2: Imperiled—Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.

SA: CDFW Special Animal

SSC: CDFW Species of Special Concern

FP: CDFW Fully-Protected

WL: CDFW Watch List

S3: Vulnerable—Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.

S4: Apparently Secure—Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.

S5: Secure—Common, widespread, and abundant in the state.

H: All sites are Historical, element not seen for last 20 years, but suitable habitat still exists.

X: Extirpated; element is extinct in the wild.

GXC: Extinct in the wild; exists in cultivation.

Q: Taxonomic questions associated with rank.

Custom Soil Resource Report for 607 Sand Point Road



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for Santa Barbara County, California, South Coastal Part

607 Sand Point Road



January 5, 2018

Preface

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

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

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

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

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

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

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Soil Map

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

Custom Soil Resource Report Soil Map




Custom Soil Resource Report


MAP LEGEND


Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Santa Barbara County, California, South Coastal Part
Survey Area Data: Version 10, Sep 11, 2017

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

Date(s) aerial images were photographed: Dec 31, 2009—Jan 15, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AC	Aquents, fill areas	0.4	34.9%
BE	Beaches	0.3	26.0%
Totals for Area of Interest		1.1	100.0%

Map Unit Descriptions

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

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

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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

onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

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

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

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

Santa Barbara County, California, South Coastal Part

AC—Aquents, fill areas

Map Unit Setting

National map unit symbol: hc3m

Elevation: 10 to 50 feet

Mean annual precipitation: 15 to 20 inches

Mean annual air temperature: 61 to 63 degrees F

Frost-free period: 310 to 330 days

Farmland classification: Not prime farmland

Map Unit Composition

Aquents and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aquents

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Earthy fill from variable sources

Typical profile

H1 - 0 to 60 inches: variable

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Depth to water table: About 24 to 72 inches

Frequency of flooding: Rare

Frequency of ponding: None

BE—Beaches

Map Unit Setting

National map unit symbol: hc42

Elevation: 0 to 10 feet

Mean annual precipitation: 16 to 20 inches

Mean annual air temperature: 59 to 61 degrees F

Frost-free period: 290 to 320 days

Farmland classification: Not prime farmland

Map Unit Composition

Beaches: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Beaches

Setting

Landform: Beaches

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy or stony alluvium

Typical profile

H1 - 0 to 6 inches: sand

H2 - 6 to 60 inches: coarse sand

Properties and qualities

Slope: 1 to 5 percent

Natural drainage class: Poorly drained

Runoff class: Negligible

Frequency of flooding: Frequent

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8w

Hydric soil rating: Yes

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