Biological Report

for

Sanddew

501 Sand Point Road
Carpinteria, Santa Barbara County, California

Prepared for

Siemens Planning
5210 Carpinteria Avenue #103
Carpinteria, CA 93013

by

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES
1602 Spring Street
Paso Robles, CA 93446
(805) 237-9626

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(Edited September 2021)

Reporting Biologists: Darcee Guttilla, Senior Biologist
LynneDee Althouse, Principal Scientist
Althouse and Meade, Inc.
1602 Spring Street
Paso Robles, CA 93446
(805) 237-9626
darceeg@althouseandmeade.com
lynnedee@althouseandmeade.com

I hereby certify that the statements furnished in the report and associated maps are true and correct to the best of my knowledge and belief.

Signature — September 30, 2021 Date

Signature — September 22, 2021 Date

FORWARD TO SEPTEMBER 2021 VERSION

We updated the biological report on September 22, 2021 with the edits listed below.

1.3 Project Description: Replaced term "caisson" with "concrete pile". The mention of aggregate piers with concrete pile is a means to minimize project footprint. (Methods/details will be adequately addressed in building permit documents.)

Section 2.1 Literature Review: Fixed broken hyperlink in paragraph 3; deleted a partially duplicated paragraph 4.

3.6.4 Wildlife Survey Results: Table 7 on Page 42, added back missing wildlife species accidentally deleted between versions.

References: corrected error in SAIC 2010 reference

Checked grammar/ spelling and hyperlinks throughout.

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Cover Page: Sanddew, 501 Sand Point Road, view west, February 28, 2020.

Acronyms and Abbreviations

APN	Assessor's Parcel Number
CCC	California Coastal Commission
CCH	California Consortium of Herbaria
CCR	California Code of Regulations
CDFG	California Department of Fish and Game, [now California Department of Fish and Wildlife]
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CSM	Carpinteria Salt Marsh
CSMR	Carpinteria Salt Marsh Reserve
CWA	Clean Water Act
EPA	Environmental Protection Agency
ESH	Environmentally Sensitive Habitat
FESA	Federal Endangered Species Act
GIS	Geographic Information System
GPS	Global Positioning System
IUCN	International Union for Conservation of Nature
MBTA	Migratory Bird Treaty Act
NAIP	National Agriculture Imagery Program
NRCS	Natural Resources Conservation Service
NOAA	National Oceanic and Atmospheric Administration
P&D	County Planning and Development Department
RHA	Rivers and Harbors Act
RWQCB	Regional Water Quality Control Board
SSURGO	Soil Survey Geographic Database
UCNRS	University of California Natural Reserve System
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WETS	Wetland Tables [from NRCS Climate Center]

SYNOPSIS

- This biological report examines a 2.89-acre Study Area within Assessor Parcel Number (APN) 004-098-011 in Santa Barbara County, California. The Study Area is privately owned and abuts the 230-acre El Estero, also known as Carpinteria Salt Marsh.
- Terrestrial and marine habitat types identified and mapped in the Study Area consist of alkali heath marsh, salt grass flats, dune mat, iceplant mats, road, and tidal non-wetland waters. Approximately 1.49 acres meet Santa Barbara County's criteria for Environmentally Sensitive Habitats: dunes, wetlands, and intertidal areas.
- Botanical surveys conducted in fall 2017, spring 2018, summer 2019, and winter and summer 2020 identified 45 species, subspecies, and varieties of vascular plants in the Study Area. Suitable habitat and soil conditions are suitable for 10 special status plants. Two (2) special status plant species were observed in the Study Area.
- Wildlife surveys conducted in fall 2017, spring 2018, summer 2019, and winter, spring, summer 2020 identified 15 invertebrates, no amphibians, 1 reptile, 20 birds, and 6 mammals. Appropriate habitat is present on the property for 8 special status animals. Spring 2018 nesting bird surveys identified one inactive nest in a myoporum shrub. No state or federally listed animals were detected in the Study Area.
- Impacts are proposed within a footprint approximately 0.2-acre area, on iceplant mat and degraded dune mat habitat.
- The proposed house and access were sited to avoid impacts to wetland and sandy beach habitat, set back from an existing rock revetment, and to allow a small buffer from the adjacent neighbor's house.

1 INTRODUCTION

1.1 Purpose

This report provides information regarding biological resources associated with an approximately 2.89-acre site (Study Area) in the vicinity of Carpinteria Salt Marsh, Santa Barbara County, California. Siemens Planning requested this report from Althouse and Meade, Inc. on behalf of the owner (Table 1).

Results are reported for botanical and wildlife surveys conducted throughout the Study Area. Results of database and literature searches of special status species reports within a nine- 7.5- minute quadrangle search area of the Study Area and a vegetation assessment are also included. Special status species that could occur in the Study Area or be affected by the proposed project are discussed; and lists of plant and animal species that were identified or are expected to occur in the Study Area are provided. Potential impacts to biological resources that could occur from the proposed Project are assessed, and mitigation measures are included in this report.

TABLE 1 RESPONSIBLE PARTIES

Lead agency, owner/applicant, project planner, biological consultant, architect, landscape architect, land analyst and engineers.

Owner/Applicant	**Project Planner**	**Biological Consultant**
Sanddew LLC 501 Sand Point Road Carpinteria, CA 93013 (831) 200-4015 Contact: Mark Massara markmassara@coastaladvocates.com	Siemens Planning 5210 Carpinteria Ave #103 Carpinteria, CA 93013 (805) 403-1199 Contact: Jennifer Siemens jennifer@siemensplanning.com	Althouse and Meade, Inc. 1602 Spring St Paso Robles, CA 93446 (805) 237-9626 Contact: Darcee Guttilla darceeg@althouseandmeade.com LynneDee Althouse LynneDee@althouseandmeade.com
Lead Agency	**Architect**	**Landscape Architect**
County of Santa Barbara Department of Planning and Development 123 E. Anapamu Street Santa Barbara, CA 93101 Contact: Nicole Lieu nlieu@co.santa-barbara.ca.us (805) 403-1199	Two Trees Architects 407 Bryant Circle, Suite A-1 Ojai, CA 93023 (805) 403-6595 Contact: Danny Longwill danny@twotrees-architect.com	Van Atta Associates, Inc. 235 Palm St Santa Barbara, CA 93023 (805) 730-7446 Contact: Susan Van Atta sva@va-la.com Kevin Tanchanco kevin@va-la.com
Land Analyst (re: State Lands)	**Civil Engineer**	**Geotechnical Engineer**
Patrick Yochum Land Analyst 34north119west@gmail.com (801) 390-4833	Ashley & Vance Engineering 210 E. Cota St. Santa Barbara, CA 93101 Contact: Jason Gotsis, PE (805) 962-9966 x 160 Bruce Jones, PE (303) 755-9762 x121	Earth Systems 1731 Walter Street, Suite A Ventura, CA 93003 Contact: Anthony P. Mazzei, Geotechnical Engineer Patrick V. Boales, Eng.Geologist (805) 642-6727

1.2 Location

The Study Area is located at the end of Sand Point Road about 1.25-miles south of the intersection with Santa Claus Lane near southbound U.S. Highway 101 onramp within an 8.95-acre parcel (APN 004-098-011), the subject property. Approximate coordinates for the center of the Study Area are 34.3975° N / -119.5380° W (WGS84) in the United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1). Elevation ranges from approximately 0 to 16 feet above mean sea level (Appendix A. Stantec Existing Conditions). The Study Area is in an unincorporated portion of Santa Barbara County within the Coastal Zone. The subject property extends beyond the Study Area north into Carpinteria Salt Marsh (CSM) and south into the Pacific Ocean (Figure 2). CSM is a 230-acre estuary that connects to the Pacific Ocean east of the parcel.

The Study Area surveyed is a 2.89-acre portion of the onshore property, including associated tidal non-wetland waters to the south and north.

1.3 Project Description

The proposed project is a "floating" single-family residence with a living roof, attached carport and decks, permeable-paver driveway, habitat restoration, native landscaping, and minimal grading (Appendix B). The Owner/Applicant proposes to construct a single-family home on concrete piles with aggregate piers (Project) to minimize its footprint and maximize opportunities for plants and wildlife to utilize the shaded corridor. The 7 to 9-feet high space with direct and scattered sunlight will allow stormwater to pass freely through the vegetated habitat corridor. The windows will be made of Guardian Glass SunGuard products (Appendix C). This glass has a bird avoidance index (AI) score 70 percent and higher. The home is located within an 0.20-acre (8,878 square feet) development impact area of an existing 8.95-acre parcel (389,862 sq. ft), or approximately 2.2% of the property.

A total of 1.00 acre is proposed to be restored, protected, and maintained with native vegetation. Wetland habitats (0.08 acre) of salt grass (sandy beach; 0.07 acre) and alkali heath (0.01 acre) will be preserved, and non-native plants removed. Restoration of dune habitat will be implemented on 0.75 acre of dune habitat to be managed and maintained as natural habitat, plus weeding and restoration along 0.04-acre path area (0.79 acre, total area restored).

The remainder of undeveloped upland habitat, including the residence buffer and area between the house and the revetment (currently ice plant mat) will be restored with native species per the Van Atta landscape plan (approximately 0.09 acre south and west of the house plus 0.04 acre around the house buffer). That portion of the landscape plan is intended to buffer the residence from the west neighbor's property between the driveway and house.

1.4 Regulatory Framework

Standards for environmental protection and restoration, in the form of laws and regulations, are created within three different organizational levels of the government: Federal, State, and Local. Entities exist within each level to create and enforce regulations that help ensure protection of specific and pertinent regional issues threatening ecosystems and environments. The following federal, state, and local regulations are applicable to the proposed Project.

1.4.1 Federal Law and Regulations

Endangered Species Act – The federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a 'take' under the 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 United States Fish and Wildlife Service (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.

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

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

Section 404 Clean Water Act Regulations – The Clean Water Act provides wetland regulation at the federal level and is administered by the 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.

On June 7, 2019 the U.S. Environmental Protection Agency (EPA) issued Executive Order 13868 to update guidance regarding implementation of CWA section 404 at 40 CFR Part 121 (USEPA 2019a). One issue addressed the scope of Section 401, i.e., conditions not related to water quality requirements. EPA recommended that federal permitting agencies work with their Office of General Counsel and the EPA to determine whether a permit or license should be issued with those conditions. Additional guidance included recommendation for early agency collaboration with states and tribes.

The proposed rule was posted August 22, 2019 (40 CFR Part 121 Fed. Reg. 2019-44080, USEPA 2019b). The proposed rule states that EPA must provide technical assistance for section 401 certifications upon the request of any federal or state agency, or project proponent (Fed. Reg. 2019-44087). It proposes "to conclude that a certifying authority's review and action under section 401 must be limited to water quality impacts from the potential discharge associated with a proposed federally licensed or permitted project" (Fed. Reg. 2019-44095). The proposed rule provides specific guidance regarding Certification requests (Fed. Reg 2019-44101):

> *Certification request* means a written, signed, and dated communication from a project proponent to the appropriate certifying authority that:
>
> 1. Identifies the project proponent(s) and a point of contact;
> 2. identifies the proposed project;
> 3. identifies the applicable federal license or permit;
> 4. identifies the location and type of any discharge that may result from the proposed project and the location of receiving waters;
> 5. includes a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat or control the discharge;
> 6. includes a list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received; and
> 7. contains the following statement: '*The project proponent hereby requests that the certifying authority review and take action on this CWA section 401 certification request within the applicable reasonable timeframe.*'

The EPA proposes to establish the ''scope of certification'' as follows (Fed. Reg 2019-44101):

> The scope of a Clean Water Act section 401 certification is limited to assuring that a discharge from a Federally licensed or permitted activity will comply with water quality requirements.

The proposed rule applies to the California Regional Water Quality Control Board's certification process required by section 404 of the CWA. Note: The proposed project does not plan to impact waters of the state or the U.S.

1.4.2 State Law and Regulations

Regional Water Quality Control Board (Clean Water Act Section 401 and/or Porter-Cologne Act) – 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 (e.g., Statewide General Waste Discharge requirements for Dredged or fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be outside of Federal Jurisdiction; Water Quality Order No. 2004-0004-DWQ).

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 Coastal Act Section 30607.1 – Where any dike and fill development is permitted in wetlands in conformity with this division, mitigation measures shall include, at a minimum, either acquisition of equivalent areas of equal or greater biological productivity or opening up equivalent areas to tidal action; provided, however, that if no appropriate restoration site is available, an in-lieu fee sufficient to provide an area of equivalent productive value or surface areas shall be dedicated to an appropriate public agency, or such replacement site shall be purchased before the dike or fill development may proceed. Such mitigation measure shall not be required for temporary or short-term fill or diking: provided, that a bond or other evidence of financial responsibility is provided to assure that restoration will be accomplished in the shortest feasible time.

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

California 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 – The California Endangered Species Act (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.

1.4.3 Local Policies and 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.

Santa Barbara County Environmental Thresholds and Guidelines Manual (County of Santa Barbara 2015) provides guidelines to mitigate impacts to biological resources in order of effectiveness in the following hierarchy: 1) Avoidance, 2) Onsite Mitigation and 3) Off-Site Mitigation. Habitat mitigation should replace the same habitat types, within the same watershed, and as close as possible to the impact location. The habitat mitigation result should be comparable to the size (i.e. 1:1 mitigation to impact ratio) and quality, of the impacted habitat.

2 METHODS

2.1 Literature Review

Our literature review includes previous biological surveys and wetland delineation report for 501 Sand Point Road (SAIC 2010, Althouse and Meade 2018a, 2018b, 2020; Appendix D); local regulations are sourced from Santa Barbara County Planning Department. Species occurrence accounts are from California Natural Diversity Database (CNDDB January 2020 data), Consortium of California Herbaria (CCH January 2020 data), California Native Plant Society (CNPS July 2019 data), California Department of Fish and Wildlife (CDFW July 2019 data), International Union for the Conservation of Nature (IUCN 2020), U.S. Fish and Wildlife Service (August 2019 data), National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA NMFS September 2019 data), University of California Carpinteria Salt Marsh Reserve, Iowa State University's BugGuide.net (2019), California Herps (Nafis 2019), and eBird (2020). Resources for ecology of special status species are provided in-text (Section 3) and in References (Section 8).

We queried data for special status species and critical habitat known to occur in the seven USGS 7.5-minute quadrangles surrounding the Study Area: Carpinteria, Little Pine Mountain, Hildreth Peak, Old Man Mountain, Santa Barbara, White Ledge Peak, and Pitas Point.

Additional special status species research consisted of reviewing previous biological reports for the area and searching online museum and herbarium specimen records for locality data within Santa Barbara County. We reviewed online databases of specimen records maintained by the Museum of Vertebrate Zoology at the University of California, Berkeley, the California Academy of Sciences, and the Consortium of California Herbaria. Additional special status species with potential to occur on or near the Study Area were added to our special status species list (refer to Table 4 and Table 6).

Special status species lists produced by database and literature searches were cross-referenced with the described habitat types in the Study Area to identify all potential special status species that could occur on or near the Study Area. Each special status species that could occur on or near the Study Area is individually addressed (refer to Sections 3.5 and 3.6).

2.2 Mapping

Mapping efforts utilized Samsung Galaxy Tab 4 tablets equipped with Garmin GLO GPS Receivers and a third-party mapping application. Biological resource constraints were mapped in the field on site. Hand notation of habitats on high resolution aerials were digitized into polygon layers. Maps were created using aerial photo interpretation, field notation, and spatial data imported to Esri ArcGIS, a Geographic Information System (GIS) software program. Data were overlaid on a 2016 National Agriculture Imagery Program (NAIP) aerial of Santa Barbara County (USDA 2016). Topography was based on Stantec's survey using standard photogrammetric methods and procedures from aerial photography dated October 25, 2019. Mapping coordinates are California Coordinate System, NAD 83, (CCS83) Zone 5 grid (Epoch 2007.0).

The U.S. Army Corps of Engineers' approximate jurisdiction limits extend from the mean high water (MHW) elevation 4.55 elevation NAVD88 for section 10 Rivers and Harbors Act and between the mean high water (MHHW) elevation 5.4 and the highest astronomical tide (HAT) elevation 7.14 NAVD88 for Clean Water Act Section 404 (NOAA 2016).

2.3 Surveys

The Study Area was surveyed between July 2017 and July 2019 (Table 2). Initial studies for biological resources occurred July 7, 2017, September 1, 2017, November 20 and 30, 2017, and May 9, 2018. Follow up surveys for current conditions were performed July 1, 15, and 22, 2019, and January 10 and 22, 2020. Surveys were conducted by Principal Scientists LynneDee Althouse, M.S., and Dan Meade, Ph.D., Biologists Katie Brown, M.S., Darcee Guttilla M.S., Shannon Henke, and Kyle Nessen. Focused surveys for lizards and insects were conducted by Dan Meade, Ph.D., and Bret Robinson, M.S. Surveys were conducted on foot to compile species lists, search for special status plants and animals, map habitats, and photograph the Study Area. Habitats within the Study Area were defined by aerial photographs and ground-truthed onsite. Vegetated terrestrial habitats were classified using the Manual of California Vegetation (Sawyer et al. 2009) with results provided in Table 3. Surveys covered intertidal areas during low-low tide (-0.1 feet) and the onshore portion of the property contained within the outer seawall to the south and intertidal zone to the north. Inspections were made on January 10 and 22, and March 30, 2020 for burrowing invertebrates and legless lizards. In August 2020, we collected vegetative cover data in 1-meter square quadrats to compare dune mat habitat in the house site (9 quadrats) with the proposed restoration site (3 quadrats).

TABLE 2. BIOLOGICAL SURVEYS

Survey Date	Biologist(s)	Weather Observations	Activities
7/07/2017	LynneDee Althouse, Katie Brown	61-77 °F, wind 6-13 mph	Wetland delineation
9/01/2017	Katie Brown	63-87 °F, wind 4-13 mph	Wetland delineation
11/20/2107	Darcee Guttilla, Shannon Henke	54-70 °F, wind 8 mph	Botanical and wildlife surveys
11/30/2017	Darcee Guttilla	47- 68 °F, wind 3 mph	Botanical survey
5/09/2018	Darcee Guttilla	58 °F, wind 0-3 mph	Botanical and nesting bird surveys
7/01/2019	LynneDee Althouse	56-74 °F, wind 0-12 mph	Assess current conditions
7/15/2019	LynneDee Althouse	60-71 °F, wind 0-13 mph	Botanical survey
7/22/2019	Kyle Nessen	56-74 °F, wind 0-3 mph	Botanical and wildlife surveys
1/10/2020	Dan Meade	61 °F, wind 3-7 mph	Wetland edge survey, dune habitat assessment for sandy beach tiger beetle and dune beetles, preliminary legless lizard survey
1/22/2020	Dan Meade, Bret Robinson	65 to 70 °F, wind 3-7 mph	Beetle and lizard survey on both sides of the revetment.
2/27/2020	LynneDee Althouse Sarah Termondt	74 to 76 °F, wind 0-5 mph	Botanical survey
3/30/2020	Bret Robinson	55 to 64 °F, wind 5-7 mph	Beetle and lizard survey on north side of revetment
8/10/2020	Sarah Termondt	63 to 65 °F, wind 5 – 8 mph	Dune mat house impact and botanical survey

Survey Date	Biologist(s)	Weather Observations	Activities
8/25/2020	LynneDee Althouse	77 °F, wind 0-2 mph	Photo dune mat vegetation and inspect cover boards for legless lizards
9/15/2020	Kyle Nessen	78 °F, wind 0-3 mph	Survey for *Limonium* spp.
3/17/2021	Kyle Nessen	55 °F, wind 5-10 mph	Dune mat vegetation analysis and drone imagery

2.3.1 Botanical

Each habitat type in the Study Area was inspected, described, and catalogued (Section 3.3). All plant species observed in the Study Area were identified and recorded (Section 3.5.6). Reconnaissance transects were meandering with an emphasis on locating habitat appropriate for special status plants. Boundaries of different vegetation types were mapped, general conditions described, and dominant species noted. Species lists were compiled, and habitats evaluated for special status species. Identification of botanical resources included field observations and laboratory analysis of collected material (Table 5). Botanical surveys were conducted in summer and fall 2017 according to agency guidelines (USFWS 2000, CDFW 2018, and CNPS 2001). Botanical surveys were timed to identify perennial special status plant species known from the region (refer to Section 4.3.1, and Table 4) that have potential to occur in the Study Area. Spring botanical surveys were conducted May 9, 2018, to complete botanical inventory of annual species. Additional botanical surveys were performed July 1, 15, and 22, 2019 to assess site conditions and update species lists. Botanical nomenclature used in this document follows the Jepson Manual, Second Edition (Baldwin et al. 2012). The Jepson Manual First Edition names are provided in brackets where nomenclature has recently changed.

2.3.2 Wildlife

All animal species observed in the Study Area were identified and recorded (Section 3.6.4). Wildlife documentation included observations of animal presence and wildlife sign such as nests, tracks, and scat, and common species likely to occur onsite and in CSM. Observations of wildlife were recorded during field surveys in all areas of the Study Area (Table 7). Birds were identified by sight, using 10-power binoculars, and by vocalizations. Reptiles and amphibians were identified by sight, often using binoculars, and by hand-captures; traps were not used. Mammals recorded in the Study Area were identified by sight and sign.

2.3.2.1 Globose dune beetle

Focused globose dune beetle *(Coelus globosus)* survey method followed Doyen (1976). Dr. Christina Sandoval, Reserve Director at Coal Oil Point Reserve, was consulted regarding survey methods specific for dune beetles. Survey was conducted between from 11:24 AM and 2:30 PM on January 22, 2020 after preliminary investigation on January 20, 2020. The site was first surveyed for potential beetle habitat on the 1-acre parcel. Suitable habitat is comprised of small sandy patches on dune habitat. The most suitable habitat on the dune habitat contains dry sand, small in grain size, loosely compacted, and depth of a few inches. These dune patches were scooped and sifted through a Number 10 sieve with an opening of 0.0787 inch. All suitable habitat was covered in addition to less suitable habitat where the sand was harder and wetter than the dry patches in order to get a complete survey of the site.

2.3.2.2 Northern California legless lizards

Focused Northern California legless lizard *(Anniella pulchra)* survey was conducted from 2:15 PM to 4:00 PM on January 22, 2020. This consisted of two biologists using 3-pronged rakes to pull up vegetative mats and rake through the substrate habitat underneath. The survey was performed throughout the site where habitat was likely (mats of vegetation on sand dune soil). Two coverboards were placed on site and GPS coordinates recorded. Coverboards consist of a cardboard layer placed on soil and a square piece of plywood laid on top, then covered by vegetation. Coverboards were first inspected March 30, 2020, after being in place for two months. Coverboard surveys are ongoing in 2020.

2.4 Soils

A custom soil report was generated by importing the Study Area as an Area of Interest (AOI) into the Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database (SSURGRO) via their online portal (USDA 2018). The exported custom soil report includes a map showing an overlay of the soil map units within the AOI as well as a description of each and is provided.

3 RESULTS

3.1 Regional Context

The Study Area is located on a geographically unique location, a sand spit with the Pacific Ocean to the south, residential development to the west, Carpinteria Salt Marsh to the north, and an estuary outlet to the east that connects freshwater from Santa Monica Creek and Franklin Ditch to the Pacific Ocean. The City of Carpinteria borders the saltmarsh to the north and east. Habitats in the Study Area have been impacted by infrastructure (revetment) and adjacent development. The property is also frequently used as a destination for people walking dogs off-leash. Further east the coastline consists of residential development bordering the salt marsh and the Pacific Ocean. Coastal strand, salt marsh, estuarial, tidal non-wetland waters (intertidal zone and subtidal channel) are typical biologically diverse and important for wildlife species. Commercial nurseries and agricultural fields and orchards north of the salt marsh extend north to Los Padres National Forest.

3.2 Soils

Two individual soil map units from the Natural Resource Conservation Service (NRCS) Soil Survey Geographic Database (SSURGO) overlap the Study Area (Figure 3): Aquents, fill areas (AC) and Beaches (BE) (Soil Survey Staff 2019). A detailed custom soil report for the Study Area is provided in Appendix E.

3.3 Habitat Types

Terrestrial habitats in the Study Area include alkali heath marsh, sandy beach, dune mat, and iceplant mats (Sawyer et al. 2009; Figure 4). Coastal marine habitats in the Study Area include tidal non-wetland waters and revetment. A gravel access road, primarily un-vegetated with a low abundance of ruderal species, occurs on the west side of the parcel. A frequently used pedestrian path continues from the gravel road to the terminus of the sand spit near the mouth of the estuary. This path traverses dune mat and iceplant mat habitats.

Santa Barbara County Coastal Land Use Plan (2014) considers several habitat resources within the Study Area Environmentally Sensitive Habitats (ESH): dunes, wetlands, and tidal non-wetland waters, a total of 1.49 acres (52 percent) of the Study Area (Figure 4). Refer to Section 1.4.2 State Law and Regulations for the California Coastal Act's definition of ESH.

The proposed development is located within the upland portion (1.2 acres) of the Study Area comprised of dune mat, iceplant mat, and an existing gravel driveway.

TABLE 3. HABITAT TYPES

The approximate acreage and location are provided for habitat types in the Study Area. ESH makes up 1.49 acres (52 percent) of the Study Area.

Habitat Type	ESH	Approximate Acreage	Location
Alkali heath marsh	Yes	0.01	On the margin of the subtidal channel, adjacent to the existing road in the northwest portion of the Study Area.
Sandy Beach	Yes	0.07	A narrow band in the northern portion of the Study Area, where the marine tidal non-wetland waters zone transitions to terrestrial habitat of the fore dune.
Dune mat	Yes	0.46	Center of the Study Area.
Tidal non-wetland waters *(overlaps 0.01 acre of alkali heath and iceplant mat)*	Yes	0.95	Narrow band of water body that wraps around the terrestrial habitats and revetment in the northern, eastern, and southern portion of the Study Area.
Iceplant mats	No	0.63	Center of the Study Area.
Road	No	0.11	Northwest portion of the Study Area.
Revetment	No	0.67	Inland border of the intertidal zone in the southern and eastern portions of the Study Area.
Total		**2.90***	

*Total habitat acreage (2.90 acres) exceeds that of the Study Area (2.89 acres) because approximately 0.01 acre of tidal non-wetland waters overlaps alkali heath saltmarsh and iceplant mats below elevation 6.5 feet NAVD88, north of proposed driveway.

3.3.1 Alkali Heath Marsh (ESH)

Alkali heath marsh is a unique wetland habitat that meets the criteria of ESH (Santa Barbara County 2014). The Membership rule for this herbaceous alliance is that alkali heath (*Frankenia salina*) is greater than 30 percent relative cover in the herbaceous layer, sometimes co-dominant with salt grass (*Distichlis spicata*) or other herbs and subshrubs (Sawyer 2009). Salt tolerant marsh species occur on the road revetment adjacent to the brackish water of the CSM tidal channel. Alkali heath and freeway iceplant (*Carpobrotus edulis*) co-dominate this habitat with occasional marsh jaumea (*Jaumea carnosa*) and patches of salt grass (*Distichlis spicata*). Other species including pickleweed (*Salicornia pacifica*) California sea lavender (*Limonium californicum*), and European sea lavender (*Limonium duriusculum*) occur in low abundance. Refer to Section 3.4 Potential Wetlands and Jurisdictional Waters for more information. Alkali heath occurs on top of a berm/revetment that supports existing roadbed of Sand Point Road, below elevation 6.5 feet NAVD88.

3.3.2 Sandy Beach (ESH)

Sandy beach meets the criteria of ESH because of its association with coastal saltmarsh, dune vegetation, and its previous classification as salt grass flats habitat (Althouse and Meade 2018a, 2018b), a native grassland (Santa Barbara County 2014). Sandy beach habitat has fluctuating elevations from sand deposits caused by tidal influences in the salt marsh. During 2017 to 2019 surveys, the sandy beach was classified as salt grass flats along the transition of the intertidal zone to the foredune. As of January 2020, the salt grass flats have been covered by intertidal sand deposits. The sandy beach was void of vegetation in January 2020.

3.3.3 Dune Mat (ESH)

Dune mat habitat meets the criteria of ESH because it is a unique, rare, and fragile community (Santa Barbara County 2014). Membership rules for this herbaceous alliance are that non-woody dune plants are characteristically present. At 501 Sand Point Road, representative members of the Dune Mat community are present, with patchy areas where native plants dominate vegetative cover. At this site, the habitat is very low quality, due to a high proportion of non-native species (Photo 2). We mapped it as ESH due to the presence of representative species, not due to the quality of the habitat.

Dune mat habitat occurs on the foredune of the sand spit. It is concave likely due to the surrounding revetment, and has a north facing aspect, toward the estuary. Dune species, beach bur-sage (*Ambrosia chamissonis*) and beach evening-primrose (*Camissoniopsis cheiranthifolia* ssp. *suffruticosa*), are consistently scattered throughout. These species are adapted to the harsh conditions of the coastal dune habitat (e.g., salt spray, wind, sand movement, high temperatures). Although these species characterize this habitat, the dune mat habitat is frequently dominated by dense patches of introduced species; Bermuda grass (*Cynodon dactylon*) and freeway iceplant. Other species includes coastal bush lupine (*Lupinus arboreus*), seaside heliotrope, sourclover (*Melilotus indicus*), ripgut grass (*Bromus diandrus*), Menzies' goldenbush (*Isocoma menziesii* var. *vernioides*), freeway daisy (*Dimorphotheca fruticose*) and foxtail barley (*Hordeum murinum*). Small mammal burrows and a foot trail are present in this habitat.

Dune mat habitat from the center of the house to the east varies in percent bare ground and percent native species cover. Bare ground varies from 0 to 60 percent, and dead vegetation/thatch (litter layer) averages 36 percent cover (varies 15 to 65 percent cover). Relative native plant cover (out of the live vegetation) varied in the house site from zero (0) percent to 65 percent in 9 quadrats (1-meter square), with average native plant cover 0.29 percent. Introduced vegetative plant cover varied from 35 to 100 percent cover, with average introduced cover 71 percent.

Of the three quadrats sampled in the restoration area, the average non-native cover was 66 percent (varied from 57 to 75 percent) and native cover average was 34 percent (varied from 25 to 43 percent).

Both the house and restoration sites are dominated by non-native vegetation. Dead vegetation (litter) is primarily generated by iceplant.

3.3.4 Tidal Non-Wetland Waters (ESH)

Tidal non-wetland waters meet the criteria of ESH because of their biological productivity and importance to species survival (Santa Barbara County 2014). The intertidal zone encompasses the portion of the coastline and estuary that occurs between high tide and low tide. This habitat

experiences constant changes of inundation and is exposed to the physical action of waves and fluctuating tides, leaving the sandy area essentially devoid of vegetation except for occasional patches of seaweed anchored to rocks. Many animals that inhabit the fluctuating, harsh conditions of the intertidal zone also anchor themselves to solid substrates; here, the revetment. These species include gooseneck barnacle (*Pollicipes polymerus*), California mussel (*Mytilus californianus*), Shield limpet (*Collisella pelta*), spiny chiton (*Nuttallina fluxa*), and colonial tube worms (*Dodecaceria fewkesi*). Striped shore crab (*Pachygrapsus crassipe)* is abundant in this habitat. The intertidal zone within CSM is an important food source for shorebirds and invertebrates. The subtidal zone of these waters is inundated with water most of the time. Species observed in the brackish channel include feather boa kelp (*Egregia menziesii*), sea lettuce (*Ulva* sp.; Miller 2017), brackish water snail (*Assiminea transluscens*), hermit crab (*Pagarus* sp.), California bubble (*Bulla gouldiana*), and resident fish species such as long-jawed mudsucker (*Gillichthys mirabilis*), California killifish (*Fundulus parvipinnis*), arrow goby (*Clevlandia ios*), and cheekspot goby (*Ilypnus gilberti*; SAIC 2010).

3.3.5 Iceplant (a.k.a., Ice Plant Mats)

The sandy slope of the sand spit adjacent to the revetment is stabilized by dense mats of freeway iceplant and sea fig *(Carpobrotus edulis* and *C. chilensis*), introduced species associated with disturbed land, sand dunes, and bluffs in coastal environments. This vegetation association is called Ice Plant Mat (Sawyer et al. 2009). Membership rules for this herbaceous semi-natural alliance requires greater than 80 percent relative cover of iceplant. Freeway iceplant is an invasive plant species rated by California Invasive Plant Council (Cal-IPC) to have potentially high impacts on natural habitats (Cal-IPC 2017). Myoporum (*Myoporum laetum*), giant yucca (*Yucca gigantea*), foxtail agave (*Agave attenuata*), candelabra aloe (*Aloe arborescens*) ripgut grass, beach bur-sage, and pampas grass (*Cortaderia selloana*) occur in low abundance in this habitat.

3.3.6 Road

A gravel road occupies 0.11 acre within the Study Area and primarily consists of Australian saltbush (*Atriplex semibaccata*), cut-leaf plantago (*Plantago coronopus*), slender-leaved iceplant (*Mesembryanthemum nodiflorum*) and Bermuda grass in low abundance.

3.3.7 Revetment (ESH)

The southwestern and eastern portion of the Study Area is surrounded by 0.67 acre of large rock revetment consisting of a double seawall system, maintained by the Sandyland Sea Wall Association. The revetment was installed to protect residences south of Sand Point Road from storm surges. The revetment varies from approximately 7 to 14 feet high and is higher and thicker proximal to the ocean and decreases in height and width as the structure wraps around the CSM outlet to the east. The lower portion of the revetment is within the intertidal zone. The boulders and the cracks and crevices they create provide habitat for marine wildlife species such as crabs, limpets, barnacles, mussels, chiton, and anemone. Other wildlife species using this habitat include seabirds, raccoon, roof rat and other small mammals. Intermittent plant species such as beach saltbush, pickleweed, freeway iceplant, slender-leaved iceplant (*Mesembryanthemum nodiflorum*), western marsh-rosemary (*Limonium californicum*) and pampas grass are established among the revetment where sand has accumulated. The southeastern corner of the revetment meets the

criteria of ESH because of its importance as a roosting and foraging area for seabirds moving between the ocean and the salt marsh.

3.4 Potential Wetlands and Jurisdictional Waters

Althouse and Meade performed a wetland delineation for the Study Area in July 2017 and January 2020 (Althouse and Meade 2018b, 2020; Appendix D). This work identified 0.96 acres of federal jurisdictional tidal non-wetland waters, also subject to state and local jurisdiction, within the Study Area, and an additional 0.01 acre alkali heath marsh) exclusively California Coastal Commission (CCC), CDFW, RWQCB and Santa Barbara County jurisdictional wetlands (i.e., state wetlands; Figure 5).

Three-parameter jurisdictional wetland habitat is not present within the Study Area. The estuarine habitat within the Study Area boundary is part of a subtidal channel and does not support wetland vegetation. Therefore, the Clean Water Act (CWA) Section 404 jurisdictional boundary is located at the higher high tide line (6.50 feet elevation) and the Rivers and Harbors Act (RHA) Section 10 jurisdictional boundary is located at the mean high tide line (4.55 feet elevation, NAVD88 datum). These areas are in part estuarine subtidal and estuarine intertidal according to the Cowardin classification system. CWA Section 404 and RHA Section 10 waters are also within the jurisdiction of RWQCB, CCC, CDFW, and County of Santa Barbara.

3.5 Botanical Resources

Review of special status plant occurrences within the designated search area (refer to Section 2.1 Literature Review) determined 46 special status plant species are known to occur in the region (refer to Appendix F). Appropriate habitat and soil conditions are present in the Study Area for 10 special status plants (Table 4). Current GIS data is provided for special status plants (Figure 6) and critical habitat (Figure 8) in the vicinity the Study Area (CNDDB 2020, USFWS 2019).

3.5.1 California Rare Plant Ranks

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

3.5.2 CNDDB Definitions

"Special Plants" is a broad term used to refer to all the plant taxa inventoried by the CNDDB, regardless of their legal or protection status (CDFW 2019). Special plants include vascular plants, high priority bryophytes (mosses, liverworts, and hornworts), and lichens.

3.5.3 Potential Special Status Plant List

Table 4 identifies 10 special status plant species that could potentially occur in the Study Area (CNPS 2019, CNDDB 2020). Two additional species warrant further discussion and are included on the list. Federal and California State status, global and State rank, and CRPR rank status for

each species are given. Also included are typical bloom periods, habitat (from the Jepson Manual and CNDDB) preference, potential to occur on site, whether the species was detected in the Study Area, and effect of proposed activity. A comprehensive list of special status plant species reviewed is included as Appendix F.

TABLE 4. SPECIAL STATUS PLANT LIST

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur
1.	**Red sand-verbena**	*Abronia maritima*	-/-	G3/S3?	4.2	Feb – Nov	Coastal dunes; <100m CCo, SCo, ChI; Baja CA	Present (one plant) in Study Area. High. Suitable occurs within the Study Area.
2.	**Marsh sandwort**	*Arenaria paludicola*	FE/CE	G1/S1	1B.1	May - August	Boggy meadows, marshes; <300 m. s CCo (Nipomo Mesa, SLO County, Santa Ana River, SCo)	Low. Marginal suitable habitat is present in the Study Area.
3.	**Ventura marsh milk-vetch**	*Astragalus pycnostachyus* var. *lanosissimus*	FE/CE	G2T1/S1	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	Moderate. Suitable habitat is present in the Study Area.

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur
4.	**Coulter's saltbush**	*Atriplex coulteri*	-/-	G3/S1S2	1B.2	Mar-Oct	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland	High. Suitable habitat is present in the Study Area.
5.	**Santa Barbara morning-glory**	*Calystegia sepium* ssp. *binghamiae*	-/-	G5TXQ/SX	1A	Aug	Coastal marshes and swamps	Moderate. Suitable habitat is adjacent to Study Area.
6.	**Southern tarplant**	*Centromadia parryi* ssp. *australis*	-/-	G3T2/S2	1B.1	May-Nov	Often disturbed sites, near coast, along marsh edges, and on alkaline soils.	High. Suitable disturb habitat adjacent to salt marsh is present in Study Area.
7.	**Salt marsh bird's-beak**	*Chloropyron maritimum* ssp. *maritimum*	FE/CE	G4?T1/S1	1B.2	May-Oct (Nov)	Coastal salt marshes;<10 m. SCo, n Baja CA	High. Suitable habitat is present in the Study Area.
8.	**Paniculate tarplant**	*Deinandra paniculata*	-/-	G4/S4	4.2	(Mar)Apr-Nov (Dec)	Coastal scrub, valley and foothill grassland, vernal pools; usually vernally mesic, sometimes sandy	Moderate. Suitable habitat is present in the Study Area.

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur
9.	**Coulter's goldfields**	*Lasthenia glabrata* ssp. *coulteri*	-/-	G4T2/S2	1B.1	Feb-Jun	Coastal marshes, swamps, saline places, vernal pools; <1000 m. s SCoRO, SCo, n ChI, PR, w DMoj	Moderate. Suitable habitat is present in the Study Area.
10.	**Gambel's water cress**	*Nasturtium gambelii*	FE/CT	G1/S1	1B.1	Apr-Oct	Marshes, stream banks, lake margins; <1250 m. s CCo, SCo, to Mexico	Moderate. Suitable habitat is in the present in the Study Area.
11.	**Black-flowered figwort**	*Scrophularia atrata*	-/-	G2?/S2?	1B.2	Mar-Jul	Closed-cone coniferous forest, riparian scrub, dune habitats; in sand, diatomaceous shales, calcareous and other soil types. 10-250 m. s SCoRO	Moderate. Marginally suitable habitat is present in the Study Area.

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Blooming Period	Habitat Preference	Potential to Occur
12.	**Woolly seablite**	*Suaeda taxifolia*	-/-	G4/S4	4.2	Jan-Dec	Coastal bluff scrub, coastal dunes, marshes, and swamps (margins of coastal salt).	Present (two plants) in Study Area. High. Suitable habitat is present in the Study Area.

California Geographic Subregion Abbreviations:

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

California Rare Plant Ranks:

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

CRPR Threat Ranks:

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

Global/State Ranks:

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

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

3.5.4 Special Status Plants Discussion

Based on an analysis of known ecological requirements for the special status plant species reported from the region (refer to Appendix F), and the habitat conditions observed in the Study Area, it was determined that twelve special status plant species have potential to occur in the Study Area. Two special status plant species were detected in the Study Area during 2017 botanical surveys. No additional special status plant species were detected during the May 2018 or July 2019 site surveys of the Study Area. A general overview of each species' habitat, range restrictions, known occurrences, and survey results for the Study Area are provided (CNPS 2019, CNDDB 2020).

1. **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. One individual of red sand-verbena was detected in the salt grass flats habitat during 2017 surveys of the Study Area, presently sandy beach habitat.
2. **Marsh sandwort** (*Arenaria paludicola*) is listed Endangered under the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA) and is a CRPR 1B.1 species. It is known to occur in wet meadows, marshes, and swamps in fresh or brackish water below 300 meters elevation. It is a perennial herb that typically blooms between May and August. The closest known record is approximately 73 miles northwest of the Study Area from 2005 (CCH 2017 [IRVC29493]). This species has not been documented in Santa Barbara County. This species is unlikely to occur in the Study Area due to the marginal suitable marsh habitat that occurs on the revetment. Marsh sandwort was not detected in the Study Area during 2017, 2018, or 2019 surveys.
3. **Ventura marsh milk-vetch (***Astragalus pycnostachyus* var. *lanosissimus***)** is listed as an Endangered species under FESA and CESA and is a CRPR 1B.1. Carpinteria Salt Marsh is considered critical habitat for this imperiled species (USFWS 2019). It is known to occur in Ventura, Los Angeles, and Marin Counties and is endemic to California. Between 2000 and 2006, a total of 682 plants were outplanted at Carpinteria Salt Marsh and University of California Carpinteria Salt Marsh Reserve (USFWS 2010). It grows in coastal dune, coastal scrub, coastal salt marsh and swamps habitat between 1- and 35-meters elevation. It is a perennial herb that typically blooms between August and October. The closest known natural occurrence record is approximately 10.4 miles to the southeast of the Study Area (CNDDB Occ. 6) from 1911 and is reported to be possibly extirpated. The margins of the tidal non-wetland waters and alkali heath marsh habitat are suitable for this species though due to the species' possible extirpation, it is unlikely to occur within the Study Area. Ventura marsh milk-vetch was not detected in the Study Area during 2017, 2018, or 2019 surveys.
4. **Coulter's saltbush** (*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 (CNDDB Occ. 15; Figure 6). The sandy dune habitat in the Study Area is suitable for this species and due to the proximity of a known occurrence, there is high potential for this species to

occur within the Study Area. Coulter's salt bush was not detected within the Study Area during 2017, 2018, or 2019 surveys.

5. **Santa Barbara morning glory** (*Calystegia sepium* ssp. *binghamiae*) is a CRPR list 1A (presumed to be extinct). It is known to occur in coastal marshes and swamps and blooms in August. It is a rhizomatous perennial herb that typically flowers between April and June. The most recent record of this species was in Suisan marsh in 1965 (CCH 2017[CDA39894]). This species was thought to have been rediscovered in 2011; however, the specimen was described as a new taxon in 2013. The closest known record is approximately 8.7 miles to the west of the Study Area (CNDDB Occ. 1). Due to the presence of alkali heath habitat and occasional coastal salt marsh species occurrences in the Study Area, Santa Barbara morning glory has moderate potential to occur within the Study Area. Santa Barbara morning glory was not detected in the Study Area during 2017, 2018, or 2019 surveys.
6. **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 CNDDB record is approximately 9.9 miles to the southeast of the Study Area (CNDDB Occ. 42) and is reported as possibly extirpated. A historical record from 1875 is reported 9.3 miles northwest of the Study Area (CCH [GH414574]). There is high potential for this species in Study Area in the mesic disturbed habitat near the salt marsh. Southern tarplant was not detected in the Study Area during 2017, 2018, or 2019 surveys.
7. **Salt marsh bird's-beak** (*Chloropyron maritimum* ssp. *maritimum*) is a listed as Endangered by FESA and CESA and is a CRPR 1B.2 subspecies that occurs along the coast from the San Francisco Bay area to northern Baja California. It is salt tolerant and is known to occur in coastal salt marshes, swamps, and coastal dune habitats between 0- and 30-meters elevation. It is an annual hemi-parasitic herb that typically blooms between May and October (November). This species occurs in Carpinteria Salt Marsh (CNDDB Occ. 17 (2017), Figure 6) mapped as eight polygons. One of the polygons overlaps the Study Area. A 1979 record (CCH 2020 [UCSB39273]) documented salt marsh bird's-beak in the Study Area and described it as locally abundant. There is high potential for this species to occur in the habitats of the Study Area. Salt marsh bird's-beak was not detected in the Study Area during 2017, 2018, or 2019 surveys.
8. **Paniculate tarplant** (*Deinandra paniculata*) is a CRPR 4.2 species known from the San Francisco Bay area south to northern Baja California. It is known to occur 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 2020 [SBBG8420]). The wetland habitat in the Study Area makes this species moderately likely to occur. Paniculate tarplant was not detected in the Study Area during 2017, 2018, or 2019 surveys.
9. **Coulter's goldfields** (*Lasthenia glabrata* ssp. *coulteri*) is a CRPR 1B.1 subspecies known from scattered locations in California and into Baja California. It is known to occur on

alkaline soils coastal salt marsh, coastal swamps, playa, and vernal pool habitats between 1- and 1,220-meters elevation. It is an annual herb that typically blooms between February and June. The closest known CNDDB occurrence record is approximately 0.3 miles to the east of the Study Area (CNDDB Occ. 5; Figure 6). An herbarium record from 1979 reports this species from the immediate vicinity of the Study Area, less than 0.1 miles away (CCH 2017 [USCB39172]) in Carpinteria Salt Marsh. Coulter's goldfields was not detected during 2017, 2018, or 2019 surveys.

10. **Woolly seablite** (*Suaeda taxifolia*) is a CRPR 4.2 species that occurs from San Luis Obispo County south to Baja California. It is a known to occur in coastal bluff and dune habitats; and on the margins of salt marshes, and swamps habitats. It is a perennial subshrub or shrub that flowers year around. Two woolly seablite shrubs occur in the sandy beach habitat in the Study Area.

3.5.5 Special Status Plant Species Not Expected to Occur

Results of CNDDB and CNPS database searches included two special status plant species that are not expected to occur within the Study Area due to the absence of suitable habitat and/or substrate type, or because the Study Area is outside the currently known range of the taxon. Two of these special status species warrant further discussion. These species are specifically discussed below and include plants that are listed under the federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA). Both species are considered rare, threatened, or endangered in California and elsewhere (CRPR 1B).

1. **Gambel's watercress** (*Nasturtium gambelii*) is a listed Endangered by FESA and Threatened CESA and is a CRPR 1B.1 species known from scattered locations from southern California to Baja California. It is known to occur in saturated soils of streams, dune lakes, marsh, and swamp habitats between 5- and 330-meters elevation. It is a rhizomatous perennial herb that typically blooms between April and September. The closest known record is approximately 8.4 miles west of the Study Area (CNDDB Occ. 15). Gambel's watercress was not detected in the Study Area during 2017, 2018 or 2019 surveys. Because the Study Area is located at the lower end of the salt marsh and is subject to high levels of salinity relative to fresh-water input, Gambel's watercress is not expected to occur here.
2. **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 (CNDDB Occ. 67). The sandy coastal dune habitat in the Study Area is moderately suitable for this species, although lacks typical habitat associates such as oak woodland and coastal scrub vegetation. Black-flowered figwort was not detected in the Study Area during 2017 and 2018 surveys.

3.5.6 Botanical Survey Results

Botanical surveys conducted in November 2017, May 2018, and July 2019 identified 45 species, subspecies, and varieties of vascular plant taxa in the Study Area (Table 5). The list includes 20

species native to California and 25 introduced (naturalized or planted) species. Native plant species account for approximately 43 percent of taxa in the Study Area; introduced species account for approximately 57 percent. No FESA or CESA listed plant species were detected in the Study Area during 2017, 2018 or 2019 surveys. Two CRPR 4.2 special status plant species were first detected during the November 2017 botanical survey. Summer 2019 botanical surveys confirm no additional special status plant or locally rare plant species occur within the Study Area.

TABLE 5. VASCULAR PLANT LIST

Scientific Name	Special Status	Origin	Common Name
Trees – 2 Species			
Myoporum laetum	None	Introduced	Myoporum
Yucca gigantea	None	Introduced	Giant yucca
Shrubs and Subshrubs – 14 Species			
Agave attenuata	None	Introduced	Foxtail agave
Aloe arborescens	None	Introduced	Candelabra aloe
Ambrosia chamissonis	None	Native	Beach bur-sage
Atriplex leucophylla	None	Native	Beach saltbush
Carpobrotus chilensis	None	Introduced	Sea fig
Carpobrotus edulis	None	Introduced	Freeway iceplant
Dimorphotheca fruticosa	None	Introduced	Trailing African daisy
Isocoma menziesii var. *vernonioides*	None	Native	Menzies' goldenbush
Limonium californicum	None	Native	Western marsh-rosemary
Limonium duriusculum	None	Introduced	European sea-lavender
Lupinus arboreus	None	Native	Coastal bush lupine
Rhus integrifolia	None	Native	Lemonade berry
Salicornia pacifica	None	Native	Pickleweed
Suaeda taxifolia	**CRPR 4.2**	Native	Woolly seablite
Herbs – 22 Species			
Abronia maritima	**CRPR 4.2**	Native	Red sand-verbena
Atriplex semibaccata	None	Introduced	Australian saltbush
Cakile maritima	None	Introduced	Sea rocket
Camissoniopsis cheiranthifolia ssp. *suffruticosa*	None	Native	Beach evening-primrose
Chenopodium berlandieri	None	Native	Pitseed goosefoot
Erigeron canadensis	None	Native	Common horseweed

Scientific Name	Special Status	Origin	Common Name
Erodium cicutarium	None	Introduced	Redstem filaree
Erodium moschatum	None	Introduced	Musky stork's bill
Frankenia salina	None	Native	Alkali heath
Heliotropium curassavicum var. *oculatum*	None	Native	Seaside heliotrope
Heterotheca grandiflora	None	Native	Telegraph weed
Jaumea carnosa	None	Native	Marsh jaumea
Medicago polymorpha	None	Introduced	Bur clover
Melilotus indicus	None	Introduced	Sourclover
Melilotus officinalis	None	Introduced	Yellow sweetclover
Mesembryanthemum nodiflorum	None	Introduced	Slender-leaved iceplant
Oxalis pes-caprae	None	Introduced	Bermuda buttercup
Plantago coronopus	None	Introduced	Cut-leaf plantago
Plantago erecta	None	Native	California plantain
Raphanus sativus	None	Introduced	Radish
Sonchus oleraceus	None	Introduced	Common sow thistle
Spergularia marina	None	Native	Saltmarsh sand-spurry
Grasses – 7 Species			
Bromus diandrus	None	Introduced	Ripgut brome
Bromus madritensis ssp. *rubens*	None	Introduced	Red brome
Cortaderia selloana	None	Introduced	Pampas grass
Cynodon dactylon	None	Introduced	Bermuda grass
Distichlis spicata	None	Native	Salt grass
Elymus condensatus	None	Native	Giant wild-rye
Hordeum murinum	None	Introduced	Foxtail barley

3.6 Wildlife Resources

CNDDB Online Inventory of Rare and Endangered Animals of California reports records for 37 special status animals within the designated seven-quadrangle search area (Appendix G). Appropriate habitat conditions are present in the Study Area for nine special status animals (Table 6). Species occurrence records (Figure 7) and critical habitat (Figure 8) are provided for special status species known to occur within 5 miles of the Study Area (CNDDB 2020, NOAA 2005, and USFWS 2019).

3.6.1 CNDDB Definitions

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

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

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

CNDDB includes species listed on the IUCN Red List. The IUCN Red List Categories define the extinction risk of species assessed. Nine categories extend from NE (Not Evaluated) to EX (Extinct). Critically Endangered (CR), Endangered (EN) and Vulnerable (VU) species are taxa considered to be threatened with extinction.

3.6.2 Potential Special Status Animals List

The CNDDB identifies nine special status animal species with potential to occur in the Study Area. Federal and California State status, global and State rank, and CDFW listing status for each species are given. Typical nesting or breeding period, habitat preference, potential habitat on site, whether the species was detected in the Study Area, and effect of proposed activity are also provided. A comprehensive list of special status animal species reviewed is included as Table 6.

TABLE 6. SPECIAL STATUS ANIMAL LIST

	Common Name	Scientific Name	Federal / State Status	Global / State Rank	CDFW Status	Nesting/ Breeding Period	Habitat Preference	Potential to Occur
1.	**Northern California legless lizard**	*Anniella pulchra*	-/-	G3/S3	SSC	Early Spring to July	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential.	Low. Study Area has been highly disturbed in the past.
2.	**Obscure bumble bee**	*Bombus caliginosus*	-/-	G4?/S1S2	SA	April to October	Coastal areas, open grassy coastal prairies and Coast Range meadows.	Low. Sandy habitat is not appropriate for bumble bee colonies.
3.	**Western snowy plover**	*Charadrius alexandrinus nivosus*	FT/-	G3T3/S2S3	SSC	March 15 - August 15	Sandy beaches, salt pond levees, & shorelines of large alkali lakes. Needs friable soils for nesting.	Low. Poor nesting habitat in the Study Area.
4.	**Sandy beach tiger beetle**	*Cicindela hirticollis gravida*	-/-	G5T2/S2	SA	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 present on salt marsh side of Study Area. No habitat on ocean side of Study Area.

	Common Name	Scientific Name	Federal / State Status	Global / State Rank	CDFW Status	Nesting/ Breeding Period	Habitat Preference	Potential to Occur
5.	**Globose dune beetle**	*Coelus globosus*	-/-	G1G2/S1S2	SA	n/a	Coastal sand dune habitat. Inhabits foredunes and sand hummocks.	Marginal habitat is present in the Study Area. No appropriate habitat due to sea wall on ocean side. Lower dune habitat very limited. Ciliated dune beetle found.
6.	**Tidewater goby**	*Eucyclogobius newberryi*	FE/-	G3/S3	SSC	n/a	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Low. Marginal habitat is present due to agricultural and urban runoff, siltation, and sedimentation in CSM. The Marsh mouth is always open.
7.	**Steelhead - southern California DPS**	*Oncorhynchus mykiss irideus*	FE/-	G5T1Q/S1	SA	February - April	Fed listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek, San Diego County)	Low. Appropriate habitat is present only in marsh channel.
8.	**Wandering (=saltmarsh) skipper**	*Panoquina errans*	-/-	G4G5/S2	SA	March to November	Found in coastal salt marshes with water nearby. Larvae feed on salt grass and other salt marsh species	Low. Limited breeding habitat is present in Study Area.

	Common Name	Scientific Name	Federal / State Status	Global / State Rank	CDFW Status	Nesting/ Breeding Period	Habitat Preference	Potential to Occur
9.	**Belding's savannah sparrow**	*Passerculus sandwichensis beldingi*	-/CE	G5T3/S3	SA	March 15 - August 15	Coastal salt marshes. Nests in Salicornia on or about margins of tidal flats. Santa Barbara to San Diego Counties	Low. Well-developed Salicornia habitat is not present in the Study Area.

*Not listed in the CNDDB for the search area, but species is a possibility for the location.

Federal and State Status Abbreviations:

FE: Federally Endangered
FT: Federally Threatened
PE: Proposed Federally Endangered
PT: Proposed Federally Threatened
CE: California Endangered
CT: California Threatened
CCE: Candidate for California Endangered
CCT: Candidate for California Threatened

IUCN Designations for Threatened Taxa:

CR: Critically Endangered
EN: Endangered
VU: Vulnerable

Global/State Ranks:

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

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

California Department of Fish and Wildlife Rank:

WL: Watch Lis
SSC: Species of Special Concern
FP: Fully Protected
SA: Special Animal

3.6.3 Special Status Animals Discussion

There are nine special status animal species that could potentially occur in the Study Area.

1. **Northern California legless lizard** (*Anniella pulchra*) is a California Species of Special Concern that occurs from Contra Costa to Ventura County. It has a Global Rank of G3 and a State Rank of S3, both of which indicate that this species is considered Vulnerable. This species includes the subspecies formerly treated as *A. pulchra nigra* and *A. pulchra pulchra* which was shown to be an invalid designation (Pearse and Pogson 2000). Northern California legless lizard inhabits friable soils in a variety of habitats from coastal dunes to oak woodlands and chaparral. Adapted to subterranean life, the legless lizard thrives near native coastal shrubs that produce an abundance of leaf litter and have strong roots systems (Kuhnz et al. 2005). Areas of exotic vegetation and open grassland typically do not provide suitable habitat for the Northern California legless lizard since these plant communities support fewer populations of insect prey base and offer little protection from higher ground temperatures and soil desiccation (Slobodchikoff and Doyen 1977; Jennings and Hayes 1994). However, CDFW recently discovered a population of legless lizard in ice plant-covered dune mat at McGrath's State Beach in Oxnard (D. Blankenship, CDFW, personal communication 2019). Breeding period is from early spring to July (some populations observed to breed biennially). The closest reported occurrence of northern California legless lizard is a 1983 record approximately 0.32 miles northeast of the Study Area at Sandy Land Estates (CNDDB Occ. 63; Figure 7). Due to historical presence of northern legless lizard in coastal Carpinteria and presence of ice plant-cover dune mat habitat onsite, the Study Area could support the northern California legless lizard. However, the location is isolated and has been subject to significant disturbance over the years, (e.g., rock revetment). Because legless lizards burrow below the soil's surface, they were not observed in 2017, 2018, or 2019. During a focused survey by two biologists conducted on January 22, 2020, legless lizards were not detected. As of March 30, 2020, no legless lizards have been found under coverboards. Coverboard surveys are ongoing in 2020. Development of the site is unlikely to directly affect this species due to habitat loss, however impacts are mitigable (See Sections 5.1 and 5.5).

2. **Obscure bumble bee** (*Bombus caliginosus*) is designated by CDFW as a Special Animal that occurs in Mediterranean California and the Pacific Coast from southern California to southern British Columbia, with scattered records from the east side of California's Central Valley. It is considered uncommon throughout its range. Obscure bumble bee inhabits open grasslands and meadows along the coast. Coastal bush lupine (*Lupinus arboreus*) and alkali heath (*Frankenia salina*) are some of the preferred food sources found onsite. Colonies may be underground and inhabit abandoned bird nests. Peak flight activity for this species is March to April for queens, May to July for workers, and July for males (Thorp et al. 1983). Climate change and extensive development (at least in California) are likely to threaten this species (NatureServe 2014). Threats include pesticide use, pathogens from managed pollinators, competition with non-native bees, and climate change (reviewed in Goulson 2010, Williams *et al.* 2009, Williams and Osborne 2009, Cameron *et al.* 2011, Fürst *et al.* 2014, Hatfield *et al.* 2012). The closest recorded occurrence for this species is 14.2 miles northwest of the Study Area, in Los Padres National Forest in 1965 (CNDDB Occ. 171). The obscure bumble bee was not observed during 2017 or 2018 surveys. Due to sandy soils it is unlikely that this site could support obscure bumble bee

colonies. A spring survey is scheduled in May 2020 for foraging bumble bees.. Development of the site should not affect this species (See Sections 4.3.5 and 5.6).

3. **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, and on the banks of alkaline lakes and ponds and salt evaporation ponds (CNDDB, CDFW 2014, Page et. al 1991). It is found along the entire coast of California and inland at the Salton Sea, Mono Lake and isolated sites along alkali lakes away from the coast (CDFW 2014). Western snowy plovers nest from early March through late September with fledging occurring about one 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). It has been found that nests placed on heterogeneous substrates with egg size stones were more cryptic, and therefore had a higher survival rate than those nests placed on homogenous, sandy substrates (Colwell et al 2011). In interior alkaline lakes snowy plovers need enough nesting habitat to space their nests far apart from one another which helps to mitigate predation from California gulls (*Larus californicus*; Page et al 1983). Prior to 1978 the coastline bordering Carpinteria Salt Marsh, including all the terrestrial area within the Study Area, was considered western snowy plover nesting habitat until this section of coastline was converted from sandy beaches with friable soils to a seawall (CNDDB Occ. 43). A review of eBird documented observations from 2007 to 2020 showed over 200 observations of western snowy plover in Carpinteria Salt Marsh (eBird 2020). The closest reported occurrence of western snowy plover is a historic record within the Study Area (CNDDB Occ. 43; 1978; Figure 7). This occurrence extended along beaches south of Sand Point Road and Avenue Del Mar to the east, and all of Carpinteria State Beach. This area was no longer considered prime nesting habitat as of 1978 due to increased human activity and development (CNDDB Occ. 43). Due to frequent pedestrian and pet traffic accessing the Study Area, the site has a low potential to support nesting western snowy plover. Western snowy plover was not detected during 2017 or 2018 surveys.

4. **Sandy beach tiger beetl**e (*Cicindela hirticollis gravida*) is a rare beetle, with no state or federal status. This beetle has a Global Rank of G5T2, globally secure, but imperiled and a State Rank of S2 (imperiled), both of which indicate that this species is considered imperiled from drastic habitat loss. This beetle is an active terrestrial predator that hunts and stalks small arthropods. They are quick runners and can fly. This beetle burrows in sandy/dune areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico (CNDDB 2020). Historical records for mainland Santa Barbara County include a 1979 observation at Carpinteria State Beach, 0.8 miles southeast of Study Area (CNDDB Occ. 20) and a 1916 observation at Naples, west of Goleta (CNDDB Occ. 41). These populations have been extirpated because of their sensitivity to human contact. One population believed to be extant is located at Coal Oil Point in Goleta and was last observed in 2003 (CNDDB Occ. 3). The sea wall and wave action on the southern Pacific Ocean side of the property preclude suitable habitat for sandy beach tiger beetle. Sandy beach tiger beetle was not observed during 2017 or 2018 site surveys or 2020 focused survey. Additional sampling is planned for 2020. Dune mat vegetation dominated by freeway iceplant (*Carpobrotus edulis*) is present in the Study Area. Dune and beach habitat on the site is small and of poor quality, and does not appear likely to

support this species that typically occurs on large broad beaches with little human disturbance (See Sections 5.1 and 5.6).

5. **Globose dune beetle** (*Coelus globosus*) is on the International Union for Conservation of Nature (IUCN) Red List as a vulnerable species[1]. The globose dune beetle inhabits coastal dunes and sand hummocks (CNDDB 2020). This flightless beetle burrows beneath the sand in dune vegetation. A 1987 species account (CNDDB Occ.4) in Santa Barbara County noted that beetles were present in 10 to 30 percent cover of dune vegetation. The Carpinteria State Beach population (CNDDB 1934; Occ.14) located 0.8 miles from Study Area is presumed to be extant (CNDDB Occ. 14, last updated November 27, 2007). Globose dune beetle was not observed during 2017 and 2018 site surveys. Sandy dune focused surveys in January and March 2020 did not yield globose dune beetle. During the survey, 13 common ciliated dune beetles *(Coelus cilatus)* were found on site. These were found in suitable sand dune habitat under and around vegetation. No beetles were found in the less suitable, harder dune habitat. All 13 beetles were keyed out to the species of *Coelus ciliatus* using a key from the Doyen publication (1976).

6. **Tidewater goby** (*Eucyclogobius newberryi*) is a federally listed endangered species and is a California Species of Special Concern. It requires slow moving (but not still) waters with high oxygen levels in estuaries, lagoons, and the lower reaches of streams before they enter the sea. The tidewater goby is found in isolated populations along the California coast from the Smith River near the Oregon border to Agua Hedionda Lagoon in San Diego County (CNDDB 2020). The breeding season for the tidewater goby starts in April and can continue into December depending on local temperatures and rainfall amount (USFWS 2008). Sandy bottom habitats are needed for the male to burrow into the sand and spawn (Swenson 1999). This goby feeds on benthic invertebrates and is an opportunistic feeder that can adapt to different food sources depending on the habitat it is in (Swenson and McCray 1996). The closest historical occurrence of tidewater goby is in adjacent Carpinteria Salt Marsh, however tidewater goby was not observed during 1995 or 2003 surveys due to water quality, attributed to agricultural and urban runoff, sedimentation and siltation in the salt marsh (USFWS 2005). CNDDB Occ. 73 (1984) also suggests that the Carpinteria salt marsh population may be extirpated (CNDDB 2020). Tidewater goby was not observed in the Study Area during 2017 and 2018 site surveys. Andy Brooks, Reserve Manager, said they have never found TWG in the Carpinteria Salt Marsh (pers. comm. 5/15/2020). There are no proposed impacts to the tidal non-wetland waters zone.

7. **Steelhead southern California DPS (***Oncorhynchus mykiss irideus*) is the anadromous form of rainbow trout. Adults spawn in freshwater, while juveniles remain in freshwater before migrating to the ocean to grow and become sexually mature prior to returning as adults to spawn in freshwater. Steelhead in the Southern California Coast Distinct Population Segment (SCCDPS) include naturally-spawned O. mykiss occurring downstream from natural and manmade barriers from the Santa Maria River, south to the southern extent of their range in San Diego County. A Distinct Population Segment (DPS) is a group of steelhead that is genetically distinct from other California steelhead populations. Steelhead are known to occur in coastal streams and rivers in Santa Barbara

[1] IUCN Red List identifies threatened species in three categories: critically endangered, endangered, and vulnerable. Globose dune beetle is IUCN Taxonomic ID No. 5078.

County including but not limited to the Santa Maria River, Jalama Creek, and other coastal streams. Coastal streams in Santa Barbara County are critical habitat for migrating steelhead. Steelhead generally require cool, fast-flowing streams with rock and cobble substrate for spawning and rearing. Steelhead historically entered Carpinteria Salt Marsh to spawn in Santa Monica Creek watershed, but stream alterations have impeded spawning sites (UCNRS 2020). Steelhead were not observed at the Study Area during 2017 and 2018 site surveys. There are no proposed impacts to tidal non-wetland waters.

8. **Wandering (salt marsh) skipper** (*Panoquina errans*) is a sensitive butterfly species that occurs in coastal salt marshes of California and Baja, and in northwestern Mexico. The wandering skipper is a localized species and feeds primarily on salt marsh plant species including salt grass (*Distichlis spicata*) and alkali heath (*Frankenia salina*), plants that occur onsite in the alkali heath marsh habitat. Flight period for this species is March to November with greatest abundance during the summer. The closest occurrence of wandering skipper is a 2007 record adjacent to the Study Area in the Carpinteria Saltmarsh Reserve (CNDDB Occ.16). Smaller patches of salt grass occur within the Study Area. There is no potential for this species to breed onsite due to lack of suitable habitat for larvae and adults. Wandering skipper was not detected in the Study Area during 2017 and 2018 site surveys. There are no proposed impacts to sandy beach or alkali heath habitat (See Sections 4.3.5 and 5.6).

9. **Belding's Savannah Sparrow** (*Passerculus sandwichensis beldingi*) is a sensitive bird species included on the CDFW Special Animals List as a Species of Special Concern (CDFW 2019). This savannah sparrow subspecies occurs in coastal salt marsh habitats from Santa Barbara County south through San Diego County. It nests in pickleweed (*Salicornia* ssp.) on the margins of tidal mud flats. Nesting populations of Belding's savannah sparrow were formerly known from salt marsh habitats in the southern portion of Ventura County, from Santa Clara River to Point Mugu. Approximately 75 pairs of Belding's savannah sparrows were documented nesting within the Carpinteria Salt Marsh in 2001. Suitable nesting habitat (pickleweed) has a minimal, patchy distribution within the Study Area and is unlikely to support nesting Belding's savannah sparrows, but adults are likely to use the Study Area for foraging (SAIC 2010). Belding's savannah sparrow was not observed in the Study Area during 2017 and 2018 site surveys, and suitable nesting habitat is not present in the Study Area.

3.6.4 Wildlife Survey Results

At least 70 animal species could potentially occur in the Study Area (Table 7). These include at least 14 invertebrates, 1 amphibian, 4 reptiles, 34 birds, and 17 mammals. Invertebrate, small mammal and reptile live-trapping studies were beyond the scope of this report, although several species are likely to occur. We provide this list as a guide to the wildlife observed in the Study Area and for common species that may be present year-round or seasonally as transients, particularly avian fauna. Wildlife surveys were performed in November 2017, May 2018, July 2019, and January 2020. Ongoing cover board survey is in progress for Northern California legless lizards that have not been detected on site to date.

TABLE 7. WILDLIFE LIST

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Invertebrates - 15 Species				
Solitary Anemone	*Anthopleura sola*	None	✓	Benthic to intertidal zone; tide pools, deep surge channels on exposed rocky shores, and open bays/ harbors.
Brackish Water Snail	*Assiminea transluscens*	None	✓	Coastal habitats such as reefs, tide pools, and estuaries.
California Bubble	*Bulla gouldiana*	None	✓	Shallow water in estuaries and sheltered bays.
Ciliated Dune Beetle	*Coelus ciliatus*	None	✓	Sand dunes and very sandy soils along Pacific Coast and inland areas.
Shield Limpet	*Collisella pelta*	None	✓	Intertidal zone on rocks and kelp holdfast.
Colonial Tube Worm	*Dodecaceria fewkesi*	None	✓	Intertidal zone; rocky habitat.
Salt Marsh Snail	*Melampus olivaceus*	None	✓	Estuarine salt marshes with associated tidal channels and mudflats.
California Mussel	*Mytilus californianus*	None	✓	Hard surfaces within middle intertidal to subtidal areas and favor surf zones.
Spiny Chiton	*Nuttallina fluxa*	None	✓	Rocky intertidal zone.
Stripped Shore Crab	*Pachygrapsus crassipes*	None	✓	Rocky coastal shores in upper low tidal zone to highest high intertidal zone.
Hermit Crab	*Pagarus sp.*	None	✓	Intertidal zone of coastal rocky shores.
Goosenceck Barnacle	*Pollicipes polymerus*	None	✓	Rocky coastal shores in the splash zone; high-energy environments.
California Tagelus	*Tagelus californianus*	None	✓	Bay and estuary mudflats.

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Brown Top Shell	*Tegula brunnea*	None	✓	Protected rocky coast.
Pink Barnacle	*Tetraclita rubescens*	None	✓	Middle to low intertidal zones on rocks exposed to strong surf.
Amphibians –1 Species				
Baja California Treefrog	*Pseudacris hypochondriaca*	None		Marshes, meadows, swales, open areas, fallowed agricultural fields, and woodlands.
Reptiles – 4 Species				
Northern California Legless Lizard	*Anniella pulchra*	SSC		Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential.
California Alligator Lizard	*Elgaria multicarinata multicarinata*	None		Wide range; variety of habitats.
Coast Range [synonym Western] Fence Lizard	*Sceloporus occidentalis bocourtii*	None	✓	Wide range; variety of habitats.
Western Side-blotched Lizard	*Uta stansburiana elegans*	None		Open rocky areas with scattered vegetation, including the edges of sandy washes. Wide range; variety of habitats.
Birds – 35 Species				
Western Grebe	*Aechmophorus occidentalis*	None		Freshwater lakes, marshes, open water, saltwater, brackish bays, and estuaries.
Mallard	*Anas platyrhynchos*	None		Wetlands, lakes, ponds, marshes, rivers, coastal habitats, and parks.
California Scrub Jay	*Aphelocoma californica*	None	✓	Wide range; variety of habitats.
Great Egret [nesting colony]	*Ardea alba*	S	✓	Freshwater and marine-estuarine wetlands.

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Great Blue Heron [nesting colony]	*Ardea herodias*	S	✓	Wetlands, water bodies and water courses of all shapes and sizes.
Red-tailed Hawk	*Buteo jamaicensis*	None		Open, semi-open country.
Green Heron	*Butorides virescens*	None	✓	Riparian zones, marshes, human-made ditches, canals, ponds, lake edges, open floodplains, sloughs, salt marshes, pastures, mudflats, ponds in parks, and harbors.
Sanderling	*Calidris alba*	None	✓	Hard-packed, sandy beaches, tidal mudflats, and rocky coastlines.
Anna's Hummingbird	*Calypte anna*	None		Many habitats.
American Goldfinch	*Carduelis tristis*	None		Weedy fields, woodlands.
Turkey Vulture	*Cathartes aura*	None		Open country.
Semipalmated Plover	*Charadrius semipalmatus*	None	✓	Mudflats, salt marshes with mussel beds, low-energy beach areas.
Killdeer	*Charadrius vociferus*	None	✓	Open areas, sandbars, mudflats, heavily grazed pastures, cultivated fields, athletic fields, airports, golf courses, graveled or broken-asphalt parking lots.
Rock Pigeon	*Columba livia*	None		Urban areas.
American Crow	*Corvus brachyrhynchos*	None		Many habitats, esp. urban.
Common Raven	*Corvus corax*	None		Open areas, deciduous and evergreen forests, desert, coastal areas, scrub, grasslands, and urban areas.
Brewer's Blackbird	*Euphagus cyanocephalus*	None		Open habitats

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
House Finch	*Haemorhous mexicanus*	None		Riparian, grasslands, chaparral, woodlands, and urban areas.
Heermann's gull	*Larus heermanni*	None	✓	Offshore, rocky sea coasts and beaches, coastal sloughs, estuaries, harbors, lagoons, bays, and offshore kelp beds.
Western Gull	*Larus occidentalis*	None	✓	Intertidal areas, harbors, sandy beaches, refuse dumps, picnic areas.
California Gull [nesting colony]	*Larus californicus*	WL	✓	Mudflats, estuaries, deltas, beaches. inland lakes, rivers, open areas, pastures, orchards, meadows, and farms.
Belted Kingfisher	*Megaceryle alcyon*	None	✓	Streams, rivers, ponds, lakes, estuaries, and calm marine waters.
Northern Mockingbird	*Mimus polyglottos*	None	✓	Riparian, chaparral, woodlands and urban.
Long-billed Curlew [nesting]	*Numenius americanus*	WL	✓	Tidal estuaries, wet pasture habitats, and sandy beaches.
Whimbrel	*Numenius phaeopus*		✓	Intertidal flats, oyster banks, sandy beaches, rocky shores, river mouths, estuaries, salt marshes, lagoons, upper beaches and dunes.
Black-crowned Night Heron [nesting colony]	*Nycticorax nycticorax*	SSC	✓	Streams, rivers, margins of pools, ponds, lakes, lagoons, tidal mudflats, salt marsh, freshwater marshes, man-made ditches, canals, ponds, reservoirs, and wet agricultural fields.

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
Osprey [nesting]	*Pandion haliaetus*	S	✓	Rivers, lakes, and along saltwater coasts.
House Sparrow	*Passer domesticus*	None	✓	Urban.
California Brown Pelican [nesting colony & communal roosts]	*Pelecanus occidentalis californicus*	SSC	✓	Sandbars, pilings, jetties, breakwaters, mangrove islets, and offshore rocks and islands are important roosting and loafing sites.
Double-crested Cormorant nesting colony]	*Phalacrocorax auritus*	WL	✓	Coastal waters, large inland lakes.
Black Phoebe	*Sayornis nigricans*	None	✓	Near water.
Eurasian Collared-Dove	*Streptopelia decaocto*	None		Urban areas.
European Starling	*Sturnus vulgaris*	None		Agricultural, livestock areas.
Mourning Dove	*Zenaida macroura*	None		Open, semi-open habitats.
White-crowned Sparrow	*Zonotrichia leucophrys*	None		Open, semi-open habitats.
Mammals – 17 Species				
Coyote	*Canis latrans*	None		Varied, residential.
Domestic Dog	*Canis lupus familiaris*	None	✓	Affiliated with residents.
Virginia Opossum	*Didelphis marsupialis*	None		Riparian, moist woodlands, brushy habitats, wetlands, agricultural and residential areas.
Feral Cat	*Felis catus*	None	✓	Varied, residential.
Black-tailed Jackrabbit	*Lepus californicus*	None		Wide range of habitats with varied structure.
Striped Skunk	*Mephitis mephitis*	None		Varied, residential.
California Vole	*Microtus californicus*	None		Marshy ground, saltwater and freshwater locations, wet meadows, coastal wetlands and dry, grassy hillsides.

Common Name	Scientific Name	Special Status	Found On-site?	Habitat Type
California Ground Squirrel	*Otospermophilus beecheyi*	None		Fields, pastures, grasslands, oak woodlands, rocky outcrops, urban, suburban and agricultural areas.
Deer Mouse	*Peromyscus maniculatus*	None		All dry land habitats.
Raccoon	*Procyon lotor*	None	✓	Streams, lakes, rock cliffs, dens in trees, and residential.
Norway Rat	*Rattus norvegicus*	None	✓	Urban, riparian.
Western Harvest Mouse	*Reithrodontomys megalotis*	None		Open, mesic habitats, meadows, pastures and fallow agricultural fields, deserts, shrublands, marshes.
Broad-footed Mole	*Scapanus latimanus*	None		Moist, rich, friable soils with little vegetation.
Ornate Shrew	*Sorex ornatus*	None		Marshes, salt and fresh; low, dense vegetation adjacent to rivers, lakes, and streams; grassy hillsides and chaparral slopes.
Brush Rabbit	*Sylvilagus bachmani*	None		Dense brushy cover, riparian areas.
Botta's Pocket Gopher	*Thomomys bottae*	None	✓	Perennial meadows, grass and forb stages of most riparian-deciduous and conifer forests, residential.
Red Fox	*Vulpes vulpes*	None	✓	Annual grasslands or grassy open stages with scattered shrubby vegetation.

Abbreviations
S: Calif Dept of Forestry & Fire Protection – Sensitive
SSC: CDFW Species of Special Concern
WL: CDFW Watch List

3.6.5 Habitat Connectivity and Wildlife Movement

The Study Area is located in an ecologically complex area between the Pacific Ocean and the mouth of the Carpinteria Salt Marsh where shorebirds forage daily along the shores and mudflats, and congregate along the revetment. Lack of infrastructure and limited human activity provides a flyway for birds moving between the salt marsh and the ocean (Figure 4). Developing the property will reduce the area of the flyway, causing birds to alter flight patterns to access CSM. Wildlife that move between the revetment and the saltmarsh must also adapt their movement patterns and activity periods to navigate around the development and associated lighting from inside and outside the building. The proposed Project will temporarily disturb waterbirds, and other wildlife residing at, feeding at or migrating though the mouth of CSM (M. Mooney, Santa Barbara County Peer review memo August 13, 2014).

4 POTENTIAL IMPACTS

4.1 Habitats

The proposed project avoids impacts to wetland habitats, Waters of the U.S., and Waters of the State of California.

Habitat impacts were calculated by adding a 5-foot buffer (0.04 acre) around the permanent foot print of the development (0.20 acre) because the microhabitat of this area is permanently altered by the development and may also be affected by landscaping activities surrounding the development. Acreage of temporary and permanent impacts to each habitat type is provided in Table 8 where habitats are organized and quantified by ESH and non-ESH status. The building envelope will permanently impact 0.08 acre (17%) of dune mat habitat (ESH). Other ESH onsite (alkali heath marsh, sandy beach, and tidal non-wetland waters) will be avoided. Temporary impacts to approximately 0.11 acre (24%) of dune mat habitat are attributed to access road and staging area south of building envelope. Non-ESH impacts will occur on 0.25 acre, including the existing road (0.10 acre) and 0.15 acre iceplant mats (Figure 9). Approximately 95% of ESH in the Study Area will be protected from permanent impacts; 5% (0.08 acre) permanent impacts proposed, and approximately 7% (0.11 acre) of the 1.49 acres of ESH will be temporarily impacted.

TABLE 8. POTENTIAL HABITAT IMPACTS

Proposed temporary and permanent Project impacts to ESH and Non-ESH habitat types. Potential temporary and permanent impacts to habitats are grouped by ESH and non-ESH habitat values. Percentages of each habitat type affected are provided.

Habitat Type	Total Acres	Temporary Impacts		Permanent Impacts		Total Impact	
		Acres	%	Acres	%	Acres	%
ESH*							
Alkali heath marsh	0.01	0	0	0	0	0	none
Sandy beach	0.07	0	0	0	0	0	none
Dune mat	0.46	0.11	24%	0.08	17%	0.19	41%
Tidal non-wetland waters	0.95	0	0	0	0	0	none
ESH Total (less 0.01 acre overlap)	**1.49**	**0.11**	**7%**	**0.08**	**5%**	**0.19**	**13%**
Non-ESH							
Iceplant mats	0.63	0.09	14%	0.06	10%	0.15	24%
Road	0.11	0	0	0.10	91%	0.10	91%
Revetment	0.67	0	0	0	0	0	none
Non-ESH Total	**1.41**	**0.09**	**6%**	**0.16**	**11%**	**0.25**	**18%**

*Approximately 0.01 acre of tidal non-wetland waters overlaps alkali heath marsh and ice plant. Alkali heath marsh habitat and tidal non-wetland waters is not proposed to be impacted.

County Coastal Zoning Ordinance Article 2, Section 35-97.9.4 exempts lots that abut CSM from maintaining a minimum 100-foot buffer around wetland habitats in which no permanent structures are permitted. The building footprint is entirely contained within the 100-foot wetland buffer (Figure 12), therefore acreages of temporary and permanent impacts within the 100-foot wetland buffer (Table 9) are the same as Table 8; the only difference is the percentages of total acreage for ice plant mats and revetment within the 100-foot wetland buffer.

TABLE 9. SUMMARY IMPACTS WITHIN 100-FOOT WETLAND BUFFER

Temporary and permanent habitat impacts are summarized by acres and percent of total ESH and Non-ESH within the 100-foot wetland buffer (1.81 acres).

Habitat Type	Acres within 100-Ft. Buffer	Temporary Impacts		Permanent Impacts		Total Impact	
		Acres	%	Acres	%	Acres	%
ESH							
Alkali heath marsh	0.01	0	0	0	0	0	none
Sandy beach	0.07	0	0	0	0	0	none
Tidal non-wetland waters	0.58	0	0	0	0	0	none
Dune mat	0.45	0.11	24%	0.08	18%	0.19	42%
Non-ESH							
Iceplant mats	0.53	0.09	17%	0.06	11%	0.15	28%
Road	0.11	0	0	0.10	82%	0.10	91%
Revetment	0.06	0	0	0	0	0	none

Notwithstanding the wetland buffer exemption, the proposed Project still has a limited building envelope when factoring in limits of the higher-high tideline, revetment setbacks and environmentally sensitive habitats throughout the parcel. It would be impracticable to build on this parcel with a protective 20-foot ESH buffer onsite (Figure 10). Therefore, site plans have been reconfigured to avoid all impacts to wetland habitat and observe a 20-foot buffer from wetland and tidal non-wetland waters except for wetland habitat along the existing driveway. Rather than imposing a 20-foot buffer around ESH habitats, construction activities shall be confined to a fenced area surrounding the building envelope (Figure 9; Appendix B. Sheet SA.04c Construction Fence Location) on the property to avoid unintentional impacts to ESH (refer to Section 5.1).

4.1.1 Alkali heath marsh (ESH)

The proposed Project will avoid direct and indirect impacts to alkali heath marsh habitat that occurs along the existing driveway, in a created habitat. Alkali heath marsh habitat is considered wetland habitat. Santa Barbara County Environmental Thresholds Guidelines for wetlands states that

projects which result in a net loss of important wetland area or wetland habitat value, either through direct or indirect impacts to wetland vegetation, degradation of water quality, or that would threaten the continuity of wetland-dependent animal or plant species are considered to have a potentially significant effect on the environment (County of Santa Barbara 2015). Impacts to alkali heath marsh habitat is potentially significant, but mitigable to a less than significant level. (refer to Sections 5.1 and 5.2.1). No impacts are proposed to the alkali heath marsh habitat.

4.1.2 Sandy beach (ESH)

The proposed Project will avoid direct and indirect impacts to sandy beach habitat above higher-high tide line (6.5 ft. elevation) and construction limits observe a 20-foot buffer from the intertidal zone. Impacts to ESH are potentially significant (County of Santa Barbara 2015), but mitigable to a less than significant level (refer to Sections 5.1and 5.2.2). No impacts are proposed to sandy beach habitat.

4.1.3 Dune mat (ESH)

Within area of construction fencing (Appendix B Sheet SA.04C Construction Fence Location), the proposed Project will temporarily impact 0.11 acre (24 percent) of dune mat habitat from vegetation clearance, grading, drilling for concrete piles, and soil compaction from vehicles and staged materials and equipment. The building footprint will permanently impact at least 0.08 acre (17 percent) of dune mat habitat. Impacts to dune mat habitat are potentially significant, but mitigable to a less than significant level (refer to Sections 5.1 and 5.2.3). Permanent impacts proposed for this habitat will be mitigated on site at a 4:1 ratio (restored: impacted); temporary impacts will be mitigated onsite at a 2:1 ratio.

Due to physical constraints for developing the property and in consideration of minimizing the project foot print, impacts to biological resources and the viewshed, it is not feasible to eliminate impacts to dune mat habitat. The 0.46 acre of dune mat habitat onsite is of degraded quality. Relevé data from 2019 indicated that nonnative species, freeway iceplant (*Carpobrotus edulis*) and Bermuda grass (*Cynodon dactylon*) make up 50 to 59% vegetative cover in the dune mat habitat. The Conceptual Restoration Plan (Althouse and Meade 2020) not only proposes to enhance remaining dune mat habitat and manage nonnative species, it also proposes to convert 0.75 acre of freeway iceplant to high quality native dune mat habitat, yielding a net gain of 0.56 acre of high quality dune mat habitat, more than doubling existing low grade dune mat habitat with 1.02 acres of high quality dune mat habitat.

The proposed residence is built on concrete piles to be in compliance with California Coastal Commission's (CCC) Sea Level Rise (SLR) Update Guidance (November 2018) to protect the residence from potential coastal hazards caused from extreme storm and wave action and seismic activity over the life of the development. Both CCC and Santa Barbara County (SBCO) require site development engineering design be constructed based on a no revetments scenario. Having the residence on open concrete piles also provides habitat and cover and free movement of wildlife on the property.

4.1.4 Tidal non-wetland waters (ESH)

The proposed Project will avoid direct and indirect impacts to tidal non-wetland waters, comprised of intertidal zone and subtidal channel. Santa Barbara County Environmental Thresholds

Guidelines for intertidal zone states that projects which result in a net loss of important wetland area or wetland habitat value, either through direct or indirect impacts to wetland vegetation, degradation of water quality, or that would threaten the continuity of wetland-dependent animal or plant species are considered to have a potentially significant effect on the environment (County of Santa Barbara 2015). Subtidal channel is hydrologically connected to the intertidal zone and CSM, therefore best management practices such as maintaining equipment, proper containment of toxic chemicals, and erosion control shall be employed to avoid impacts to water quality and sedimentation of the subtidal channel. Impacts to tidal non-wetland waters are avoidable (refer to Sections 5.1and 5.2.5). Impacts to intertidal channel habitat is potentially significant, but mitigable to a less than significant level (refer to Section 5.2.5). No impacts are proposed to tidal non-wetland waters habitat.

4.1.5 Iceplant mats

The proposed Project will temporarily affect 0.09 acre (14 percent) of iceplant mats habitat within the Study Area due to grading and fill operations, access route south of building footprint, and staging area southeast of footprint. The building footprint will permanently impact at least 0.06 acre (10 percent) of iceplant mats habitat. Impacts to iceplant mats habitat are not significant and do not require mitigation. Due to the invasive nature of this vegetation, iceplant mats habitat will be removed and replaced with native dune mat habitat (refer to Sections 5.1 and 5.2.4).

4.1.6 Road

The proposed Project will permanently affect 0.10 acre (91 percent) of gravel road within the Study Area with grading and fill. Impacts to the road are not significant, and do not require mitigation (refer to Sections 5.1 and 5.2.1).

4.1.7 Revetment

The proposed Project should not impact revetment infrastructure. No mitigation is required.

4.1.8 Potential Wetlands and Jurisdictional Waters

The proposed Project will not directly or indirectly impact federal jurisdictional non-wetland waters, or state and local potential jurisdictional wetlands (Table 10; Figure 11 and Figure 12). As per the Santa Barbara County Coastal Plan Policy 9-14 (2014), 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. Impacts to jurisdictional wetlands are potentially significant (County of Santa Barbara 2015), but mitigable. Recommendations for impact avoidance and minimization to jurisdictional wetlands are provided in Sections 5.1and 5.3.

TABLE 10. POTENTIAL IMPACTS TO POTENTIAL JURISDICTIONAL WETLANDS AND WATERS

Proposed temporary and permanent impacts to federal, state and local potential jurisdictional wetlands and waters.

Potential Jurisdictional Wetlands and Waters	Area (Acres)	Area of Impact (Acres)	Federal Jurisdiction (Acres)	State and Local Jurisdiction (Acres)
Tidal Non-Wetland Waters CWA Section 404 (USACE)	0.96	0	✓	✓
One Parameter Wetland (CDFW, CCC, RWQCB, Santa Barbara County)	0.01	0		✓
Total (less 0.01-acre overlap)	**0.97**	**0**		

4.1.9 Habitat Mitigation Summary

Habitat impacts shall be mitigated on site. Temporary habitat impacts shall be mitigated at a 2:1 ratio and permanent impacts at a 4:1 ratio. A 4:1 ratio for permanent impacts by the proposed project would require 0.32 acre of dune mat habitat restoration, and the 2:1 mitigation ratio for temporary impacts would require 0.22 acre of dune mat habitat restoration, for a total of 0.54 acre (23,522 square feet) of restored dune mat habitat.

4.2 Nesting Birds

Vegetation removal and construction activities associated with the Project could result in adverse impacts to nesting birds if conducted during nesting season (February 1 to August 31). Noise generated from heavy equipment and alarms (74 to 98 dbA 50 feet from source) may disturb breeding and nesting birds in CSM and interrupt vital environmental cues such as auditory detection of predators (Dooling and Popper 2007). Post-construction impacts include loss of available nesting habitat, increased human (and domestic animal) presence and light pollution, which cumulatively reduce the likelihood of nesting activity on the property. Preconstruction surveys should be performed prior to initiation of construction activities between March 1 and August 31 (refer to Sections 7.1 and 7.4).

4.3 Special Status Species

Two special status plant species and no special status wildlife species were detected in the Study Area during biological surveys, however several special status seabirds and shorebirds nest and forage in CSM. Special status birds (e.g. long-billed curlew) were observed foraging within the parcel boundary outside of the Study Area during the November 2017 biological survey. The intertidal zone within CSM is an important food source to shorebirds that forage along the shores at low tide and rest on the revetment at the mouth of CSM. The proposed Project is not likely to affect special status species.

4.3.1 Plants

Two special status plant species were detected in the sandy beach habitat onsite, one red sand-verbena (*Abronia maritima*) and two woolly seablite (*Suaeda taxifolia*). Both species have a California Rare Plant Rank of 4.2 indicating their limited distribution and status as moderately threatened in California (20-80 percent occurrences threatened/ moderate degree and immediacy of threat). Both species are listed as locally rare species in Santa Barbara County (Wilken 2012). The proposed Project is not anticipated to impact these species. Recommendations for avoiding impacts to special status plants are provided in Sections 5.1and 5.2.2.

4.3.2 Birds

The proposed Project is likely to impact shorebirds, seabirds and landbirds. Noise and activity from construction activities and equipment reduces available foraging, resting, and potential breeding habitat for birds because of their wariness of humans. Post-construction impacts include habitat loss, increased human presence, light pollution that affects nocturnal wildlife movement, and a potentially fatal collisions with proposed expansive picture/slider windows providing direct views between the salt marsh and Pacific Ocean. The proposed Project reduces the flyway used by birds moving between the salt marsh and the ocean. The Project footprint also reduces marginal foraging habitat for Belding's Savannah sparrow (SAIC 2010). The cumulative effects of this project and significant loss of coastal strand habitat on birds is significant. Recommendations for minimizing impacts to special status birds are provided in Section 5.4.

4.3.3 Mammals

Special status mammals and their sign (e.g. scat, tracks, or dens) were not detected within the Study Area during biological surveys. Although habitat quality in the Study Area is suitable for San Diego desert woodrat, this niche has already been filled by Norway rat and raccoon. The proposed Project is not expected to affect special status mammals. Preconstruction surveys conducted immediately prior to commencement of Project activities would ensure special status animals are not affected (refer to Section 5.1).

4.3.4 Reptiles and Amphibians

The proposed project may impact Northern California legless lizard (*Anniella pulchra*). Focused surveys are underway to determine species presence in the Study Area. Preconstruction surveys conducted immediately prior to commencement of, and during ground disturbing activities would reduce impacts to special status animals (refer to Sections 5.1 and 5.5).

4.3.5 Invertebrates

The proposed project will not impact the wandering skipper, because no impacts are proposed for alkali heath habitat. Protective fencing will be installed around wandering skipper habitat. The proposed project should not directly or indirectly affect marine invertebrates in the intertidal zone of CSM (refer to Sections 5.1 and 5.3). The proposed project may temporarily impact special status terrestrial invertebrates that may occur onsite. The proposed Project will reduce available habitat for upland invertebrates that live in dune mat habitat, however impacts are unlikely to adversely affect invertebrates (see Section 5.1). Post-construction onsite compensatory mitigation

will increase dune mat habitat for special status invertebrates. Seasonally timed focused invertebrate surveys conducted in the spring and summer, prior to construction activities would reduce impacts to special status invertebrates (refer to Sections 5.1 and 5.6).

4.4 Habitat Connectivity and Wildlife Movement

The Study Area is located in an ecologically complex area between the Pacific Ocean and the mouth of the Carpinteria Salt Marsh where shorebirds forage daily along the shores and mudflats, and congregate along the revetment. Lack of infrastructure and limited human activity provides a flyway for birds moving between the salt marsh and the ocean (Figure 4). Developing the property will reduce the area of the flyway, forcing birds to change flight patterns. Wildlife that move between the revetment and the saltmarsh must also adapt their movement patterns and activity periods to navigate around the development. The proposed Project will temporarily disturb water birds , and other wildlife residing at, feeding at or migrating though the mouth of CSM (M. Mooney, Santa Barbara County Peer review memo August 13, 2014).

5 BEST PRACTICES AND MITIGATION RECOMMENDATIONS

Biological recommendations (BR) for avoidance, minimization, and mitigation measures are provided to reduce impacts of proposed Project activities on biological resources to a less than significant level. BRs include guidelines from the County of Santa Barbara Environmental Thresholds and Guidelines Manual (2015) where text is shown in all capitals regarding planning requirements (e.g., BR-9 for staging/storing/refueling equipment).

5.1 Construction Best Management Practices

BR 1 Consequences of tidal fluctuation and timing of high tides times shall be considered for all construction planning activities to prevent pollutants and construction material from entering CSM. The project shall implement an erosion control plan or storm water pollution prevention plan (SWPPP) that includes documentation of and preparation for storm events and high tides that may adversely affect the work area. As the total of temporary and permanent impacts are anticipated to be less than one (1) acre, an erosion control plan may be all that is required.

BR 2 During concrete pile construction, methods will be used that avoid a need to dewater, or create temporary spoils piles.

- **A.** If Fluid (Super Mud) method is used, all drilling mud will be pumped out into a tank as the concrete is inserted.
- **B.** If Casing method is used, a steel pipe will bet into each hole as it is drilled, and fluids (if used), will be pumped out into a tank.
- **C.** A biological monitor will be on site during concrete pile installation to verify minimization of impacts to protected habitats, and to document fluid disposal management protocol to avoid impacts to habitats and water quality.

BR 3 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. The survey shall be conducted by a qualified biologist approved to relocate common wildlife should they occur. 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 4 Construction fencing. Prior to initiation of construction, construction fencing shall delineate construction access to include the building envelope, vehicle access path south of building envelope and staging area south east of building envelope (Appendix B Sheet SA.04c Construction Fence Location).

BR 5 The rest of the property shall be off-limits for all construction-related activities. Construction fencing will prevent unauthorized impacts to ESH.

BR 6 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 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. Identify sensitive species and habitats.

b. Describe 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.

d. All employees shall sign a form confirming that they have received training provided by a qualified biologist documenting they have attended the and understand the information presented to them.

BR 7 Monitoring. The Owner/Applicant shall submit to Santa Barbara County Planning & Development 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, concrete work, earth disturbance, and vegetation clearance activities, all construction activities which may impact ESH resources, and any night work due to proximity to Carpinteria Salt Marsh. Duties include the responsibility to ensure compliance with County conditions of approval. The Owner/Applicant shall submit to Planning & Development 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 inspect the site as appropriate.

BR 8 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. All equipment shall only be stored in the designated equipment staging area. Construction vehicles shall be confined to a pre-defined equipment access path no greater than the minimum width necessary to complete necessary construction activities.

BR 9 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 foot unless otherwise approved by P&D and shall be located at least 20 feet from any storm drain, wetland, or water body.

PLAN REQUIREMENTS: The Owner/Applicant shall designate the P&D-approved location on all development 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.

BR 10 Equipment Washout-Construction. Perform washout of concrete mixers, delivery trucks, and other delivery systems in designated areas only. Wash concrete only from mixer chutes into approved concrete washout facility.

A. Offsite. Due to the sensitive ESH resources onsite, the Owner/Applicant shall designate one or more P&D-approved offsite washout areas for the washing of concrete trucks, paint, equipment, or similar activities to prevent wash water from discharging to the storm drains, street, drainage ditches, wetland, or ocean. Note that polluted water and materials shall be contained in these areas and removed from the site as needed. Washout areas shall be located at least 100 feet from any storm drain, waterbody, or sensitive biological resources.

B. Onsite. If a temporary concrete washout is to be used on site, the container must provide impermeable containment, and be placed over secondary containment. Temporary washout facilities shall have sufficient volume to completely contain all liquid and waste concrete materials generated during washout procedures. EPA provides guidance for metal washout containers (roll-off): The metal roll-off bin is designed to securely contain concrete washout water and solids and is portable and reusable. It also has a ramp that allows concrete pump trucks to wash out their hoppers. (Roll-off providers offer recycling services, such as, picking up the roll-off bins after the washout water has evaporated and the solids have hardened, replacing them with empty washout bins, and delivering the hardened concrete to a recycler, rather than a landfill. Some providers will vacuum off the washout water, treat it to remove metals and reduce the pH, deliver it to a wastewater treatment plant for additional treatment.)

PLAN REQUIREMENTS: The Owner/Applicant shall designate the P&D-approved location on all coastal development permit plans.

TIMING: The Owner/Applicant shall identify and establish the area prior to commencement of construction.

MONITORING: Environmental monitor shall ensure compliance prior to and throughout construction.

BR 11 Habitat Restoration. The Owner/Applicant shall submit for P&D approval a Restoration Plan prepared by a P&D-approved biologist and landscape architect and designed to mitigate

Project-related habitat impacts, following the guidelines set forth in Santa Barbara County's Environmental Thresholds and Guidelines Manual (2015).

BR 12 Restoration Plan shall include the following components:

a. Landscaping shall be with native dune species described in the Restoration Plan.

b. Species shall be from locally obtained plants and seed stock.

c. New plantings shall be irrigated per the Restoration Plan.

d. Non-native species, (e.g., iceplant, European sea-lavender, pampas grass, etc.) shall be removed from the Study Area.

PLAN REQUIREMENTS: The Owner/Applicant shall incorporate this requirement into a landscape plan to be prepared by a P&D-approved landscape architect. The Owner/Applicant shall post a performance security to ensure installation prior to Final Building Inspection Clearance and maintenance for five years.

TIMING: Landscaping shall be installed prior to Final Building Inspection Clearance. The owner shall maintain plants for five years (or until performance standards have been satisfied) following Final Building Inspection Clearance.

MONITORING: The Owner/Applicant shall demonstrate to P&D compliance monitoring staff that all required components of the approved plan(s) are in place as required prior to Final Inspection Clearance and maintained throughout maintenance period. The landscape architect shall verify to P&D compliance monitoring staff, in writing, using receipts, etc., the use of native seed stock on the property prior to release of performance security. P&D compliance monitoring staff signature is required to release the installation security upon satisfactory installation of all items in approved plans and maintenance security upon successful implementation of this plan.

5.2 Habitats

BR 13 Minimize disturbance to environmentally sensitive habitats (ESH). The Project Biologist shall ensure that removal or disturbance of ESH habitats, particularly coastal strand, is minimized to the extent feasible. When construction or demolition is required within ESH habitat, the smallest equipment feasible shall be used to accomplish the task.

BR 14 Mitigation for impacts to environmentally sensitive habitats (ESH). The minimum recommended mitigation ratio for temporary impacts to all ESH resources will be at a 2:1 ratio (habitat restored to habitat impacted). The minimum recommended mitigation ratio for permanent impacts to ESH will be 4:1 (habitat restored to habitat lost).

BR 15 Wetland Habitat Setback. Except for the existing gravel driveway on the parcel, and removal of iceplant mats onsite, all ground disturbances and vegetation removal shall be prohibited within a 20-foot setback from federal and state wetland habitat (intertidal zone of CSM), as delineated by construction fencing surrounding development and staging area. The area shall be fenced with a fencing material and in a location acceptable to P&D.

PLAN REQUIREMENTS: The wetland habitat area shall be shown on all grading plans.

TIMING: Fencing shall be installed prior to any earth movement.

MONITORING: P&D compliance monitoring staff shall perform site inspections throughout the construction phase.

BR 16 Mitigation, Monitoring, and Reporting Plan. The Owner/Applicant shall submit for P&D approval a Mitigation, Monitoring, and Reporting Plan (MMRP) prepared by a P&D approved biologist and designed to offset temporary and permanent impacts of development to ESH resources and including the following components:

a. Description of the project/impact site (i.e., location, responsible parties, areas to be impacted by habitat type);

b. Location, habitat types and areas of habitat to be established, restored, or enhanced;

c. Mitigation ratios for temporary and permanent impacts to ESH;

d. Prepare final Habitat Restoration Plan (BR-11) as attachment to MMRP;

e. Site preparation, planting plan with species lists, container sizes, and seeding rates, and implementation and monitoring schedule;

f. Identification of a reference site for monitoring success criteria;

g. Responsible parties and financial assurances;

h. Mitigation landscaping shall use locally sourced native plants and seed stock for landscaping;

i. New plantings shall be irrigated with drip irrigation on a timer and shall be weaned off irrigation over a period of two to three years;

j. Site maintenance for invasive plant management, specifically for freeway iceplant and pampas grass, and other species as needed; and

k. Annual reporting with a final report prior to project close-out.

PLAN REQUIREMENTS: Include the components of the plan in Landscape and Irrigation Plans

TIMING: Plans shall be submitted prior to approval of coastal development permit. The Owner/Applicant shall post a performance security to ensure installation prior to Final Building Inspection Clearance and maintenance for five years, or until five-year success criteria has been achieved. The OWNER shall maintain the plants and irrigation for five years following Final Building Inspection Clearance.

MONITORING: The Owner/Applicant shall demonstrate to P&D compliance monitoring staff that all required components of the approved plan(s) are in place as required prior to Final Inspection Clearance and maintained throughout maintenance period. P&D compliance monitoring staff signature is required to release the installation security upon satisfactory installation of all items in approved plans and maintenance security upon successful implementation of this plan.

5.2.1 Alkali heath marsh (ESH)

To avoid impacts to alkali heath marsh habitat, avoid any reinforcement/fill of revetment along coastal salt marsh (north portion of driveway). Should unavoidable impacts to this habitat occur, mitigation must be performed offsite because there is not enough suitable habitat, hydrology, and geology to support alkali heath marsh. Refer to **BR 14** above for mitigation ratios for ESH.

BR 17 Clearly delineate alkali heath habitat along the driveway with minimum length 5-foot t-posts, orange construction fencing (minimum 4 feet high), and signs explaining that alkali heath is protected habitat.

5.2.2 Sandy beach (ESH) and rare plants

BR 18 Clearly delineate sandy beach habitat along the driveway with minimum length 5-foot t-posts, orange construction fencing (minimum 4 feet high), and signs explaining that sandy beach habitat is protected habitat. Rare plants that occur in sandy beach habitat will not require immediate protective fencing because construction activities will be contained within fenced area (refer to **BR 4** construction fencing above).

5.2.3 Dune mat (ESH)

BR 19 To minimize impacts to this sensitive coastal strand habitat, use the smallest construction footprint necessary and install construction fencing around building footprint and staging area (refer to BR-3 above).

BR 20 Employ wood mats where vehicles traverse dune mat habitat to reduce compaction of soil.

BR 21 Restoration of Dune mat habitat. Per Santa Barbara County Coastal Plan Policy 9-2, restoration of dune habitat requires that re-vegetation shall be with native California plants propagated from the disturbed sites or from the same species at adjacent sites. Where possible, collect topsoil and native seed and plants from dune mat habitat prior to initiation of construction activities for use in onsite restoration.

5.2.4 Iceplant mats

Impacts to iceplant mat habitat are not significant and do not require mitigation, however California legless lizard may occur under iceplant thatch. To avoid impacts to California legless lizard refer to BR-32 prior to removing iceplant from construction area. Onsite restoration should involve replacing iceplant mats with native dune mat and/or salt grass flats habitat, depending on elevation and exposure to tidal fluctuation.

BR 22 Prior to initiation of construction activities, remove iceplant mats from planned access routes, parking, and staging areas identified in Appendix B. Architectural Site Plans Sheet SA.04C Construction Fence Location. A qualified biologist, familiar with

California legless lizard ecology shall conduct preconstruction surveys and monitor vegetation clearance operations.

5.2.5 Tidal non-wetland waters (ESH)

Direct impacts to potential jurisdictional waters shall be avoided. Indirect impacts (e.g., sedimentation) shall be avoided to the fullest extent practicable.

BR 23 Prior to approval of construction permit, to avoid potential sedimentation within the saltmarsh, 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 24 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 result in minimal erosion.

BR 25 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, a compatible native seed mix shall be used to revegetate the restored area (refer to **BR 16** above, Mitigation Monitoring and Reporting Plan). The same vegetation treatment shall apply for any areas 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.

5.3 Potentially Jurisdictional Wetlands and Non-Wetland Waters

At this time, the Project does not propose to directly impact any wetland or waters habitat. The Applicant/Owner understands that should impacts to wetland or tidal waters be proposed, authorization may be required from the following agencies: County of Santa Barbara (with oversight from CCC), CDFW, RWQCB, USACE, USFWS, and National Marine Fisheries Service (NMFS). When such permits are required, any applicable requirement shall be shown on applicable construction plans and adhered to during construction. Impacts to potential federal and state jurisdictional wetlands and waters shall be avoided to the fullest extent possible. For areas of unavoidable impact, best management practices (BMPs) will minimize the footprint in wetland habitats.

Site plans include avoidance of direct impacts to wetland habitat, and mitigation is proposed for disturbance within the wetland buffer area consistent with the adjacent City of Carpinteria Local Coastal Program Amendment No. LCP-4-CPN-15-0018-1 (California Coastal Commission 2015).

Direct adverse impacts to ESH shall be mitigated at a 4:1 ratio (habitat replaced to habitat lost). Indirect impacts to wetlands, such as development in wetland buffer areas shall be mitigated by enhancing all portions of the remaining buffer area through invasive species removal, native

vegetation screening, native species planting, and water quality improvements. Lastly, temporary impacts to ESH shall be mitigated at a 2:1 ratio.

Alkali heath (created on the road revetment) occurs within jurisdictional wetlands. No impacts to wetland habitat are currently proposed.

BR 26 If the project requires temporary impacts within wetland habitat, permits must be obtained from CDFW, RWQCB, and USACE. Authorization from the USACE may require consultation from the USFWS and/or National Marine Fisheries Service (NMFS). Develop and implement a Mitigation Monitoring and Reporting Plan (MMRP; refer to BR-15 above) for required compensatory mitigation required to compensate for Project-related impacts.

BR 27 During construction, no vehicles, equipment, activities, or staging shall be permitted within 20 feet of wetland habitat, except for the preexisting driveway and designated Area of Direct Impact (Appendix B. Architectural Site Plans Sheet SA.04c Construction Fence Location).

BR 28 Appropriate sediment control structures shall be in place to minimize construction runoff into Carpinteria Salt Marsh to prevent degradation of habitat for aquatic species. Only non- monofilament (e.g., burlap) straw wattles shall be employed onsite to protect wildlife from being ensnared.

BR 29 Stormwater 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 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 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.

5.4 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).

Windows proposed for the home have a bird avoidance index (AI) score 70 percent and higher. The current proposed project includes use of Guardian Glass SunGuard products, tested by ornithologists, Dr. Daniel Klem Jr., Muhlenberg College and Dr. Christine Sheppard, Bird Collisions Campaign Director, American Bird Conservancy to help deter bird collisions (Appendix C).

BR 30 Use exterior glass that deters bird collisions. Exterior glass window configurations must score 70 or greater in Avoidance Index (AI). Use Guardian Glass Bird1st with SN68 and inboard lamination (AI Score 74), and/or Bird1st with SN 68 and outboard lamination (AI Score 70), and/or Bird1st with SNX 62/27 and outboard lamination (or equivalent documented by the American Bird Conservancy). See Appendix C. American Bird Conservancy Guardian Glass Test Results (February 2020) for additional information on these materials.

BR 31 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 survey**s** 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 nests (300 feet for western snowy plover) 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 with the report. The Project biologist conducting the nesting survey shall have the authority to reduce or increase the recommended buffer depending upon site conditions.

BR 32 Apply architectural window design products and homeowner options to minimize bird collisions with picture windows throughout building (American Bird Conservancy 2017).

5.5 Northern California legless lizard

The northern California legless lizard may occur in the Study Area's sandy soil. Project activities, including grading, excavation, and vegetation removal may result in direct impacts to northern

California legless lizard. To reduce these potential impacts to a less than significant level we recommend the following measures:

BR 33 Legless lizard pre-construction surveys. Install coverboards for long-term monitoring of legless lizards prior to construction activities. Survey for legless lizards in proposed work areas immediately prior to and during ground-breaking activities that would affect potentially suitable habitat, as determined by the project biologist. Surveys would be conducted by a qualified biologist familiar with legless lizard ecology and survey methods. Approval from CDFW to relocate legless lizards will likely be required.

a. Prepare a legless lizard relocation plan in coordination with CDFW and University of California Natural Reserve System Carpinteria Salt Marsh Reserve (UCNRS CSM) to relocate legless lizards to upland Carpinteria Salt Marsh habitat.

b. Install coverboards in the Study Area for long-term monitoring of legless lizard.

c. Monitor construction activities during all new ground-disturbance activities located within legless lizard habitat.

d. Approved biologist would relocate legless lizards to an appropriate location.

e. Letter reports would be submitted to Agencies within 30 days of legless lizard relocation.

5.6 Invertebrates

Four special status invertebrates have potential to occur onsite. Detection of these species requires focused preconstruction surveys to determine presence in the Study Area. Timing and survey methodology vary by species. Invertebrate preconstruction surveys shall be conducted by qualified biologists familiar with ecology and survey methods for targeted species.

BR 34 Conduct appropriately timed pre-construction surveys for special status invertebrates on the Special Animals list (CDFW July 2020) with no federal or state listing status.

a) Obscure bumble bee surveys shall be conducted by a qualified biologist between June and July to maximize likelihood of detecting bumble bees. Survey protocols shall follow methods outlined in *Survey Protocols for the Rusty Patched Bumble Bee* (USFWS 2018). Survey effort shall be at minimum 1-person hour per 3 acres (1 hour of search time). The colony dissolves by October, so if obscure bumble bee is found onsite, postponing ground disturbing activities until late October would avoid impacts to this sensitive ground-nesting species.

b) Sandy beach tiger beetle surveys shall be conducted by a qualified biologist during optimal conditions for adult sandy tiger beetle activity: sunny with temperature above 70° F. Surveys shall be conducted in the high tide line and the dry sand above, including any beach wrack piles. A minimum of two visual encounter surveys shall be conducted.

c) Globose dune beetle surveys shall be performed by a qualified biologist that can differentiate globose dune beetle from the common ciliate dune beetle (*Coelus*

ciliates) with a magnifying scope. Surveys may be conducted any time of year. Surveys shall include surveying the sand for the distinctive tracks (5 mm wide lines in sand). Sand should be scooped at the base of dune plants from near the surface down to 15 cm (6 inches) deep. Place scooped sand in sieve and shake out loose sand. Key out dune beetle species observed.

d) To protect potential wandering skipper habitat, a barrier construction fence shall be installed around alkali heath marsh habitat. (There are no proposed impacts to sandy beach or alkali heath marsh habitats.) Wandering skipper surveys for adults and larvae shall be performed by a qualified biologist between July and September. Timing of surveys should be conducted between 1000-1500 hours, when temperatures are between 65–90° F and wind speed less than 10 mph. The "checklisting" butterfly survey method (Royer, Austin & Newton 1988) involves walking a meandering transect through coastal habitat until an individual skipper is observed. If an individual is discovered, the biologist walks in expanding concentric circles around the individual until no additional individuals are observed.

e) If special-status invertebrates are discovered during pre-construction surveys, they shall be protected in place where practicable. A minimum 15 ft buffer shall be placed near the special status insect. If discovered in an area to be impacted, work shall be delayed until that insect moves to another location, or a relocation plan shall be developed and approved by California Department of Fish and Wildlife prior to disturbance of occupied habitat.

5.7 Aquatic Animals

Impacts to aquatic animal species and waters will be avoided through implementation of mitigation measures outlined in Sections 5.1 Construction Best Management Practices and 5.3 Potentially Jurisdictional Wetlands and Non-Wetland Waters above.

6 PHOTOGRAPHS

Photo 1. Alkali heath marsh habitat (ESH) occurs on revetment adjacent to the road and the estuarian channel. View southeast, November 11, 2017.

Photo 2. Salt grass flats habitat (ESH) previously extended along the transition between the intertidal zone and the foredune on the inland portion of the sand spit. View northwest, November 11, 2017.

Photo 3. Tidally influenced sand deposits converted salt grass flats to sandy beach (compare sandy beach habitat (ESH) with photo 2 above. View northwest, February 27, 2020.

Photo 4. Dune mat habitat (ESH) consists of beach bur-sage (*Ambrosia chamissonis*) and beach evening-primrose (*Camissoniopsis cheiranthifolia* ssp. *suffruticosa*) scattered throughout patches of Bermuda grass (*Cynodon dactylon*) and freeway iceplant (*Carpobrotus edulis*). View northwest, June 29, 2017.

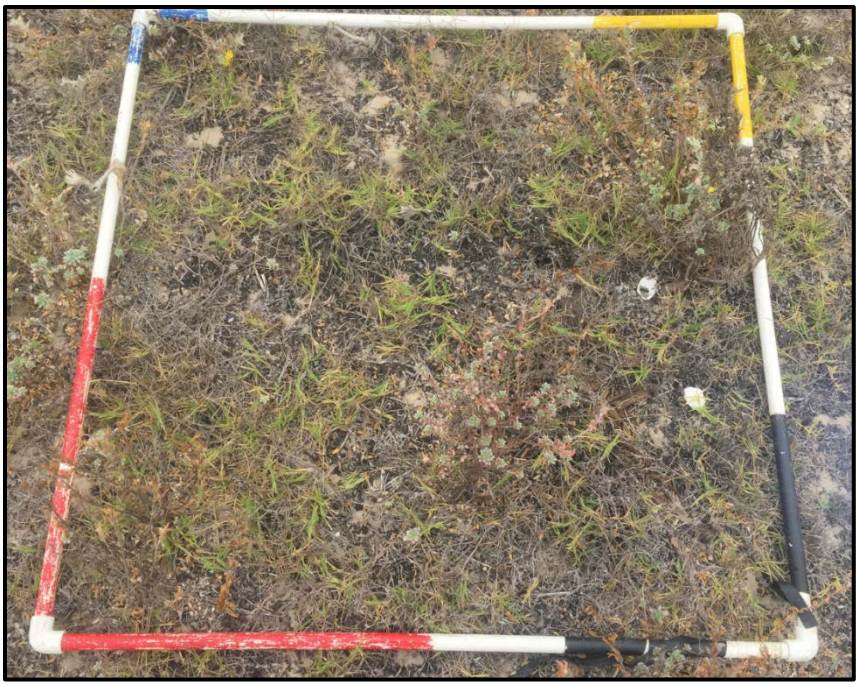


Photo 5. Close-up of dune mat habitat dominated by Bermuda grass with several beach evening primrose plants on east side of proposed house location. August 11, 2020.

Photo 6. Woolly seablite (*Suaeda taxifolia*) is a special status subshrub that occurs on the foredune boundary of the salt grass flats habitat. View south, November 11, 2017.

Photo 7. One red sand-verbena (*Abronia maritima*; right), a special status herbaceous perennial, occurs in the salt grass flats habitat with freeway iceplant (*Carpobrotus edulis*; left) and beach bur-sage (*Ambrosia chamissonis*; lower right). View south, May 9, 2018.

Photo 8. Non-native iceplant mats habitat occurs along the inland slope of the revetment. View northwest, November 11, 2017.

Photo 9. The road consists primarily of gravel with herbaceous nonnative species such as Australian saltbush (*Atriplex semibaccata*), Bermuda grass (*Cynodon dactylon*), and cut-leaf plantago (*Plantago coronopus)*. View southeast, November 11, 2017.

Photo 10. The rocky substrate in Carpinteria Salt Marsh between the subtidal channel and the intertidal zone (ESH) is utilized by a variety of marine species. View northwest, November 11, 2017.

Photo 11. The revetment protects Sand Point Road residences from Pacific Ocean storm surges. View northwest, November 11, 2017.

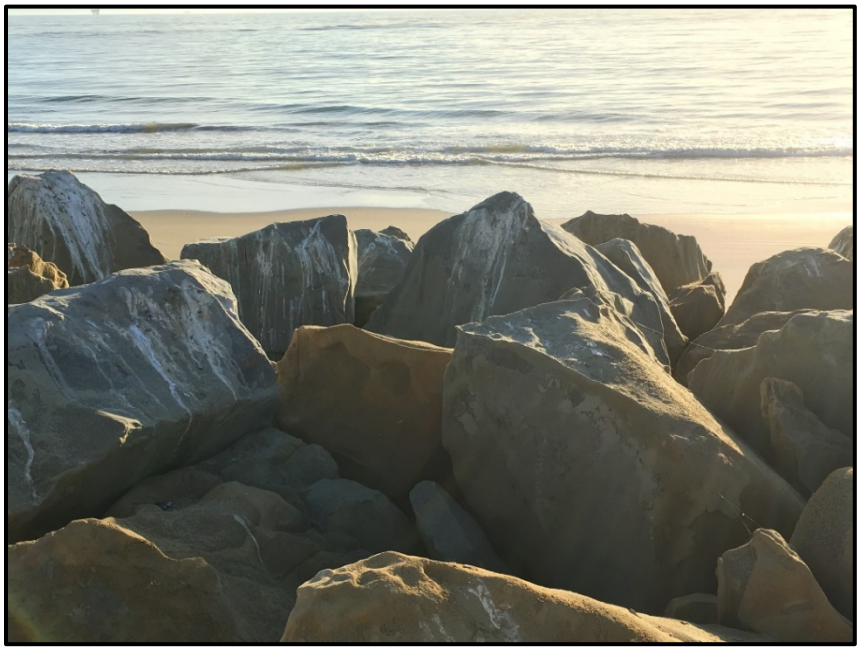


Photo 12. Coastal fish-eating birds such as brown pelican (*Pelecanus occidentalis californicus*) and double-crested cormorant (*Phalacrocorax auritus*) congregate on revetment rocks, as shown by prevalence of whitewash (guano) onsite. View southwest, November 11, 2017.

Photo 13. One inactive nest was observed onsite in myoporum (*Myoporum laetum*) View northwest, May 9, 2018.

7 FIGURES

- **Figure 1. USGS Topographic Map**
- **Figure 2. Aerial Photograph**
- **Figure 3. Soils Map**
- **Figure 4. Biological Resources Map**
- **Figure 5. Delineation of Potentially Jurisdictional Waters and Wetlands**
- **Figure 6. California Natural Diversity Database Plant Records**
- **Figure 7. California Natural Diversity Database Animal Records**
- **Figure 8. USFWS and NOAA NMFS Critical Habitat**
- **Figure 9. Impacts to Habitats**
- **Figure 10. Impacts to ESH**
- **Figure 11. Impacts to Potential Jurisdictional Wetlands**
- **Figure 12. Potential Impacts to Habitats and Potential Jurisdictional Wetlands**

Figure 1. United States Geological Survey Topographic Map

Legend

★ Project Location

N

0 1,000 2,000 4,000 Feet

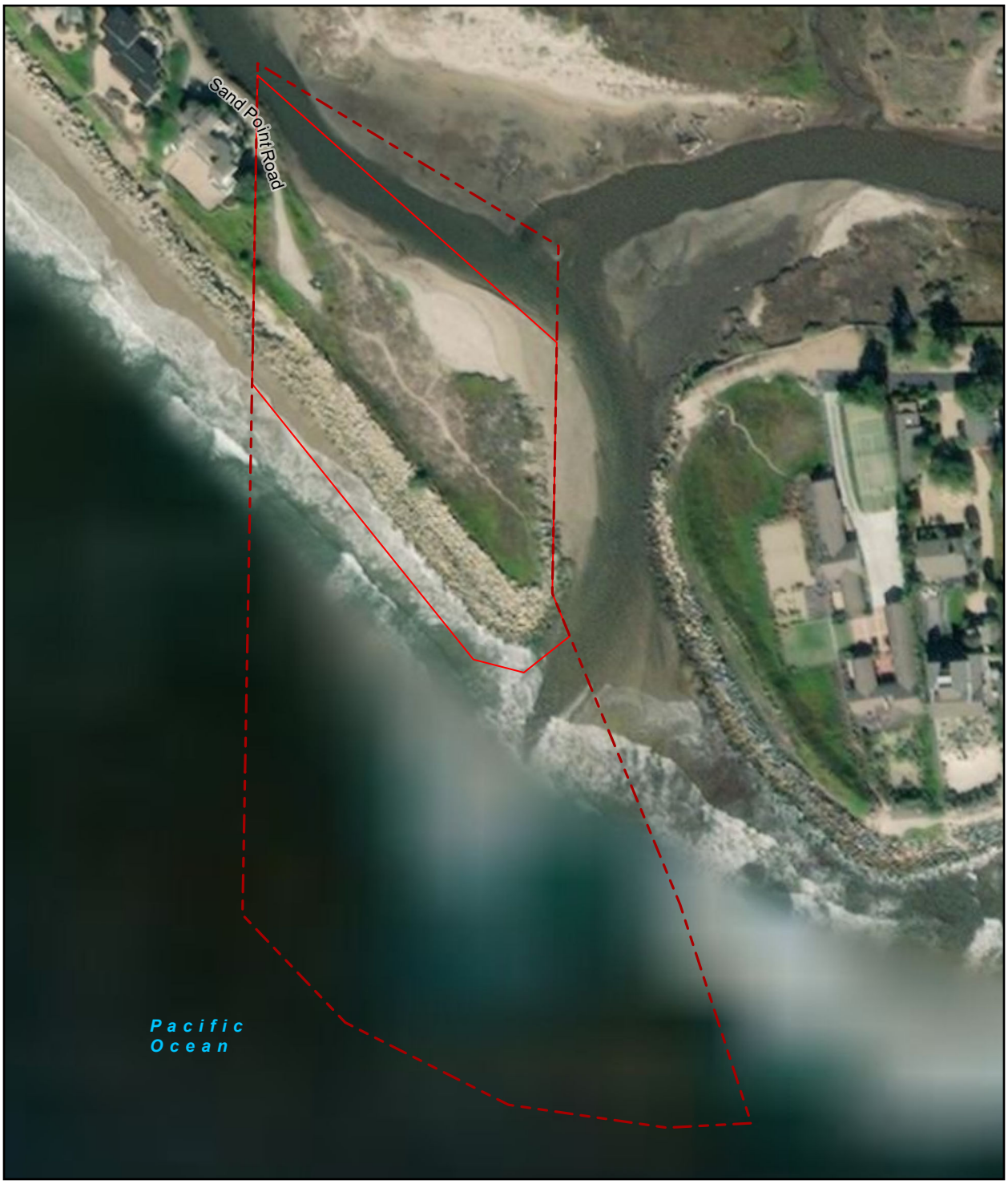
501 Sand Point Road
Map Center: 119.53814°W 34.39705°N
Santa Barbara County, California

USGS Quadrangle: Carpinteria

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
September 09, 2019 09:09 AM by JBB

Figure 2. Aerial Photograph



Legend

Study Area (2.89 acres)

Parcel Boundary

N

0 100 200 300 Feet

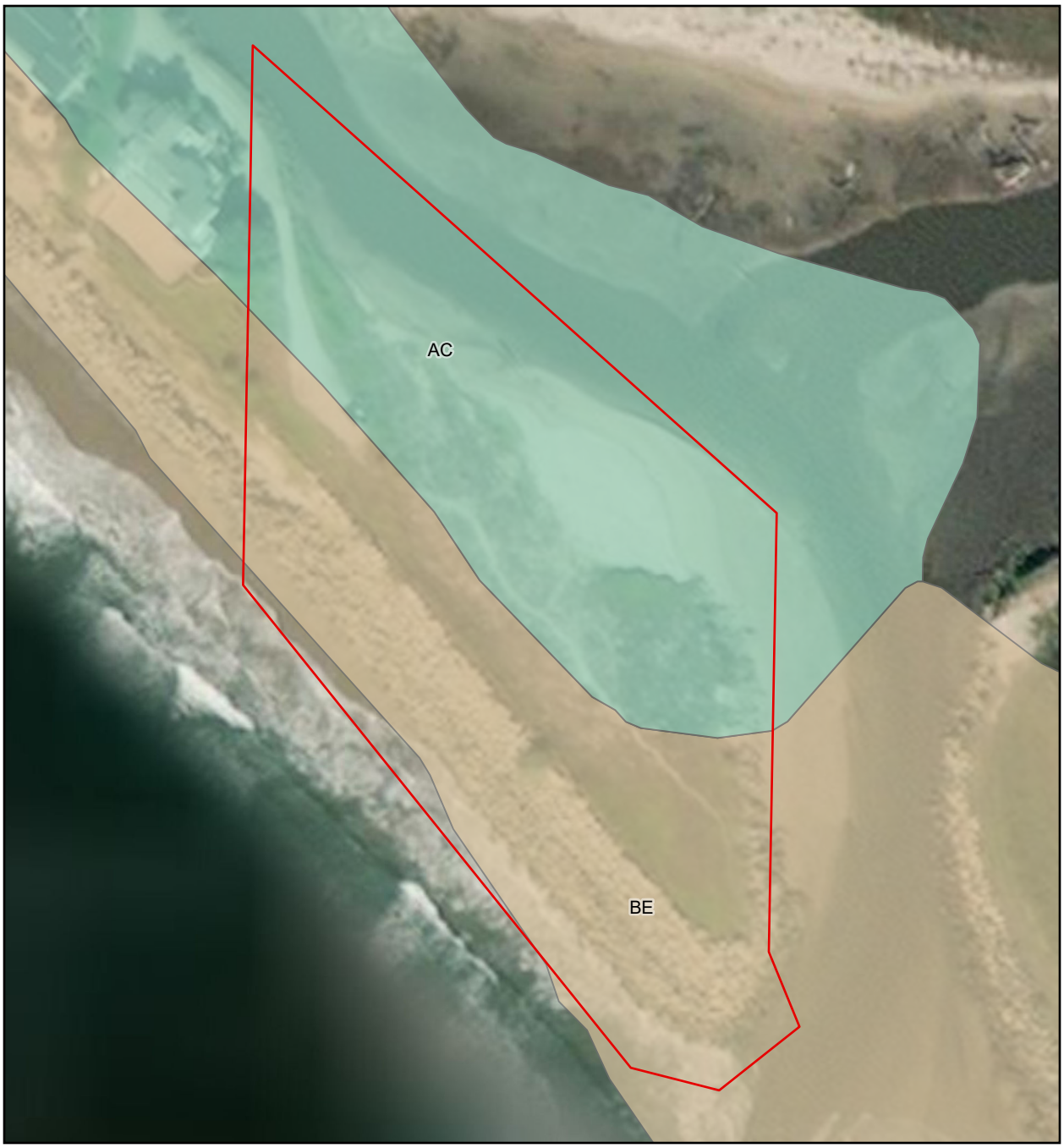
501 Sand Point Road
Map Center: 119.53779°W 34.39701°N
Santa Barbara County, California

Imagery Date: 09/28/2016

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
March 31, 2020 02:59 PM by JBB

Figure 3. USDA Soil Survey



Soil Type	Study Area
AC: Aquents, Fill Areas	41%
BE: Beaches	48%

Legend

Study Area (2.89 acres)

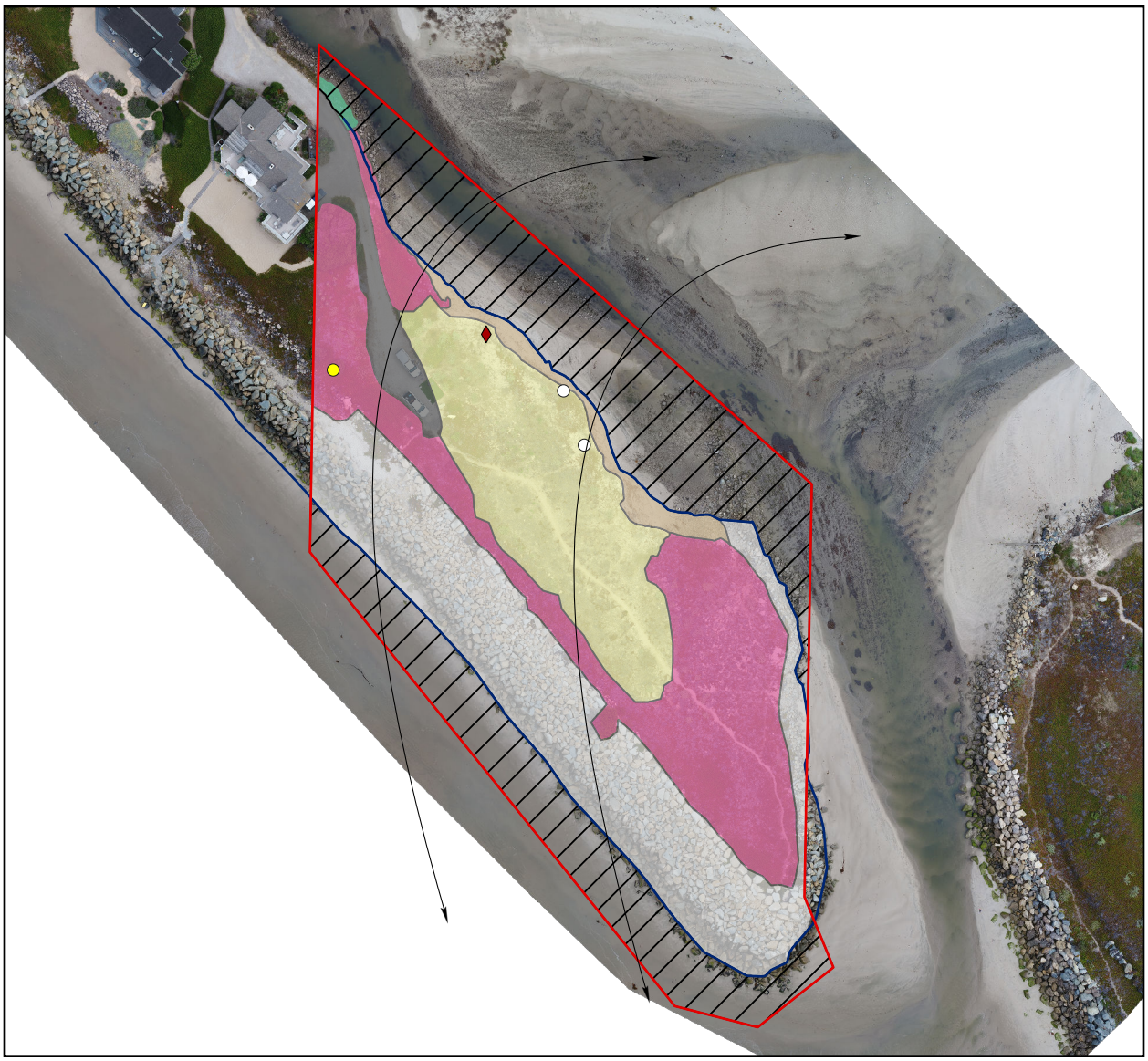
N

0 25 50 100 150 Feet

501 Sand Point Road
Map Center: 119.53811°W 34.39764°N
Santa Barbara County, California

Source: USDA NRCS Soil Survey

Figure 4. Biological Resources



Legend

- Study Area (2.89 acres)
- Inactive Nest
- Flyway
- Higher High Tide Line (6.5-Feet)

Special Status Plants

- Red Sand-verbena
- Wooly Seablite

ESH Habitats (1.49 acres)

- Alkali heath marsh (0.01 ac)
- Sandy beach (0.07 ac)
- Dune Mat (0.46 ac)
- Tidal Non-Wetland Waters (0.95 acre)

Non-ESH Habitats (1.41 acres)

- Ice Plant mats (0.63 ac)
- Revetment (0.67 ac)
- Road (0.11 ac)

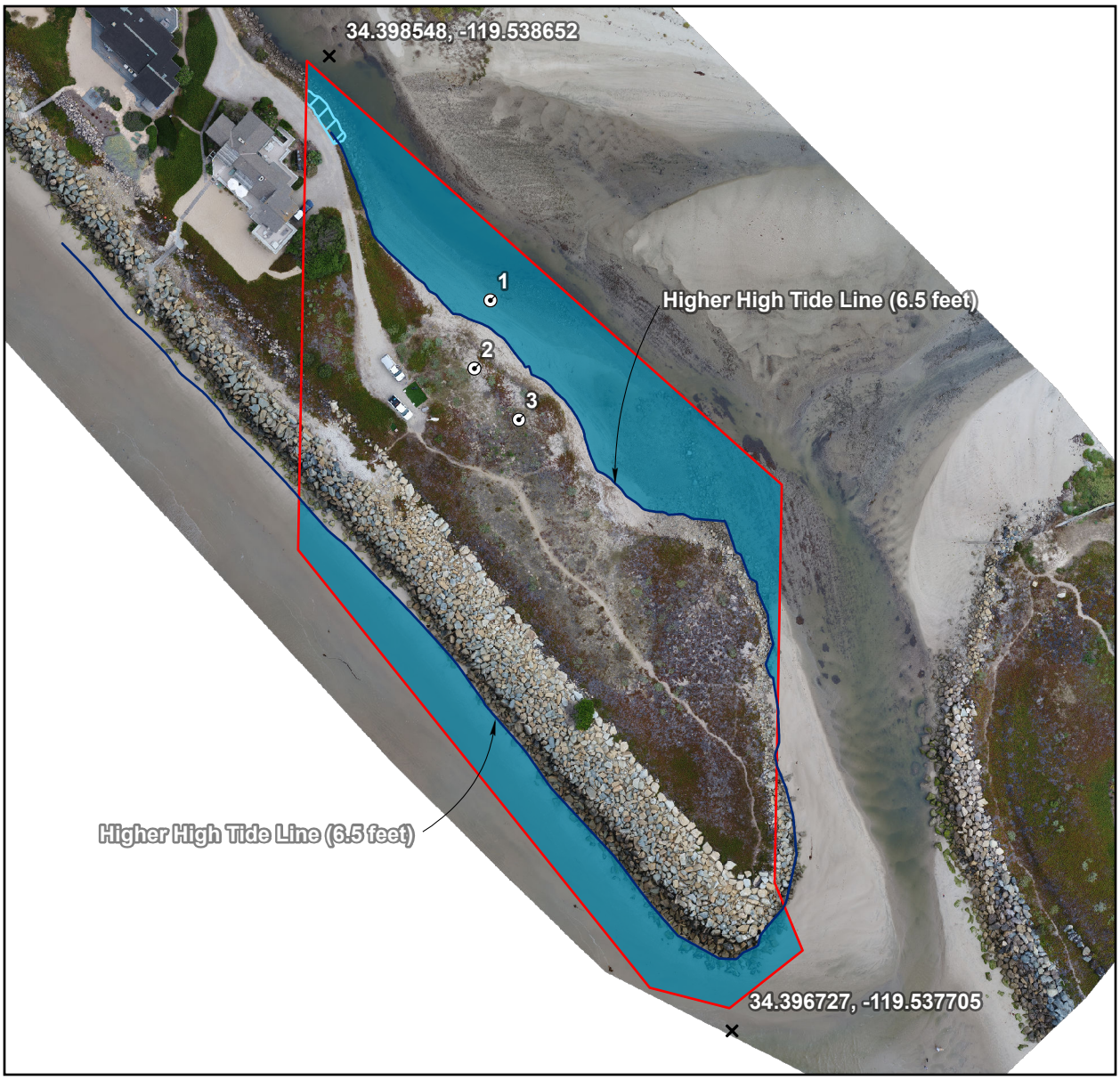
N

0 50 100 Feet

501 Sand Point Road
Map Center: 119.53813°W 34.39766°N
Santa Barbara County, California

Biological Survey Date: January 10, 2020
Topo Survey Date: October 25, 2019

Figure 5. Delineation of Potentially Jurisdictional Waters and Wetlands



Legend

- Study Area (2.89 acres)
- Site Control Point
- Sample Site
- One Parameter Wetland (0.01 acre)
  California Department of Fish and Wildlife
  California Coastal Commission
  County of Santa Barbara
- Tidal Non-Wetland Waters (0.95 acre)
  CWA Section 404 (USACE)
  California Department of Fish and Wildlife
  Regional Water Quality Control Board
  California Coastal Commission
  County of Santa Barbara

N

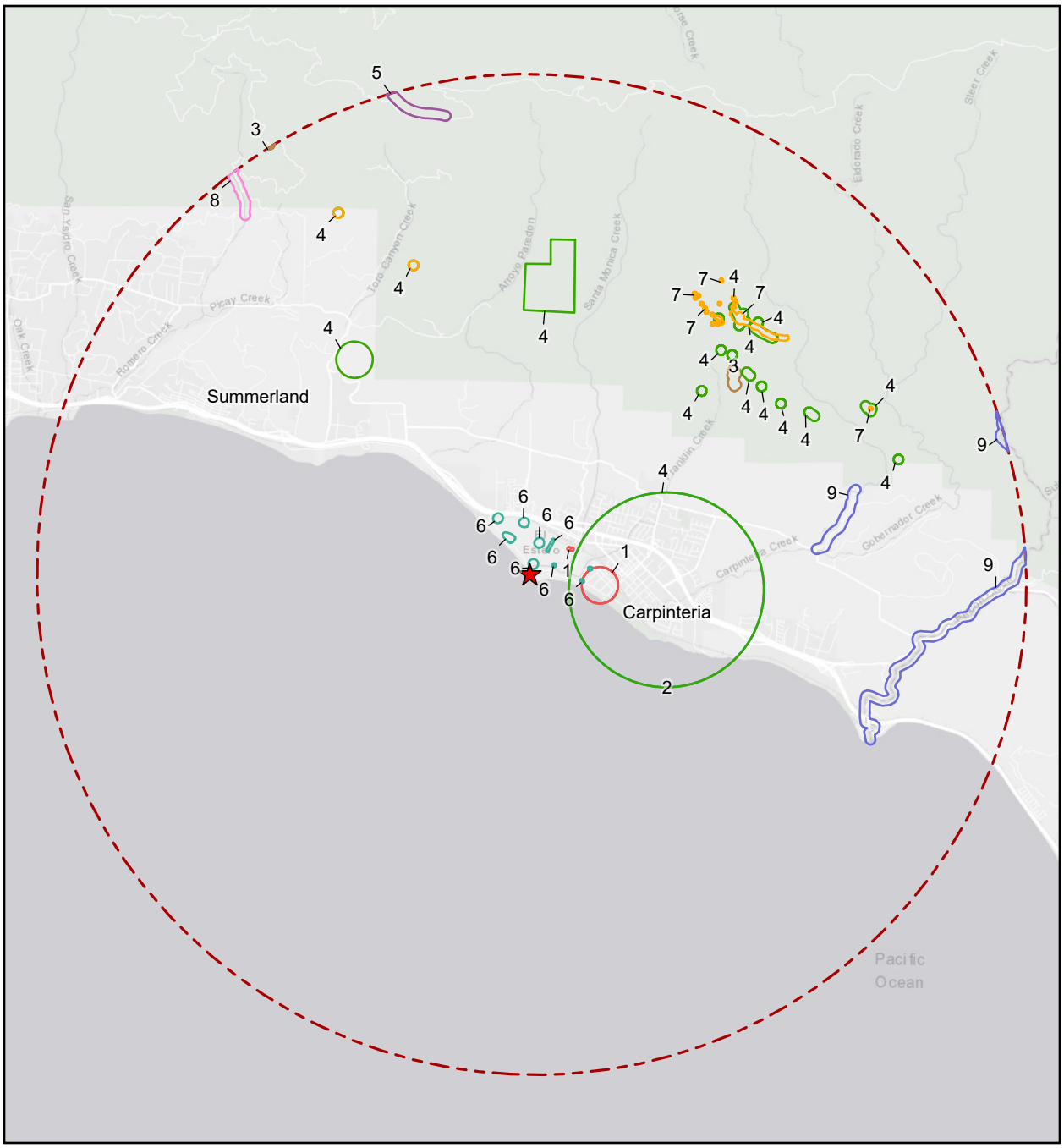
0 50 100 Feet

501 Sand Point Road
Map Center: 119.53811°W 34.39764°N
Santa Barbara County, California

Site Investigators: Katie Brown, Jacqueline Tilligkeit, Dan Meade

Vertical Datum: NAVD88 US Feet

Figure 6. California Natural Diversity Database Plant Records



Label	Common Name
1	Coulter's goldfields
2	Coulter's saltbush
3	Late-flowered mariposa-lily
4	Nuttall's scrub oak
5	Palmer's mariposa-lily
6	Salt marsh bird's-beak
7	Santa Barbara honeysuckle
8	Sonoran maiden fern
9	White-veined monardella

Legend

Study Area Location

5-Mile Radius

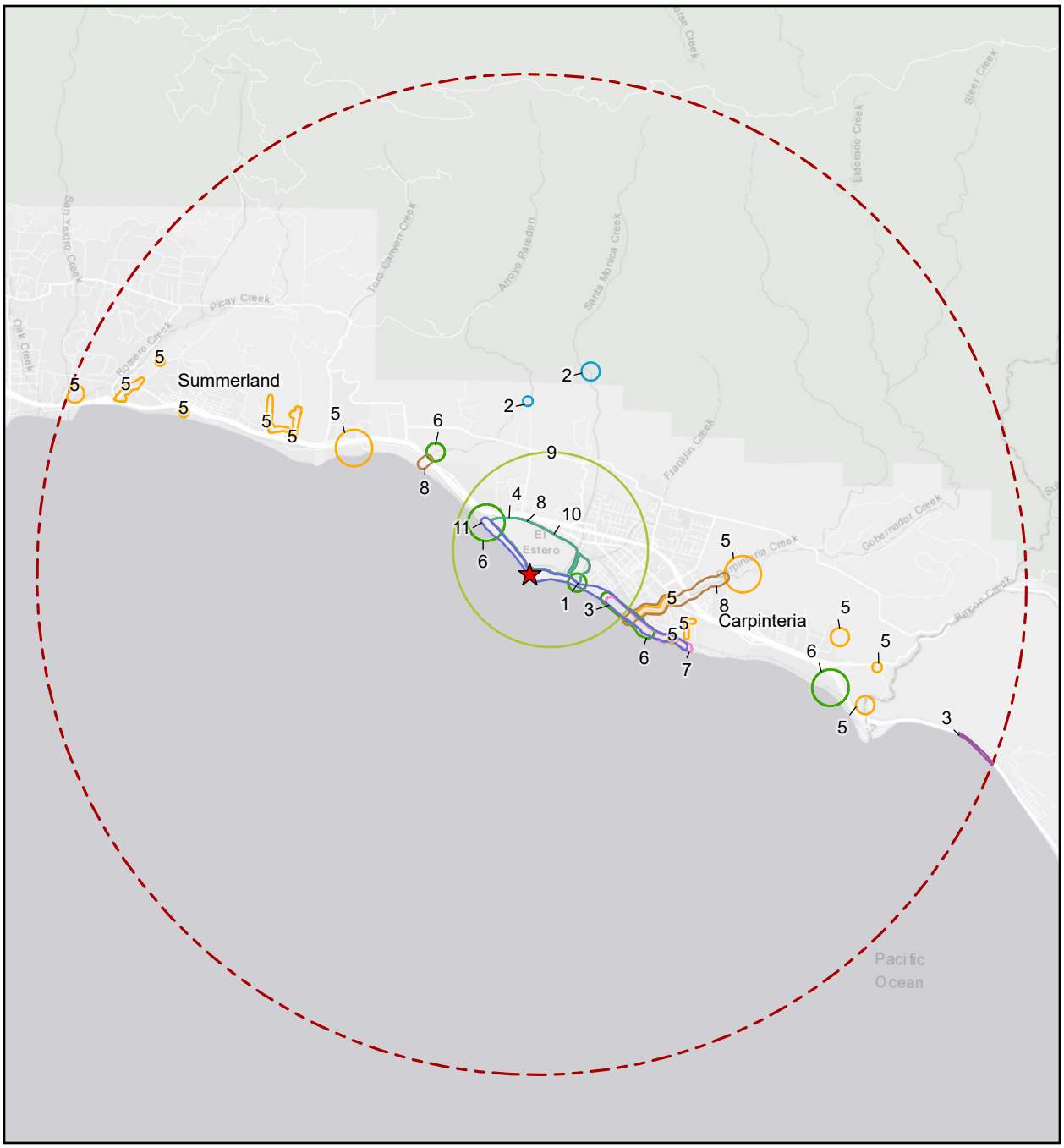
N

0 0.5 1 2 Miles

501 Sand Point Road
Map Center: 119.53776°W 34.39701°N
Santa Barbara County, California

CNDDB GIS Data Last Updated: July 2019

Figure 7. California Natural Diversity Database Animal Records



Label	Common Name
1	Belding's savannah sparrow
2	California red-legged frog
3	globose dune beetle
4	light-footed Ridgway's rail
5	monarch - California overwintering population
6	northern California legless lizard
7	sandy beach tiger beetle
8	tidewater goby
9	Townsend's big-eared bat
10	wandering (=saltmarsh) skipper
11	western snowy plover

Legend

Study Area Location

5-Mile Radius

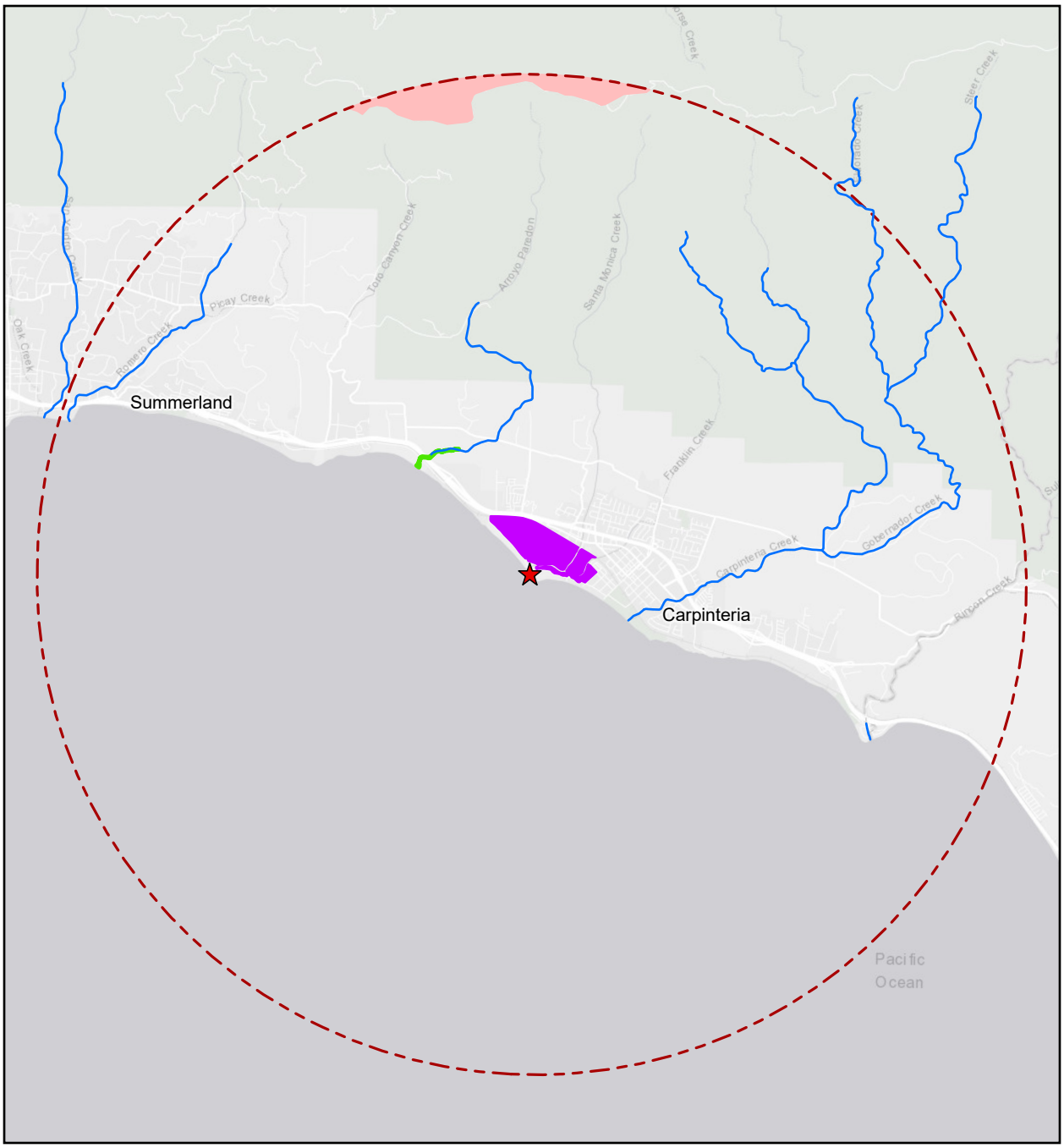
N

0 0.5 1 2 Miles

501 Sand Point Road
Map Center: 119.53776°W 34.39701°N
Santa Barbara County, California

CNDDB GIS Data Last Updated: July 2019

Figure 8. USFWS and NOAA NMFS Critical Habitat



Legend

NMFS Critical Habitat

Steelhead

USFWS Critical Habitat

California red-legged frog

Tidewater goby

Ventura Marsh Milk-vetch

Project Location

5-Mile Radius

N

0 0.5 1 2 Miles

501 Sand Point Road
Map Center: 119.53776°W 34.39701°N
Santa Barbara County, California

USFWS/NMFS Critical Habitat Data Last Updated:
August 2019

Figure 9. Impacts to Habitats

Habitat Types	Temporary Impacts (ac.)	Permanent Impacts (ac.)
Alkali heath marsh	0.00	0.00
Dune mat	0.11	0.08
Sandy beach	0.00	0.00
Ice Plant mats	0.09	0.06
Tidal Non-Wetland Waters	0.00	0.00
Road	0.00	0.10
Total	**0.20**	**0.24**

Legend

- Study Area (2.89 acres)
- Higher High Tide Line (6.5-Feet)
- 20-Foot Wetland Buffer

ESH Habitats (1.49 acres)

- Alkali heath marsh (0.01 ac)
- Dune Mat (0.46 ac)
- Sandy beach (0.07 ac)
- Tidal Non-Wetland Waters (0.95 acre)

Non-ESH Habitats (1.41 acres)

- Ice Plant mats (0.63 ac)
- Revetment (0.67 ac)
- Road (0.11 ac)

Special Status Plants

- Red Sand-verbena
- Wooly Seablite
- Inactive Nest

Permanent Impacts

- Building Footprint and Driveway
- Building Footprint + 5-Foot Buffer

Temporary Impacts

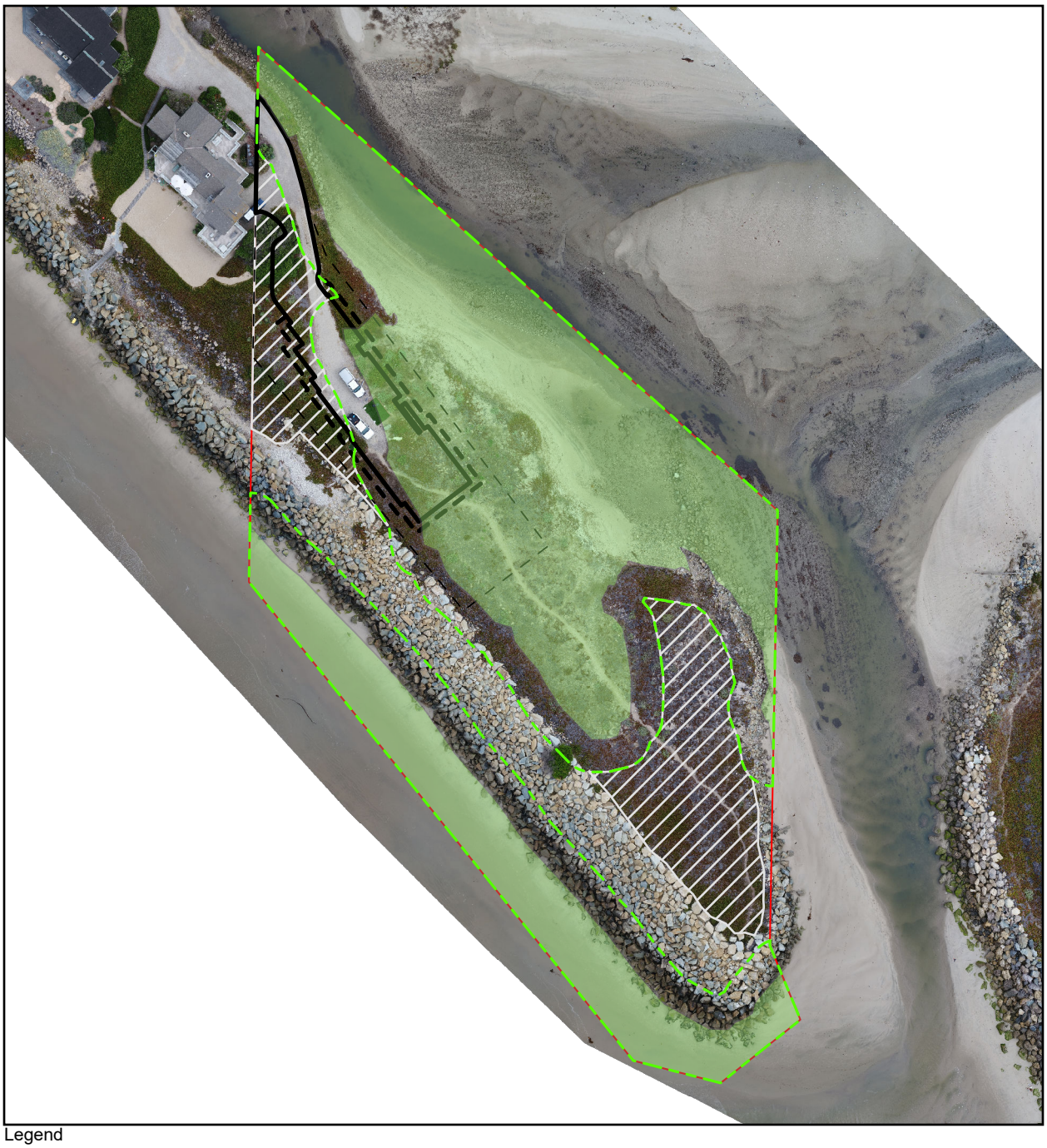
- Construction Staging

N

0 25 50 Feet

501 Sand Point Road
Map Center: 119.53813°W 34.39765°N
Santa Barbara County, California
Biological Survey Date: January 10, 2020
Topo Survey Date: October 25, 2019
Impact Data Received: March 10, 2020

Figure 10. Impacts to ESH



Legend

- ESH Habitat (1.49 acres)
- 20-Foot ESH Buffer
- Buildable Area
- Study Area (2.89 acres)

Permanent Impacts

- Building Footprint and Driveway
- Building Footprint + 5-Foot Buffer

Temporary Impacts

- Construction Staging

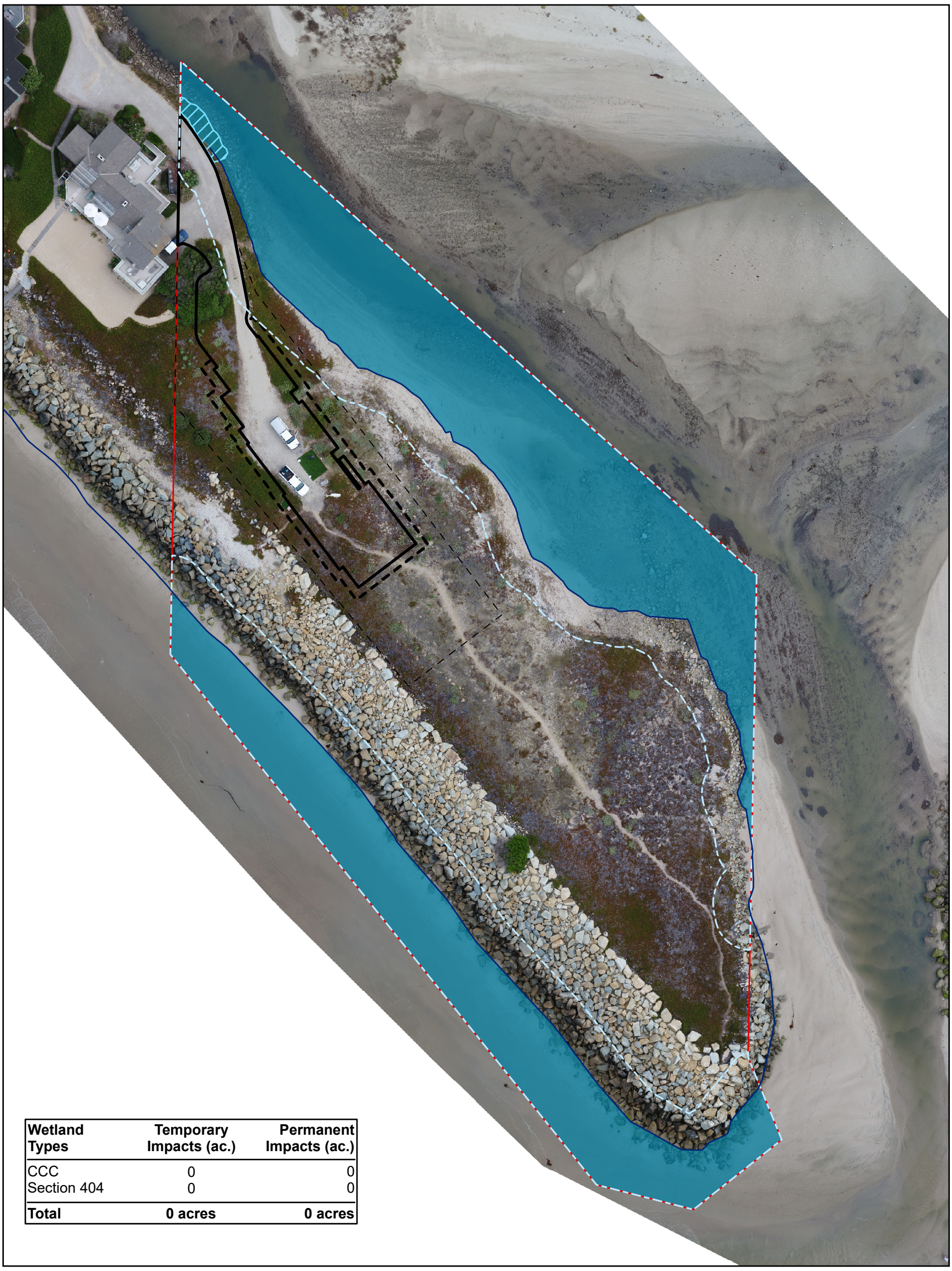
N

0 50 100 Feet

501 Sand Point Road
Map Center: 119.53814°W 34.39765°N
Santa Barbara County, California

Imagery Date: 2018
Impact Data Received: March 10, 2020

Figure 11. Impacts to Wetlands



Wetland Types	Temporary Impacts (ac.)	Permanent Impacts (ac.)
CCC	0	0
Section 404	0	0
Total	**0 acres**	**0 acres**

Legend

- Tidal Non-Wetland Waters (0.95 acre) CWA Section 404 (USACE)
- One Parameter Wetland (0.01 acre) California Coastal Commission
- 20-Foot Wetland Buffer

Permanent Impacts

- Building Footprint and Driveway
- Building Footprint + 5-Foot Buffer

Temporary Impacts

- Construction Staging

- Higher High Tide Line (6.5-Feet)
- Study Area (2.89 acres)

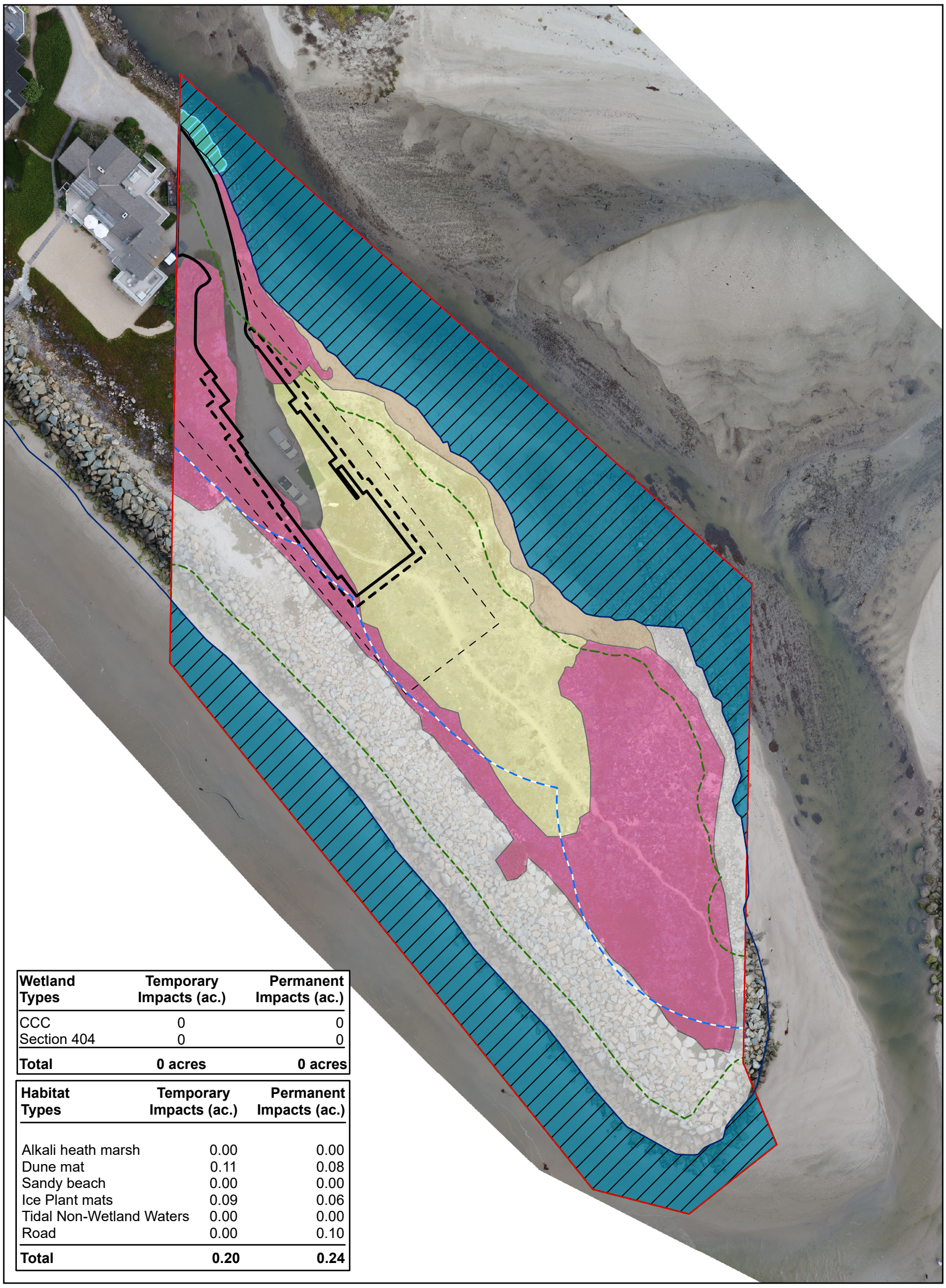
N

0 25 50 Feet

501 Sand Point Road
Map Center: 119.53813°W 34.39765°N
Santa Barbara County, California

Imagery Date: 2018
Impact Data Received: March 10, 2020

Figure 12. Proposed Impacts to Wetlands and Habitats



Wetland Types	Temporary Impacts (ac.)	Permanent Impacts (ac.)
CCC	0	0
Section 404	0	0
Total	**0 acres**	**0 acres**

Habitat Types	Temporary Impacts (ac.)	Permanent Impacts (ac.)
Alkali heath marsh	0.00	0.00
Dune mat	0.11	0.08
Sandy beach	0.00	0.00
Ice Plant mats	0.09	0.06
Tidal Non-Wetland Waters	0.00	0.00
Road	0.00	0.10
Total	**0.20**	**0.24**

Legend

- Study Area (2.89 acres)
- Higher High Tide Line (6.5-Feet)
- 20-Foot Wetland Buffer
- 100-Foot Wetland Buffer
- CCC Wetland (0.01 acre)
- Tidal Non-Wetland Waters (0.95 acre) CWA Section 404 (USACE)

ESH Habitats (1.49 acres)

- Alkali heath marsh (0.01 ac)
- Dune Mat (0.46 ac)
- Sandy beach (0.07 ac)
- Tidal Non-Wetland Waters (0.95 acre)

Non-ESH Habitats (1.41 acres)

- Ice Plant mats (0.63 ac)
- Revetment (0.67 ac)
- Road (0.11 ac)

Permanent Impacts

- Building Footprint and Driveway
- Building Footprint + 5-Foot Buffer

Temporary Impacts

- Construction Staging

N

0 25 50 Feet

501 Sand Point Road
Map Center: 119.53813°W 34.39765°N
Santa Barbara County, California

Biological Survey Date: January 10, 2020
Impact Data Received: March 10, 2020

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9 APPENDICES

- **Appendix A. Stantec Existing Conditions**
- **Appendix B. Architectural Site Plans (Two Trees Architecture)**
  - Sheet Bio-1 Vegetation Delineation
  - Sheet Bio-2a Proposed Development
  - Sheet Bio-3 Proposed Development
  - Sheet Bio-4 Construction Fence Location
  - Sheet Bio-5 Aerial Footprint Breakdown
  - Sheet A4.01 Elevations
  - Sheet A1.03 Site Sections
  - Sheet A2.03 Roof Plan
- **Appendix C. American Bird Conservancy Guardian Glass Test Results (February 2020)**
- **Appendix D. Wetland Delineation (Althouse and Meade 2020)**
- **Appendix E. Soils Report**
- **Appendix F. Special Status Plant Species Reported from the Region**
- **Appendix G. Special Status Animal Species Reported from the Region**

APPENDIX A. STANTEC EXISTING CONDITIONS

SURVEYOR'S NOTES

1. MAPPING

AERIAL TOPOGRAPHY
TOPOGRAPHIC MAPPING WAS COMPILED AT A SCALE OF 1"=30', WITH A 1 FOOT CONTOUR INTERVAL, USING STANDARD PHOTOGRAMMETRIC METHODS AND PROCEDURES BY STANTEC FROM AERIAL PHOTOGRAPHY DATED OCTOBER 25, 2019.

AERIAL PHOTOGRAPHY
THE AERIAL PHOTOGRAPHY USED AS THE BACKGROUND FOR THIS MAP WAS OBTAINED ON OCTOBER 25, 2019 BY STANTEC. THE PHOTOGRAPHY HAS BEEN CONVERTED INTO A DIGITAL FORMAT AND CORRECTED FOR HORIZONTAL AND VERTICAL DISTORTION USING STANDARD PHOTOGRAMMETRIC METHODS.

2. MAPPING COORDINATES

CALIFORNIA COORDINATE SYSTEM, NAD 83, (CCS83) ZONE 5 GRID (EPOCH 2007.0).

3. ELEVATIONS

ELEVATIONS SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). SEE CONTROL POINT LISTING.

4. BOUNDARY AND EASEMENTS

BOUNDARY AND EASEMENTS AS SHOWN HEREON ARE PER FIDELITY NATIONAL TITLE COMPANY REPORT NO. 420415009G-JH, DATED FEBRUARY 27, 2017 AND IS ASSUMED TO BE ACCURATE AND COMPLETE.

FEMA DESIGNATIONS PER MAP NUMBER 06083C1418H DATED 09/28/2018.

5. GENERAL NOTE

THE US ARMY CORPS OF ENGINEERS' APPROXIMATE JURISDICTION LIMITS EXTEND TO THE MEAN HIGH WATER (MHW) ELEVATION 4.55 NAVD88 FOR SECTION 10 HARBORS AND RIVERS ACT AND BETWEEN THE MEAN HIGHER HIGH WATER (MHHW) ELEVATION 5.4 AND THE HIGHEST ASTRONOMICAL TIDE (HAT) ELEVATION 7.14 NAVD88 FOR USACE CLEAN WATER ACT SECTION 404 ELEVATION 6.5 NAVD88. THE ELEVATIONS ABOVE REFERENCED ARE PER THE NOAA PUBLISHED DATA FOR SANTA BARBARA STATION 9411340 ACCEPTED NOVEMBER 7, 2016, PER NAVD88 DATUM EXPRESSED IN US FEET

CONTROL POINT LISTING

HORIZONTAL: NAD83 CA 5, US SURVEY FEET
VERTICAL: NAVD88, US SURVEY FEET

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	1,971,006.181	6,097,463.150	8.136	FD 60D
4	1,970,636.933	6,097,757.984	10.516	FD 1/2IN IP W/PLUG
100	1,970,512.095	6,097,731.811	16.044	SET ATGT + ON ROCK
101	1,970,735.941	6,097,540.902	16.448	SET ATGT + ON ROCK
102	1,971,039.126	6,097,444.780	8.103	SET ATGT + ON AC
200	1,971,756.110	6,096,975.257	7.624	FD 2" BRASS CAP (BM)

SURVEYOR'S STATEMENT

THIS MAP, AND THE SURVEY IT REPRESENTS, WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

KENNETH J. WILSON, PLS 7911

DATE: JANUARY 2, 2020

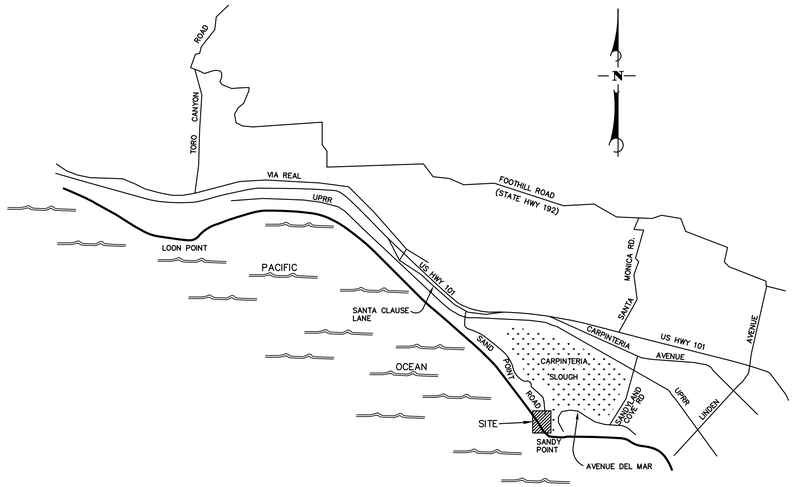
PROFESSIONAL LAND SURVEYOR
KENNETH J. WILSON
NO 7911
STATE OF CALIFORNIA

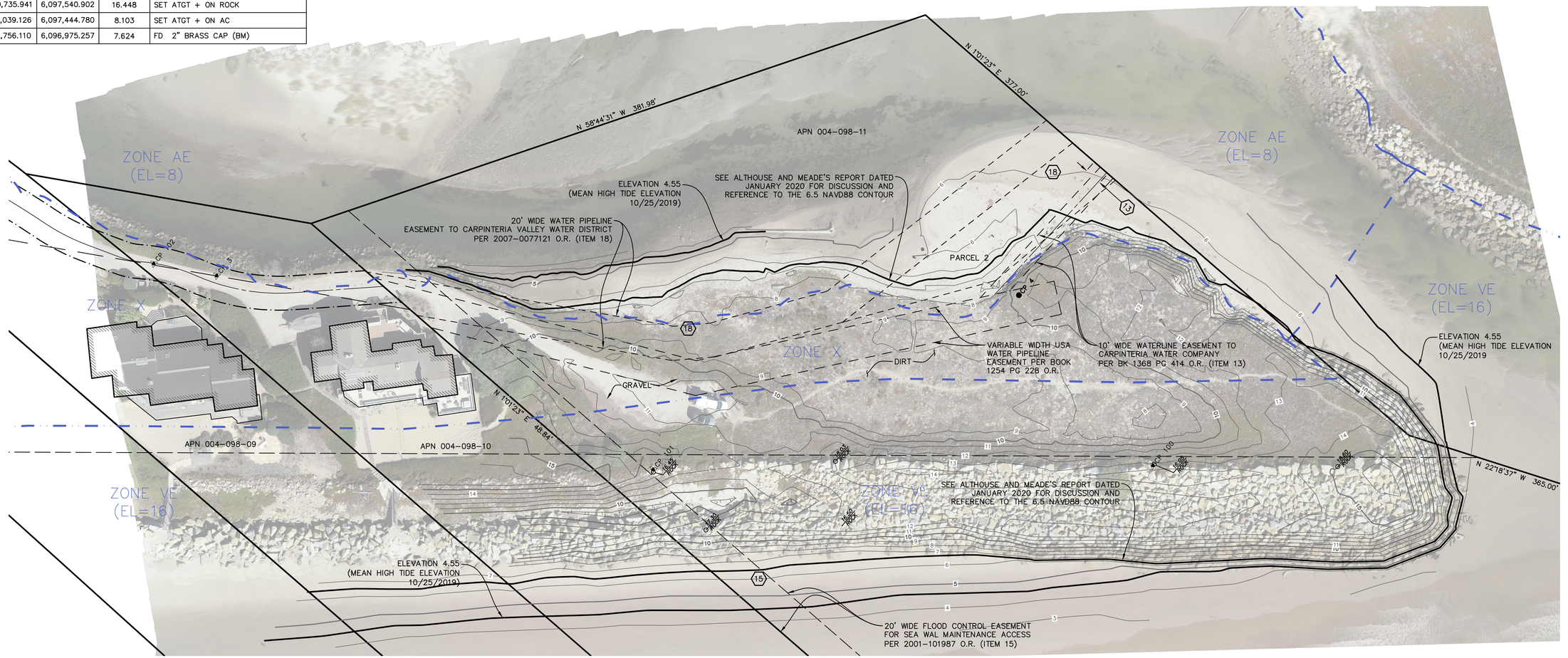
EXCEPTION NOTES

(NUMBER CORRESPONDS TO ITEM NUMBER IN PRELIMINARY TITLE REPORT. NOT ALL EXCEPTION ITEMS ARE NOTED.)

13. EASEMENT TO CARPINTERIA WATER COMPANY PER INSTRUMENT NO. 5360, BOOK 1368, PAGE 414, O.R.
15. EASEMENT TO COUNTY OF SANTA BARBARA PER INSTRUMENT NO. 2001-0101987 O.R.
18. EASEMENT TO CARPINTERIA VALLEY WATER DISTRICT PER INSTRUMENT NO. 2007-0077121 O.R.
19. EASEMENT TO CARPINTERIA SANITARY DISTRICT PER INSTRUMENT NO. 2011-57872 O.R. IS NOT LOCATABLE FROM RECORD INFORMATION

VICINITY MAP NO SCALE





SCALE: 1"=30'
0 30 60 90

NO.	DATE	REVISIONS	APPD.
1	10/25/19	UPDATE SURFACE AND ORTHO	
2	11/26/19	UPDATE MAP LABELS AND NOTES	
3	12/30/19	UPDATE MAP LABELS AND NOTES	

Stantec
111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532 Fax: (805) 966-9801

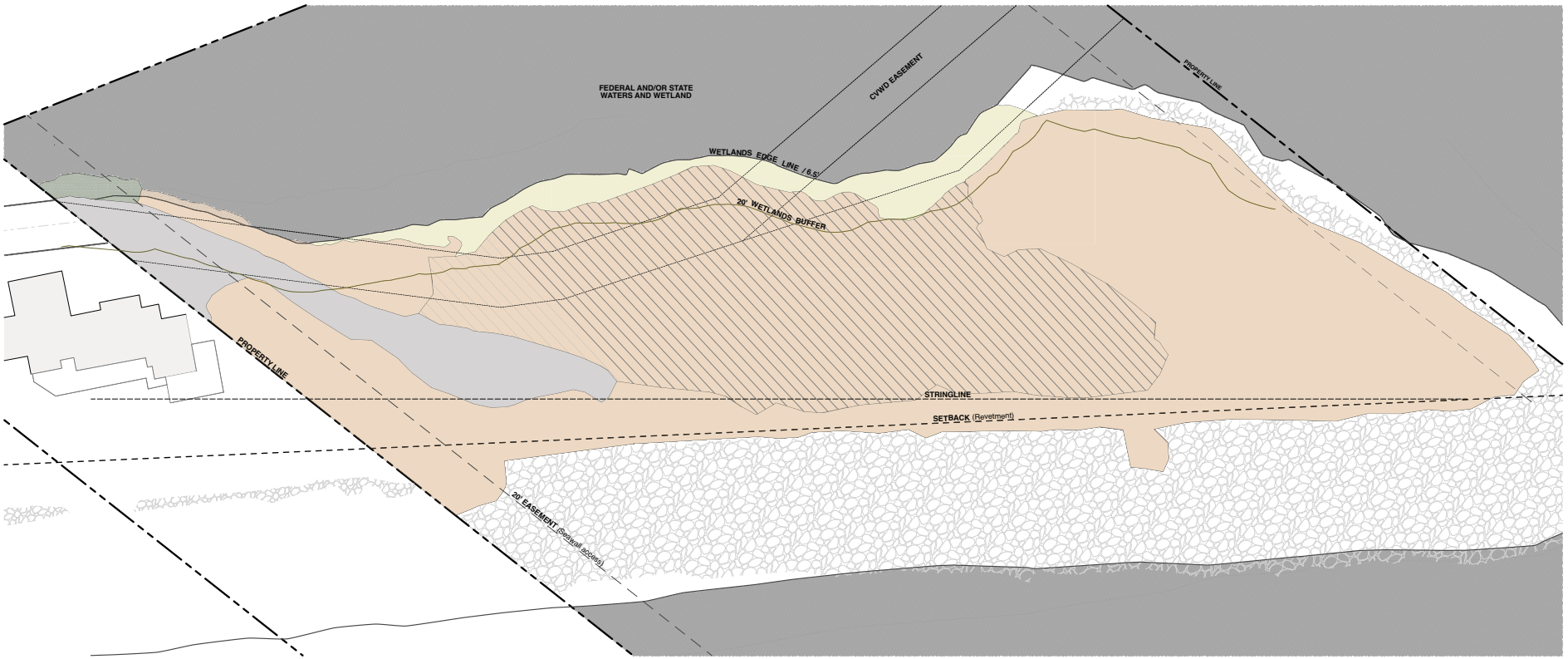
FIELD CREW: HMG
SURVEY COMPLETED: 10/25/19
OFFICE TECH: ECR & HMG
COMPILATION COMPLETED: 12/30/2019

EXHIBIT
501 SANDPOINT ROAD
CARPINTERIA, CALIFORNIA
JANUARY 2020

PROJECT NUMBER 2064153401
SHEET 1 OF 1
DWG 2064153401-TOPO 2019UPDATE.DWG

DWG PATH: V:\2064\ACTIVE\2064153401\GEOMATICS\CAD\2064153401-TOPO 2019UPDATE.DWG
PLOT DATE: 12/2/2020 9:51:28 AM
SAVED DATE: 12/2/2020

APPENDIX B. ARCHITECTURAL SITE PLANS (TWO TREES ARCHITECTURE)

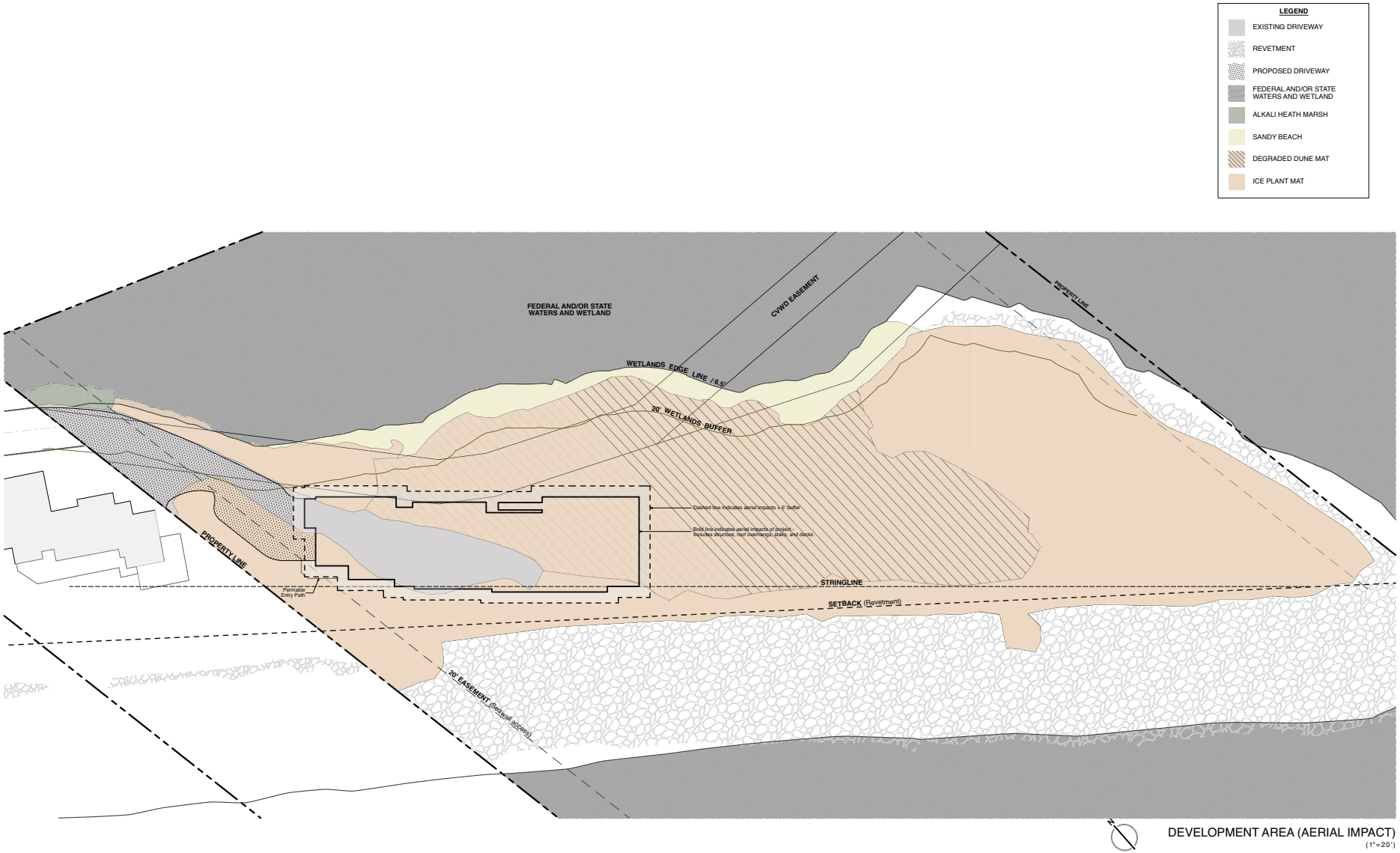


VEGETATION PLAN
(1"=20')

VEGETATION DELINEATION

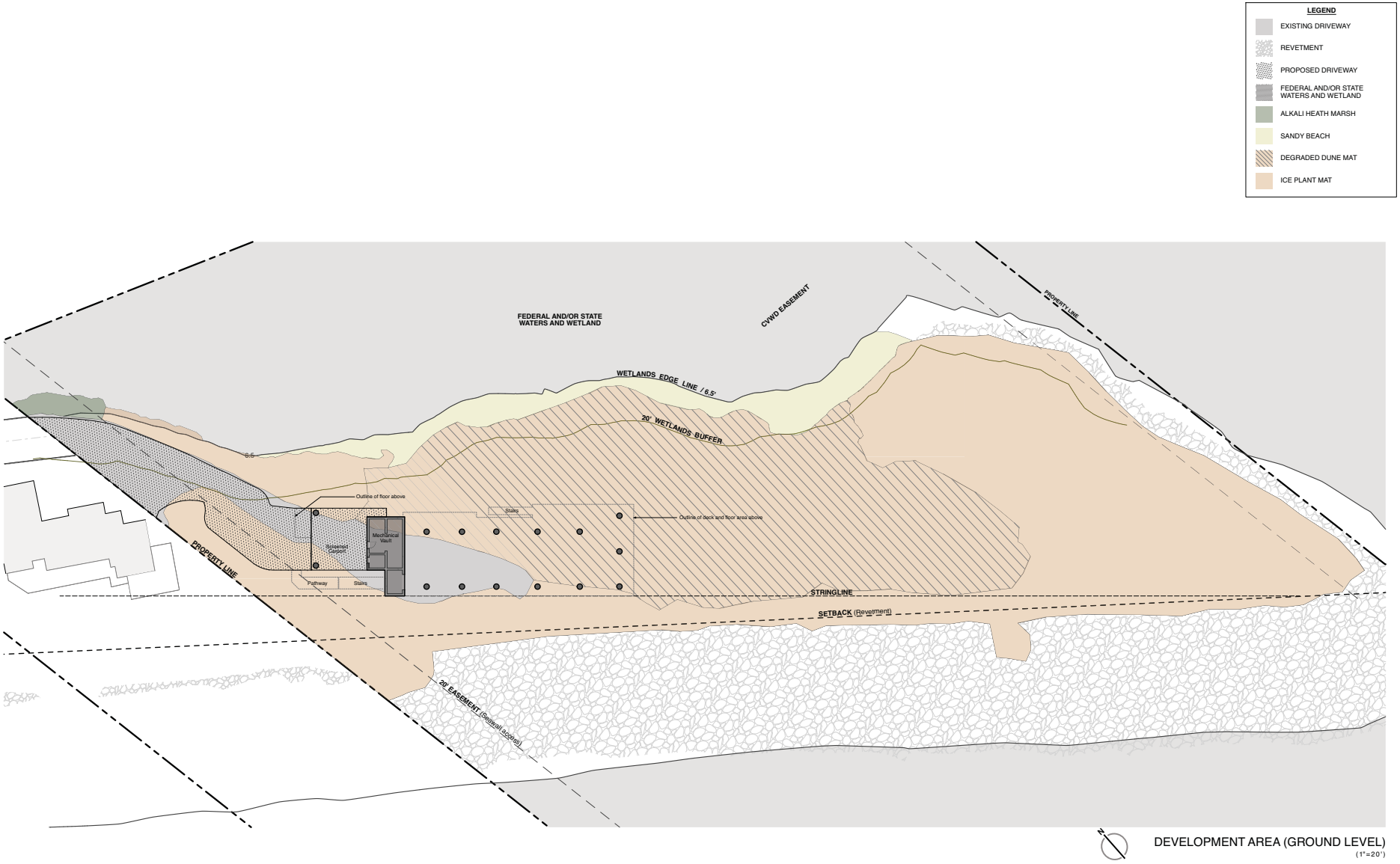
VEGETATION AND EASEMENTS

BIO-1

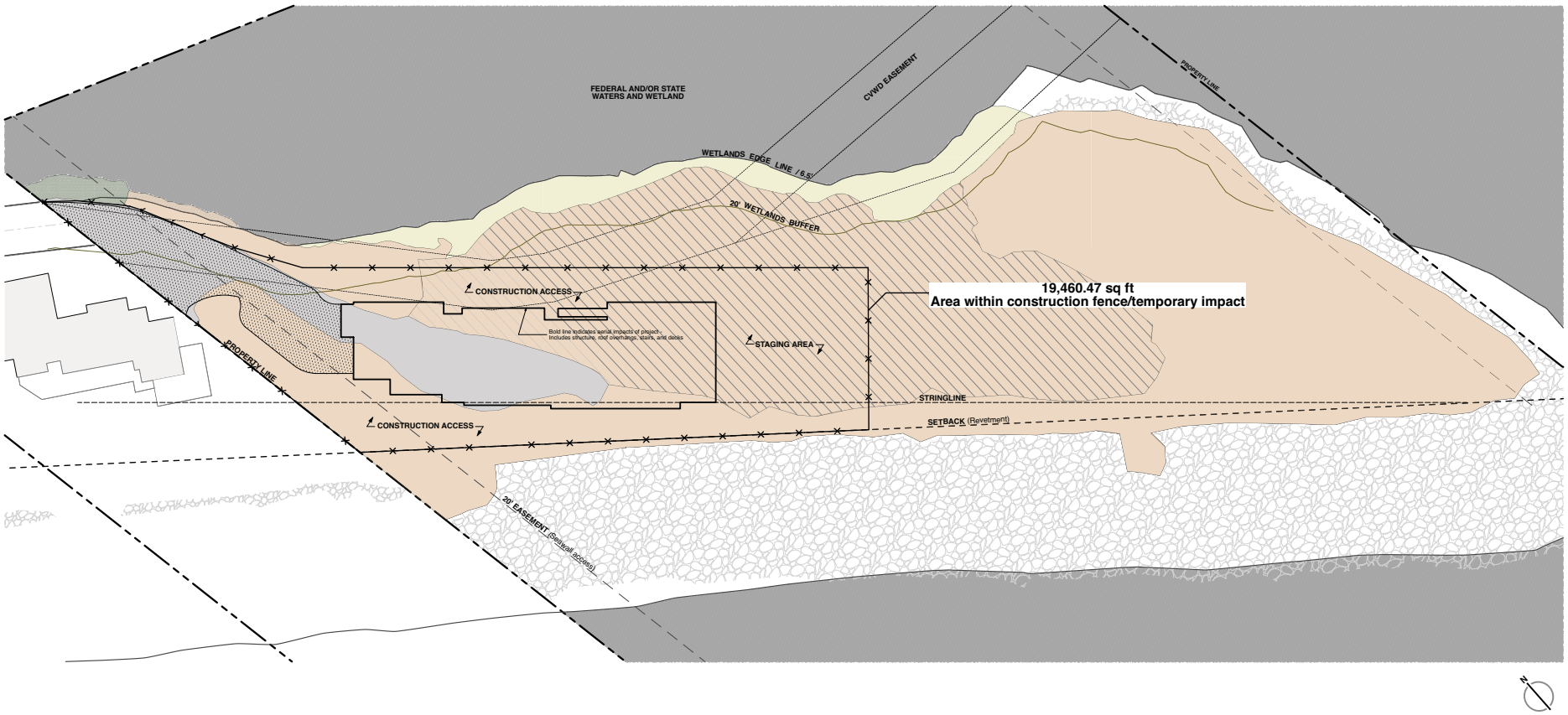


PROPOSED DEVELOPMENT

BIO-2a



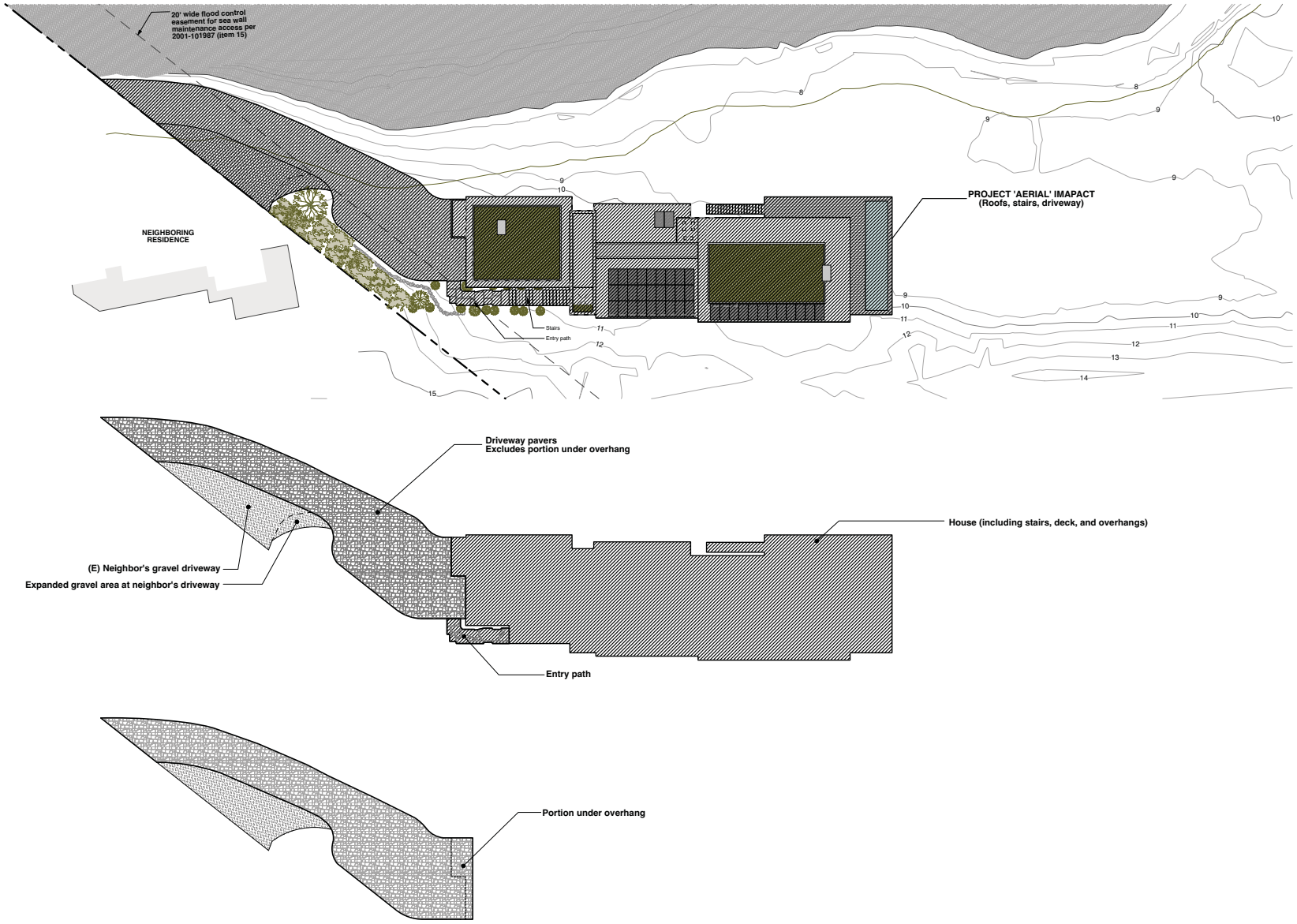
PROPOSED DEVELOPMENT BIO-3



CONSTRUCTION FENCE LOCATION

SCALE: 1" = 20'

BIO-4



AERIAL FOOTPRINT BREAKDOWN

SCALE: 1/16" = 1'-0"

BIO-5

WEST ELEVATION

SCALE: 1/8" = 1'-0"

SOUTH ELEVATION

SCALE: 1/8" = 1'-0"

EAST ELEVATION

SCALE: 1/8" = 1'-0"

NORTH ELEVATION

SCALE: 1/8" = 1'-0"

TWO TREES ARCHITECT

LICENSED ARCHITECT DANIEL R. LOBRING LIC. # C32281 REN. 10/31/2017 STATE OF CALIFORNIA

PRELIMINARY NOT FOR CONSTRUCTION

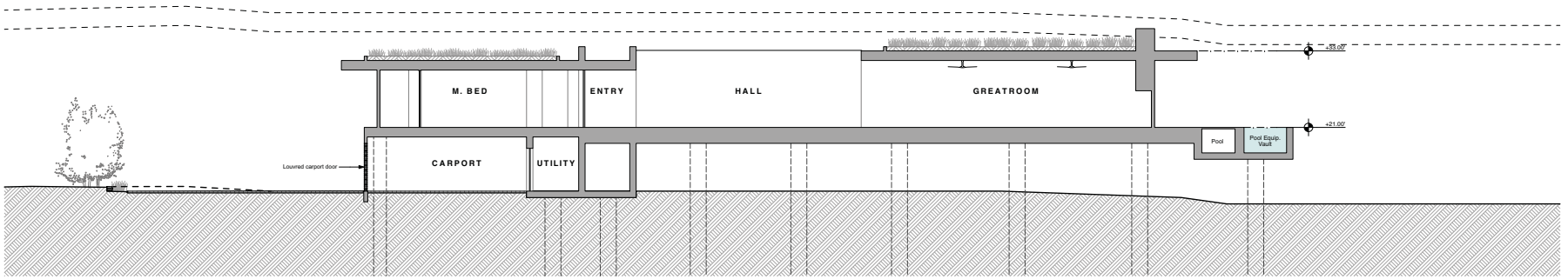
PROJECT:
SANDDEW
501 Sand Point Road
Carpinteria, CA 93013
004-098-11

JOB NUMBER:
1815

DATE ISSUED:

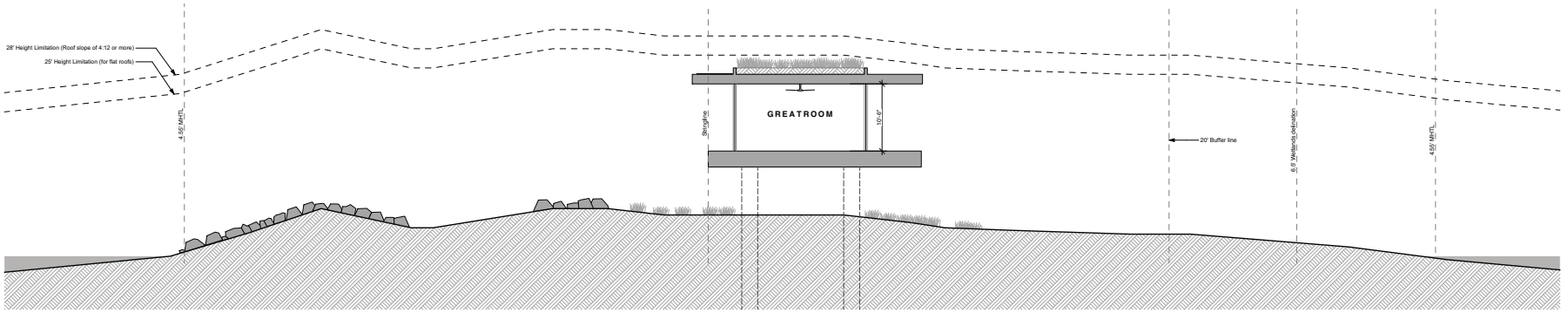
PRINTED 2/25/20

SHEET:
A4.01
OF:



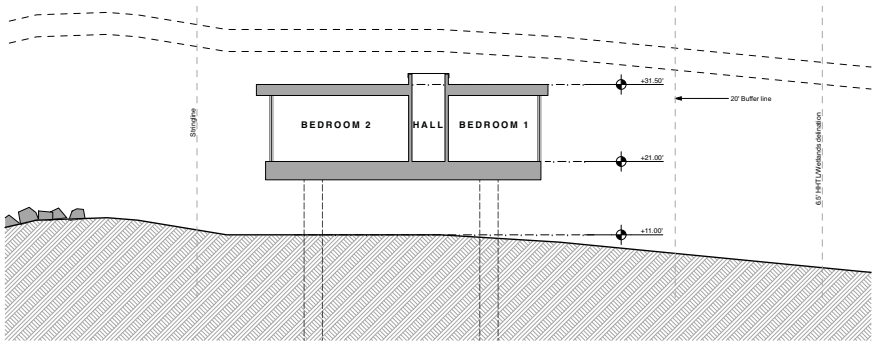
D

SCALE: 1/8" = 1'-0"



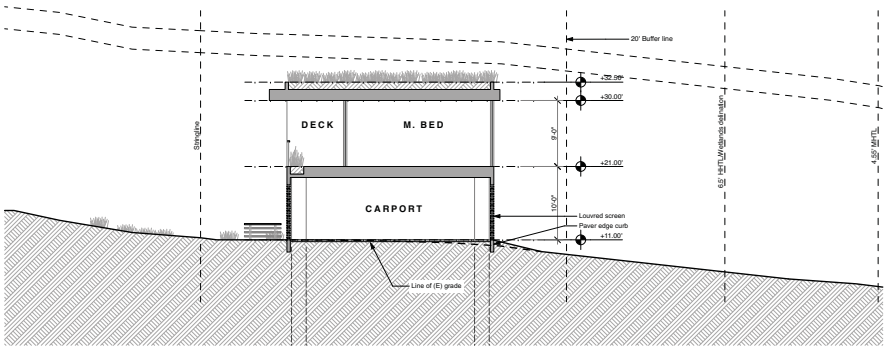
C

SCALE: 1/8" = 1'-0"



B

SCALE: 1/8" = 1'-0"



A

SCALE: 1/8" = 1'-0"

SITE SECTIONS

SCALE: 1/8" = 1'-0"

TWO TREES ARCHITECT

LICENSED ARCHITECT
DANIEL M. LOUPRET
LIC. # C32281
REN. 10/31/2017
STATE OF CALIFORNIA

PRELIMINARY
NOT FOR
CONSTRUCTION

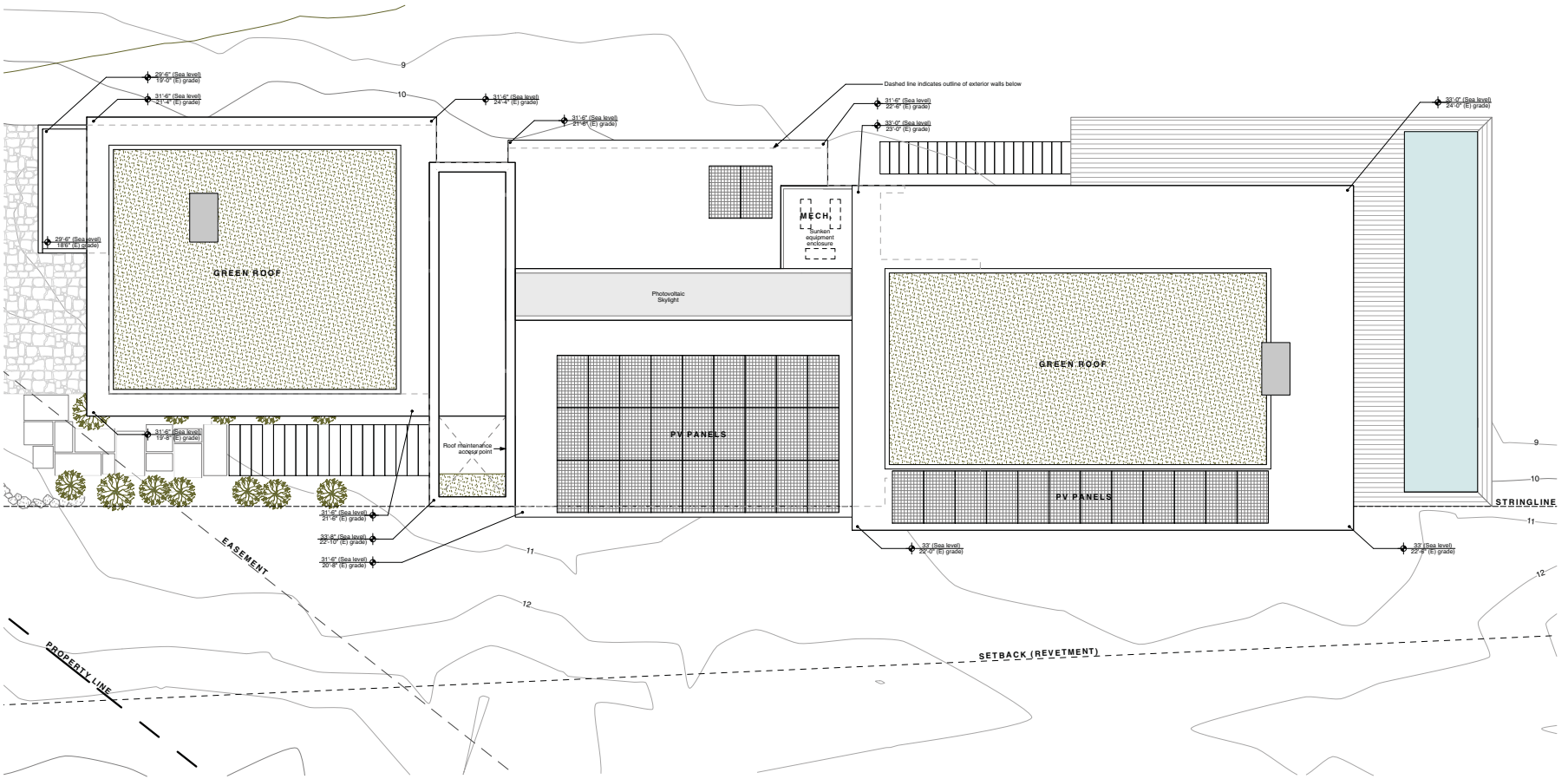
PROJECT:
SANDDEW
501 Sand Point Road
Carpinteria, CA 93013
004-098-11

JOB NUMBER:
1815

DATE ISSUED:

PRINTED 2/25/20

SHEET:
A1.03
OF:



ROOF PLAN

SCALE: 3/16" = 1'-0"

TWO TREES ARCHITECT

LICENSED ARCHITECT
DANIEL M. LOBRING
LIC. # C32281
REN. 10/31/2017
STATE OF CALIFORNIA

PRELIMINARY NOT FOR CONSTRUCTION

PROJECT:
SANDDEW
501 Sand Point Road
Carpinteria, CA 93013
004-098-11

JOB NUMBER:
1815

DATE ISSUED:

PRINTED 2/25/20

SHEET:
A2.03
OF:

APPENDIX C. AMERICAN BIRD CONSERVANCY GUARDIAN GLASS TEST RESULTS (FEBRUARY 2020)

AMERICAN BIRD CONSERVANCY

Shaping the future for birds

Guardian Glass test results with ABC
February 2020

This document was prepared by Guardian Glass to summarize testing results received from American Bird Conservancy and is distributed with approval from ABC. All results below were tested at Powdermill Avian Research Center in Rector, PA.

To pass configurations must score 70 or greater in Avoidance Index (AI).

Bird1st with SN68 and inboard lamination
Bird strike deterrent: Bird1st surface 1, vertical stripes, 30% coverage
Configuration: IGU with inboard laminate
Low-e: SN 68
Results reported December 1st, 2016
AI Score: 74
Useable Flights: 80
MT Score: 26

Bird1st with SN 68 and outboard lamination
Bird strike deterrent: Bird1st surface 1, vertical stripes, 50% coverage
Configuration: IGU with outboard laminate
Low-e: SN 68
Result reported on November 17th, 2017
AI Score: 70
Useable Flights: 80
MT Score: 30

Bird1st with SNX 62/27 and outboard lamination
Bird strike deterrent: Bird1st surface 1, vertical stripes, 50% coverage
Configuration: IGU with outboard laminate
Low-e: SNX 62/27
Result reported on December 1st, 2018
AI Score: 75
Useable Flights: 81
MT Score: 25

1731 Connecticut Avenue, NW, 3rd Floor • Washington, D.C. 20009
Tel: 202-234-7181 • Fax: 202-234-7182 • abc@abcbirds.org • www.abcbirds.org

Testing notes

1. Avoidance Index (AI) Scores indicate the fraction of trials in which birds flew towards the unpatterned control glass. When the tunnel test is run with two pieces of unpatterned glass, 50% of birds fly to the left and 50% to the right, so Avoidance Index Scores range from 50- 100.
2. A score of 50 therefore means 'no deterrent effect' for a test material. For this reason, the AI must be understood as an index of how well a material will perform at reducing collisions, relative to other tested materials, when installed on a structure.
3. The AI correlates with performance when the pattern is visible; if the pattern is on an internal surface, reflections on surface one can diminish actual effectiveness when the material is installed on a structure.
4. At least 80 trials were run for each sample.
5. All samples tested *with* background.
6. As of June 2015, Material Threat (MT) Scores are calculated as (1 - AI) x 100. Note that this calculation is determined by the LEED Pilot Credit committee and is subject to change.
7. All testing with standard mirrors

APPENDIX D. WETLAND DELINEATION (ALTHOUSE AND MEADE 2020)

Delineation of Potentially Jurisdictional Wetlands and Waters

for

501 Sand Point Road

Carpinteria, Santa Barbara County

Prepared for

Siemens Planning
5210 Carpinteria Avenue #103
Carpinteria, CA 93013

by

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES
1602 Spring Street
Paso Robles, CA 93446
(805) 237-9626

April 2020

1176.01

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Exhibit

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Cover Page: 501 Sand Point subtidal channel, view northwest. July 22, 2019.

List of Acronyms and Abbreviations

[Flood Zone] AE	Base floodplain where base flood elevations are provided.
AC	Aquent soil
BE	Beach soil
CCA	California Coastal Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CO-OPS	Center for Oceanographic Products and Services
CSM	Carpinteria Salt Marsh
CWA	Clean Water Act
EPA	Environmental Protection Agency
FEMA-FIRM	Federal Emergency Management Agency Flood Insurance Rate Map
GPS	Global Positioning System
HAT	Highest Astronomical Tide
HUC	Hydrologic Unit Code
LCP	Local Coastal Plan
MHHW	Mean Higher High Water
MHT	Mean High Tide
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resource Conservation Service
NTCHS	National Technical Committee for Hydric Soils
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SSURGO	Soil Survey Geographic Database
SWRCB	State Water Resources Control Board
TOB	Top of Bank
TNW	Traditional Navigable Water
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WETS	Climate Analysis for Wetlands Tables
WOTUS	Waters of the United States

Definitions of Wetland Indicators

Wetland Plant Indicator Status Ratings In Order of Wetland Affinity

OBL	Obligate	Hydrophyte, almost always occur in wetland. Estimated probability >99 percent to occur in wetlands under natural conditions.
FACW	Facultative Wetland	Hydrophyte, usually occur in wetland, but may occur in non-wetland. Estimated probability >67% to 99% to occur in wetlands under natural conditions.
FAC	Facultative	Equally likely to occur in wetland and non-wetland. Estimated probability 33% to 67% to occur in wetlands under natural conditions.
FACU	Facultative Upland	Non-hydrophyte, usually occurs in non-wetland, but may occur in wetland. Estimated probability 1% to <33% to occur in wetlands under natural conditions.
UPL	Upland	Almost never occur in wetland. Estimated probability <1% to occur in wetlands under natural conditions.
NL	No Listed	Species not included in the federal list of wetland indicator plants. Assumed upland for purposes of wetland analysis.

1 INTRODUCTION

1.1 Purpose

This report provides a delineation of potential jurisdictional wetlands and non-wetland waters according to federal standards on 501 Sand Point Road (Study Area), located in Carpinteria in Santa Barbara County, California (Figure 1). Siemens Planning requested this delineation from Althouse and Meade, Inc. (Table 1). Its purpose is to describe potentially jurisdictional waters and wetlands according to the Clean Water Act (CWA) Section 404, the California Coastal Act (CCA), Fish and Game Code Section 1600, and the local coastal plan. This document presents a comprehensive inventory and mapping effort of wetland and non-wetland aquatic resources within the Study Area and provides information for owners, the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), California Department of Fish and Wildlife (CDFW), California Coastal Commission, and the County of Santa Barbara in decisions regarding activities on the Study Area. Section 2.0 provides more detail on the regulatory framework and scope of this jurisdictional delineation.

TABLE 1. RESPONSIBLE PARTIES

Owner/Applicant	Project Planner	Wetland Scientist
Sanddew LLC 501 Sand Point Road Carpinteria, CA 93013 (831) 200-4015	**Siemens Planning** 5210 Carpinteria Ave #103 Carpinteria, CA 93013 (805) 403-1199	**Althouse and Meade, Inc.** 1602 Spring St Paso Robles, CA 93446 (805) 237-9626
Contact: Mark Massara mark@markmassara.com	Contact: Jennifer Siemens jennifer@siemensplanning.com	Contact: LynneDee Althouse lynnedee@althouseandmeade.com

1.2 Study Area Location and Extent

The 8.95-acre parcel (APN 004-098-011) is located at the end of Sand Point Road about 1.25-miles from the Santa Clause Lane Highway 101 on/off ramp. Approximate coordinates for the center of the Study Area are 34.3975° N / -119.5380° W (WGS84) in the Carpinteria United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 2). Elevation ranges from approximately 0 to 16 feet above mean sea level. The Study Area is located in an unincorporated portion of Santa Barbara County inside the Coastal Zone.

The subject property extends north into the Carpinteria Salt Marsh, and south into the Pacific Ocean. The Study Area is limited to the portion of the property onshore and the area just offshore (2.88 acres). The east side of the parcel includes a portion of the mouth of the Carpinteria Salt Marsh (CSM), a 230-acre estuary that lies within the jurisdictional boundaries of the County of Santa Barbara. Portions of CSM are privately owned, and a portion known as the Carpinteria Salt Marsh Reserve (CSMR) is owned by the University of California. CSM is managed by the University as a single reserve and an integrated ecosystem.

1.3 Current Conditions

The County of Santa Barbara Coastal Land Use Plan (republished May 2014) shows residential properties on both sides of the mouth of CSM. The estuary is identified as "El Estero" in the County's generalized land use plan for the Carpinteria Valley Planning Area.

A visual assessment of satellite imagery suggest that the Study Area has been fundamentally unchanged for more than 20 years (Google Earth 1994). A dirt road connects from the end of San Point Road to the center of the Study Area. A small gravel parking area is located on the west end of the Study Area. No structures exist on the Study Area. A seawall borders the property to the south, and the CSM borders the property to the north with the marsh's connection to the Pacific Ocean bordering the east side of the property. One myoporum tree (*Myoporum laetum*) is located along the seawall on the south side of the property. Annual and perennial grasses, forbs, and salt marsh plant species dominate vegetated portions of the site.

1.3.1 Hydrology

The Study Area is in the Santa Barbara Coastal watershed (Hydrologic Unit, aHUC8) which is formed by the southern aspect of the Santa Ynez Mountains. The primary tributary to CSM is Santa Monica Creek (HUC12, Figure 3). The Study Area is a Holocene beach deposit with a seawall separating the property from the Pacific Ocean to the south. A 2007 USGS map describes the formation as "unconsolidated sand along coastal beaches. Thickness varies seasonally and rarely exceeds 5 m [16.4 ft]." The CSM borders the north and east side of the property with the Pacific Ocean connection to the east. Marsh water levels fluctuate with the daily tide changes. Figure 4 and Figure 5 shows that the Study Area is within a base flood elevation of 5 feet (NGVD29, Zone AE) in the National Flood Hazard Layer (FEMA 2019). Flood Zone AE indicates 1% probability of flooding every year (also known as the "100-year floodplain"), and where predicted flood water elevations above mean sea level have been established. Flood zone classifications are provided in Appendix A.

1.3.2 Vegetation and Habitats

Vegetation across the Study Area transitions from perennial grass dominated on the west side to sea fig (*Carpobrotus chilensis*) dominated on the east. A small trail connects the west side of the Study Area to the east side. The Study Area is dominated by vegetation with a small sandy beach on the north side of the property where tide fluctuations prevent vegetation establishment. The west side of the Study Area is dominated by salt grass (*Distichlis spicata*), with scattered yellow-bush lupine (*Lupinus arboreus*) and patches of sea fig. The east side of the Study Area is dominated by sea fig, pitseed gooseplant (*Chenopodium berlandieri*), and California bur clover (*Medicago polymorpha*). Woolly seablite (*Suaeda taxifolia*), beach evening primrose (*Camissoniopsis cheiranthifolia* ssp. *suffruticosa*), alkali heath (*Frankenia salina*), and coastal goldenbush (*Isocoma menziesii* ssp. *decumbens*) are scattered throughout the Study Area.

1.3.3 Soils

Two individual soil map units from the Natural Resource Conservation Service (NRCS) Soil Survey Geographic Database (SSURGO) overlap the Study Area: Aquents, fill areas (AC); and

Beaches (BE) (Soil Survey Staff 2017). A custom soil report for the Study Area can be found as Appendix B.

1.3.4 Climate

Wetland Climate Tables, or WETS data provides thresholds for rainfall expectations. Rainfall data was collected for Santa Barbara (Station ID 047902, 8.9-miles west of Project site) by the NOAA (National Oceanic and Atmospheric Administration) Regional Climate Centers (NOAA 2020). Chart 1 indicates that the average annual rainfall in the past 30-years is 18 inches, with maximum precipitation typically from January to March (Table 2 and Chart 2). As shown, the rainfall from 2016 to 2017 indicates that it was a good rain year leading into July and September 2017 when the soil pits were taken. In addition, last year's rainfall (2018-2019) is above average, as well as the months leading into the 2019-2020 season, particularly in the month of December 2019.

CHART 1. TOTAL ANNUAL PRECIPITATION BY YEAR (INCHES)

Total annual precipitation (inches) from 1990 to 2019 compared to average.

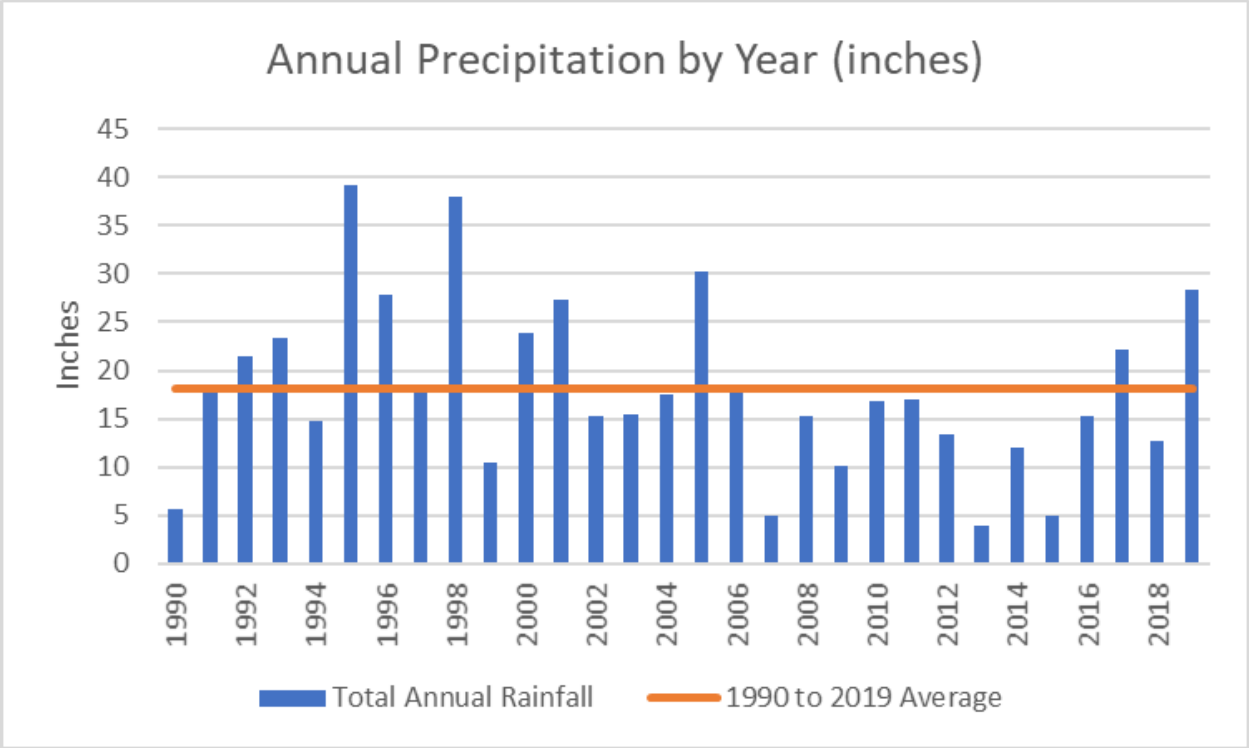


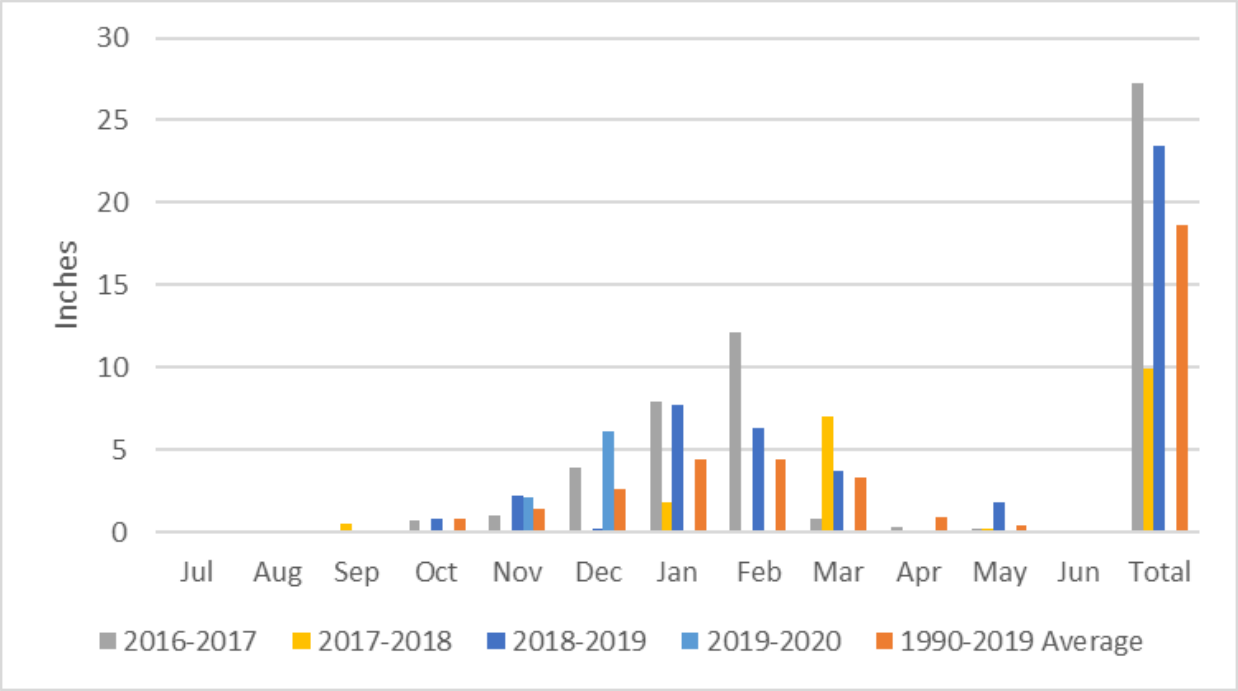
TABLE 2. PRECIPITATION BY MONTH

The historical average by month from 1990 to 2019 (30 years) compared to the 2016-2017 rain year, 2018-2019 rain year, and current rain year (2019-December 2019) (NOAA 2020).

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
1990-2019 Average	0	0.01	0.06	0.85	1.42	2.61	4.47	4.48	3.30	0.90	0.43	0.13	**18.66**
2016-2017	0	0	0.02	0.71	1.01	3.91	7.98	12.11	0.85	0.35	0.28	0.03	**27.25**
2017-2018	0	0.02	0.49	0	0.08	0	1.83	0.03	7.08	0.05	0.24	0.09	**9.91**
2018-2019	0.01	0	0	0.86	2.28	0.28	7.78	6.31	3.75	0.18	1.88	0.08	**23.41**
To 12/19	0	0	0	0	2.15	6.18	--	--	--	--	--	--	--

CHART 2. PRECIPITATION BY MONTH

The historical average by month from 1990 to 2019 (30 years) compared to the 2016-2017 rain year, 2017-2018 rain year, 2018-2019 rain year, and current rain year, in part (Jul 2019 to Dec 2019) (NOAA 2020).



2 REGULATORY FRAMEWORK

2.1 United States Army Corps of Engineers

Section 404 of the CWA authorizes the USACE to regulate activities that discharge dredged or fill material to wetlands and other waters of the United States. The term "waters of the United States" encompasses resources described by the Environmental Protection Agency (EPA) and the Corps regulations, 40 CFR (Code of Federal Regulations) §230.3(s) and 33 CFR §328.3(a). The geographic limits of relevant federal jurisdiction for non-tidal waters of the U.S. are defined in 33 CFR §328.4(c).

The *Corps of Engineers Wetlands Delineation Manual* (hereafter "1987 Manual"; Environmental Laboratory 1987) defines wetlands (EPA regulations in 40 CFR § 230.3(t); USACE regulations in 33 CFR §328.3(b)). Wetlands are considered "special aquatic sites" under the USACE definition. Special aquatic sites are afforded protection under the CWA (Sections 401 and 404). The 1987 Manual and various regional supplements describe the criteria that must be met to determine the presence of a wetland, the methods used to determine whether they are met, and the geographic extent of wetland areas identified in the field.

Additionally, wetlands that exhibit hydrology, hydric soil, and hydrophytic vegetation (three parameters) are jurisdictional by the standard set forth in the 2008 Arid West Regional Supplement to the 1987 Manual. These areas must also exhibit a significant nexus to a Traditionally Navigable Water (TNW).

For non-wetland water features, USACE jurisdiction is limited to the Ordinary High Water Mark (OHWM) or a point between the Mean Higher High Water (MHHW) line and the Highest Astronomical Tide (HAT). NOAA's published data based on the NAVD88 datum shows MHHW at 5.31 ft elevation and HAT at 7.14 ft. See Appendix C for NOAA's tidal datum information for Santa Barbara Station 9411340.

The Corps uses the MHW as the upper (landward) limit of Section 10 Rivers and Harbors Act jurisdiction, which would be 4.55 at Santa Barbara Station (NAVD88 datum). The "high tide line" for purposes of Clean Water Act Section 404 is not delineated by NOAA, but the HAT can serve as a close approximation – the maximum observed tide would be too high (personal communication with Antal Szijj on December 17, 2019).

Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce (33 CFR Part 329).

2.2 United States Environmental Protection Agency

Section 404 of the CWA is jointly administered by the EPA and the USACE. On December 11, 2018 Executive Order 13778 issued Resource and Programmatic Assessment for the Proposed Revised Definition of WOTUS. The EO recognized that federal laws, regulations and policies dependent on the definition of WOTUS include National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and the National Historic Preservation Act (NHPA). Changes to the definition of WOTUS affects implementation of multiple federal and state policies. On October 22, 2019 EPA published updated clarification and definitions related to WOTUS related

to 33 CFR Part 328 and 40 CFR Parts 11, 112, 116, 117, 122, 230, 232, 300, 301, and 401. The final rule is effective December 23, 2019. The definition of WOTUS was updated to update paragraphs (a) through (e) and add paragraph (f):

> (a) The term *waters of the United States* means
> (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
> (2) All interstate waters including interstate wetlands;
> (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
> (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
> (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
> (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;
> (4) All impoundments of waters otherwise defined as waters of the United States under the definition;
> (5) Tributaries of waters identified in paragraphs (a)(1) through (4) of this section;
> (6) The territorial seas;
> (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1) through (6) of this section.
> (8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.
> Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.
> (b) The term *wetlands* means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
> (c) The term *adjacent* means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are ''adjacent wetlands.''
> (d) The term *high tide line* means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide.
> The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

> (e) The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
> (f) The term *tidal waters* means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

On June 7, 2019 The EPA issued Executive Order 13868 to update guidance regarding implementation of CWA section 404 at 40 CFR Part 121. One issue addressed the scope of Section 401, i.e., conditions not related to water quality requirements. EPA recommended that federal permitting agencies work with their Office of General Counsel and the EPA to determine whether a permit or license should be issued with those conditions. Additional guidance included recommendation for early agency collaboration with states and tribes. The proposed rule was posted August 22, 2019 (40 CFR Part 121 Fed. Reg. 2019-44080). The proposed rule states that EPA must provide technical assistance for section 401 certifications upon the request of any federal or state agency, or project proponent (Fed. Reg. 2019-44087). It proposes "to conclude that a certifying authority's review and action under section 401 must be limited to water quality impacts from the potential discharge associated with a proposed federally licensed or permitted project" (Fed. Reg. 2019-44095). The proposed rule provides specific guidance regarding Certification requests (Fed. Reg 2019-44101):

> *Certification request* means a written, signed, and dated communication from a project proponent to the appropriate certifying authority that:
> 1. Identifies the project proponent(s) and a point of contact;
> 2. identifies the proposed project;
> 3. identifies the applicable federal license or permit;
> 4. identifies the location and type of any discharge that may result from the proposed project and the location of receiving waters;
> 5. includes a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat or control the discharge;
> 6. includes a list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received; and
> 7. contains the following statement: '*The project proponent hereby requests that the certifying authority review and take action on this CWA section 401 certification request within the applicable reasonable timeframe.*'

The EPA proposes to establish the ''scope of certification'' as follows (Fed. Reg 2019-44101):

> The scope of a Clean Water Act section 401 certification is limited to assuring that a discharge from a Federally licensed or permitted activity will comply with water quality requirements.

The proposed rule applies to the Regional Water Quality Control Board's certification process required by section 404 of the CWA.

2.3 State and Regional Water Quality Control Board

The Water Code defines "waters of the State" broadly to include "any surface water or groundwater, including saline waters, [natural, and artificial wetlands] within the boundaries of the state." In April 2019, the State Water Resources Control Board (SWRCB) RWQCB adopted procedures to define an area as a wetland if it meets three criteria: wetland hydrology, wetland soils, and (if vegetated) wetland plants. The definition also states: "An area is a wetland if: (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation. The Procedures provide the same wetland delineation methods that are used by the Army Corps of Engineers."

"Waters of the State, by definition, includes more aquatic features than Waters of the U.S., which defines the jurisdiction of the federal government. Waters of the State are not so limited. In addition, the federal definition of a wetland requires a prevalence of wetland vegetation under normal circumstances. To account for wetlands in arid portions of the state, the Water Boards' definition differs from the federal definition in that an area may be a wetland even if it does not support vegetation. If vegetation is present, however, the Water Boards definition requires that the vegetation be wetland vegetation. The State Water Board's proposed definition clarifies that vegetated and unvegetated wetlands will be regulated in the same manner." The effective date for the approved Procedures is May 28, 2020.

The state will also take jurisdiction over a non-wetland water to the OHWM, and tidal waters to the higher high tide line (CWA section 404 jurisdiction). Regional Water Quality Control Boards (RWQCB) provide regulatory oversight of wetland protection and impact mitigation.

2.4 California Department of Fish and Wildlife

CDFW takes jurisdiction over rivers, lakes, or streambeds (including any riparian vegetation surrounding those waterbodies). CDFW follows the United States Fish and Wildlife Service (USFWS) wetland definition and classification system based on the 1979 Cowardin definition (Cowardin et al. 1979). In estuarine habitats, Cowardin separates subtidal (below the fluctuating line of the tide, i.e. perpetually submerged) and intertidal (substrate is flooded and exposed with tides) habitats.

2.5 California Coastal Commission

Coastal wetlands are also protected under California's Coastal Act (CCA) of 1976, which 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, and fens.*

The CCA includes requirements related to coastal zone management and wetlands protection, including coastal development permits, and established the California Coastal Commission (CCC)

as the coastal regulatory and management agency. The CCC, which enforces the Coastal Act, defines coastal wetlands in its regulations 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 types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentration of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some during each year and their location within, or adjacent to vegetated wetland or deepwater habitats.*

The CCC's map requirement and boundary determinations criteria are provided in 14 CCR (California Code of Regulation) §13577. In addition to wetlands, the CCC will take jurisdiction over tidelands, submerged lands, public trust lands, beaches, coastal bluffs, and estuaries. Estuary jurisdictional boundaries measured 300 feet landward from the mean high tide line. The tide lines are defined similarly to the USACE tidal data analysis. However, in areas with an approved Local Coastal Plan (LCP), the CCC requirements would be superseded.

2.6 California State Lands Commission

The State Lands Commission (SLC) determines the extent and location of California's sovereign tide and submerged lands. The California Civil Code defines the boundary of tidelands as the ordinary high water mark (Civil Code §§ 670, 830).

The Commission has exclusive jurisdiction over ungranted tide and submerged lands and is the successor agency to the Surveyor General and the Division of State Lands (Pub. Resources Code §§ 6216, 6301). The Commission is the recognized authority for determining the location of the ordinary high water mark in California. The United States Supreme Court has ruled that in tidal areas the boundary is to be located by identifying the intersection of the mean high tide line with the shore (*Borax Consol., Ltd v. Los Angeles* (1935) 296 U.S. 10). Typically, this includes using the National Oceanic and Atmospheric Agency's measurement and calculation of the mean high tide tidal datum in the vicinity of the lands involved. The Commission is authorized to establish the ordinary high water mark (or ordinary low water mark) by agreement or action to quiet title (Pub. Resources Code § 6357) and is a necessary party to any title or boundary action involving granted tide and submerged lands (Pub. Resources Code § 6308).

2.7 County of Santa Barbara

Santa Barbara County's *Environmental Thresholds and Guidelines Manual* (County of Santa Barbara 2015) considers waters with one or more wetland indicator to be jurisdictional wetlands (below). The County also consider Federal wetlands regulated under the CWA to be considered to be jurisdictional wetlands.

> *For purposes of this classification wetlands must have one or more of the following three attributes:*
>
> *a) At least periodically, the land supports predominantly hydrophytes (plants adapted to moist areas);*

b) The substrate is predominantly un-drained hydric soil, and

c) The substrate is non soil and is saturated with water or covered by shallow water at some time during the growing season of each year

The Study Area is within the LCP for the County of Santa Barbara. According to Section 35-97.9 of the Coastal Zoning Ordinance, a minimum of a 100-foot buffer shall be maintained around wetland habitats and no structures will be permitted within that buffer **except** for those lots that abut the El Estero (Carpinteria Salt Marsh) (Santa Barbara County 2017).

3 DELINEATION METHODS

3.1 Overview of Sampling Methodology

Jurisdictional wetlands and other waters were identified using methods and guidelines described in the 1987 Manual, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (hereafter "2008 Supplement"; USACE 2008b), and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008a). Site visits were made in the summer and fall of 2017. Table 3 summarizes dates of field work and personnel attending each site visit.

TABLE 3. FIELD WORK LOG

Wetland delineation survey dates, actions taken, and field personnel are provided.

Survey Date	Activities	Personnel
June 29, 2017	Topographic survey, site assessment	Stantec Surveyors Katie Brown
July 7, 2017	Wetland delineation and sample sites	LynneDee Althouse Katie Brown
July 21, 2017	Site assessment	Katie Brown
September 2, 2017	Upland soil pit assessment	Katie Brown
July 1, 2019	Assess current conditions	LynneDee Althouse
October 25, 2019	Update survey – surface and orthophotograph	Stantec Surveyors
January 10, 2020	Re-evaluate location of salt grass habitat and location of highest tide elevation on a day when predicted tide was approximately 7.6 ft that morning.	Dan Meade

3.1.1 Wetlands

Soil pits were dug by hand at three sampling sites based on the presence of hydrophytic vegetation, wetland hydrology, or where low relief indicated potential wetland. For each wetland site an adjacent upland observational pit was dug to compare upland soil and vegetation features. Locations of all three sampling sites were recorded on the Aquatic Resources Delineation Map (Exhibit A) and USACE Arid West Region Wetland Determination Data Forms (Appendix D). Photos of each site are included in Section 8.0.

3.1.1.1 Wetland Hydrology

The presence or absence of wetland hydrology field indicators was assessed following methodology presented in the 1987 Manual and the 2008 Supplement. Wetland indicators included, but were not limited to, high water table, site topography, drift lines, drainage patterns, sediment deposits, inundation, observation of wet conditions during the growing season, and saturation of soils.

3.1.1.2 Wetland Soils

Soils were examined according to methodology presented in the 2008 Arid West Supplement and 1987 Manual. Hydric soil indicators were recognized by soil characteristics from the USDA-NRCS publication, *Field Indicators of Hydric Soils in the United States* (Version 7.0; USDA-NRCS 2010) and the National Technical Committee for Hydric Soils (NTCHS) definition of hydric soils.

3.1.1.3 Wetland Vegetation

Vegetation in each stratum was identified to species and recorded. The indicator status of plants was confirmed by referring to the *National Wetland Plant List* (Lichvar et. al. 2016). Species dominance was noted for each stratum using the "50/20 Rule." Dominance test was calculated for all samples and prevalence index was calculated for those samples were there was a presence of hydrology and hydric soil.

3.1.1.4 Wetland Connectivity/Adjacency

Connectivity to Traditional Navigable Waters and their tributaries is established via field work where accessible, as well through analysis of aerial photographs, United States Geological Survey (USGS) topographic map, USGS National Hydrography Dataset, and site-specific topographic survey.

3.1.2 Tidal Non-Wetland Waters

Tidal water elevations were delineated based on local tidal data and recent survey by Stantec licensed land surveyors (2019). Data was analyzed per USACE recommended protocol to determine mean and higher high tide elevations based on NAVD88 tidal data originating from NOAA's CO-OPS Santa Barbara Station ID 9411340.

3.2 Mapping Methodology

Mapping efforts utilized Samsung Galaxy Tab 4 tablets equipped with Garmin GLO GPS Receivers. Tide lines from Stantec were utilized during the delineation process. GPS data, digitized notes, and photos were imported into Esri ArcGIS, a Geographic Information Systems software suite, and interpreted into maps. Maps were produced at a minimum scale of 1 map inch to 400 feet on the ground using field data.

4 TECHNICAL FINDINGS

Our 2017, 2019, and 2020 field work resulted in the delineation of 0.96-acre of federal jurisdictional waters, also subject to state and local jurisdiction, within the Study Area and an additional 0.01 acre of exclusively CCC, CDFW, and locally jurisdictional wetlands (Exhibit A).

4.1 Federal Jurisdiction

The Study Area is at the east end of a sand spit with the mouth of the estuary to the east, a subtidal channel of CSM to the north, and the Pacific Ocean to the south. The north side of the spit is a sandy beach where three soil pits were dug to determine the presence or absence of wetland habitat.

Soils at the mean high tide line (Mean High Water, or MHT; 4.55 feet elevation) had trace amounts, only three percent, of prominent redoximorphic concentrations with saturation at 10 inches. Vegetation was not present at or below the mean high tide line. Intertidal fluctuations and high tide events on sandy soil prevent establishment of vegetation. *Distichlis spicata* (FAC) or *Frankenia salina* (FACW) was dominant in patches above the higher high tide line (6.50 feet elevation). Additionally, small areas of hydrophytic plants such as *Suaeda taxifolia* (FACW), *Spergularia marina* (OBL), *Jaumea carnosa* (OBL), and *Zantedeschia aethiopica* (OBL) were present within the larger Study Area but were not dominant.

Three-parameter jurisdictional wetland habitat is not present within the Study Area. The estuarine habitat within the Study Area boundary is part of a subtidal channel and does not support wetland vegetation. Based on communications in December 2019 with Antal Szijj (USACE Project Manager) site inspections, and review of 2019 topographic survey data by Stantec, we observed 6.5 feet (NAVD88 datum) as the appropriate elevation for the limit of the Corps' jurisdiction under CWA Section 404. This jurisdictional elevation is between the HAT and the MHHW. CWA Section 404 is also jurisdictional to the RWQCB, CCC, CDFW, and County of Santa Barbara.

4.2 CCC, CDFW, SLC, and County Jurisdiction

CCC, CDFW, and County of Santa Barbara jurisdictional boundary is limited to the higher high tide line (6.50 feet elevation) except when there is presence of a one-parameter wetland. In 2017 *Distichlis spicata* (FAC) was a dominant species in portions of the beach above the higher high tide line on the north side of the property, which was enough to satisfy the one-parameter wetland requirement of hydrophytic vegetation. As of January 2020, the salt grass has been covered by intertidal sand deposits. The beach was void of vegetation in January 2020. Additionally, on the northwest side of the Study Area near the access road, *Frankenia salina* (FACW) is dominant in a small patch near the higher high tide line. In areas where these species extend beyond the higher high tide line as a dominant, the jurisdictional boundary was expanded to the edge of hydrophytic vegetation.

The SLC boundary is the mean high tide line, an ambulatory line at approximately 4.55 feet (NAVD88 datum). The line is an ambulatory boundary because it moves based on the location of the sandy shoreline and the water. Surveys taken on separate days may show the boundary at different locations, as is illustrated in Appendix E (Stantec Topographic Map) that includes a June 29, 2017 (summer) topographic line at elevation 4.55 feet along with an October 25, 2019 (fall) mean high tide line at the same elevation.

TABLE 4. WETLAND DETERMINATION FORMS SUMMARY

Sample Site	Dominant Species	Wetland Vegetation?	Soil Indicator	Wetland Soil?	Hydrology Indicator	Wetland Hydrology?
1	N/A	--	None	--	A2, A3, B10	✓
2	FAC	✓	None	--	None	--
3	FACU	--	None	--	None	--

FACU: 1-33% in wetlands
FAC: 34-66% in wetlands

A2: High Water Table
A3: Saturation
B10: Drift Deposits

5 JURISDICTIONAL DELINEATION

Our 2017, 2019, and 2020 field work resulted in the delineation of 1.06 acre of jurisdictional waters within the 2.88-acre Study Area. Area below the higher high tide line (6.50 feet elevation) is subject to Section 404 of the Clean Water Act. The area subject to Section 404 is also jurisdictional per RWQCB, CDFW, CCC, and County of Santa Barbara standards. An additional 0.01-acre of one-parameter wetlands, subject to CCC, CDFW, and County of Santa Barbara jurisdiction, was mapped upslope of the higher high tide line due to the dominance of hydrophytic vegetation.

Jurisdictional area calculations are included in Table 5.

TABLE 5. JURISDICTIONAL WATER MEASUREMENTS

Calculated jurisdictional water areas are given for the Study Area.

Feature	Elevation (ft)	Area within Study Area (ac)
Section 404 Waters*	6.50	0.96
Additional One-Parameter Wetlands**	varies	0.01
		Total 1.06

* Also subject to RWQCB, CDFW, CCC, and County of Santa Barbara jurisdiction
** Subject to CCC, CDFW, and County of Santa Barbara jurisdiction

This report is subject to verification by the USACE, RWQCB, CCC, CDFW, and the County of Santa Barbara.

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7 FIGURES

- Figure 1. United States Geological Survey Topographic Map
- Figure 2. Aerial Photograph
- Figure 3. Hydrologic Unit Code
- Figure 4. National Wetlands Inventory
- Figure 5. Federal Emergency Management Agency Flood Insurance Rate Map

Figure 1. United States Geological Survey Topographic Map

Legend

★ Study Area Location

N

0 0.5 1 Mile

501 Sand Point Road
Map Center: 119.53723°W 34.39738°N
Santa Barbara County, California

USGS Quadrangle: Carpinteria

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
December 18, 2019 09:33 AM by SAF

Figure 2. Aerial Photograph

Legend

Parcel Study Area

N

0 100 200 Feet

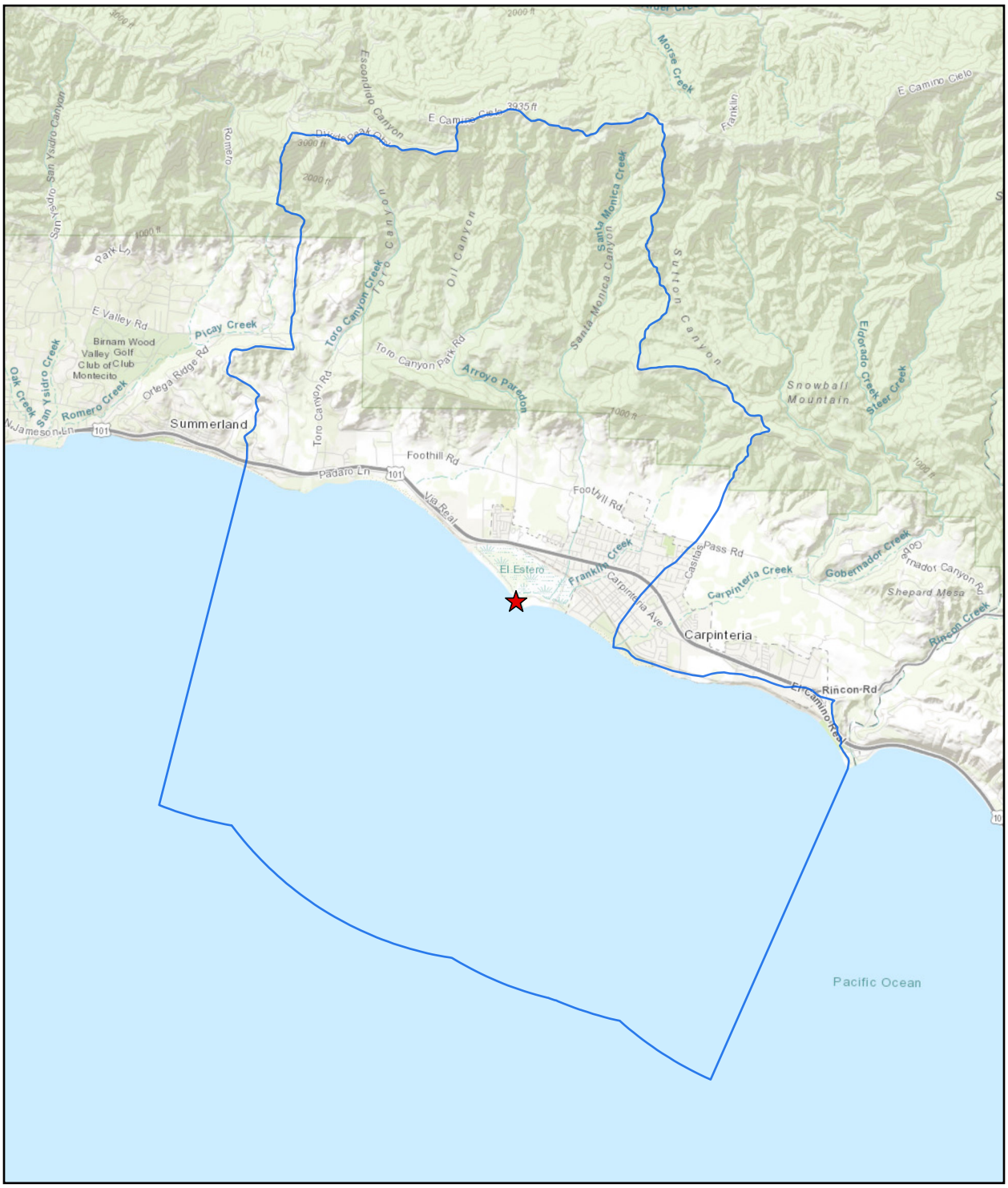
501 Sand Point Road
Map Center: 119.53791°W 34.39704°N
Santa Barbara County, California

Imagery Source: USDA NAIP, 07/07/2018

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
December 18, 2019 03:30 PM by SAF

Figure 3. Hydrologic Unit Code



Legend

Project Location

180600130205 (Santa Monica Creek-Frontal Santa Barbara Channel)

N

0 1 2 Miles

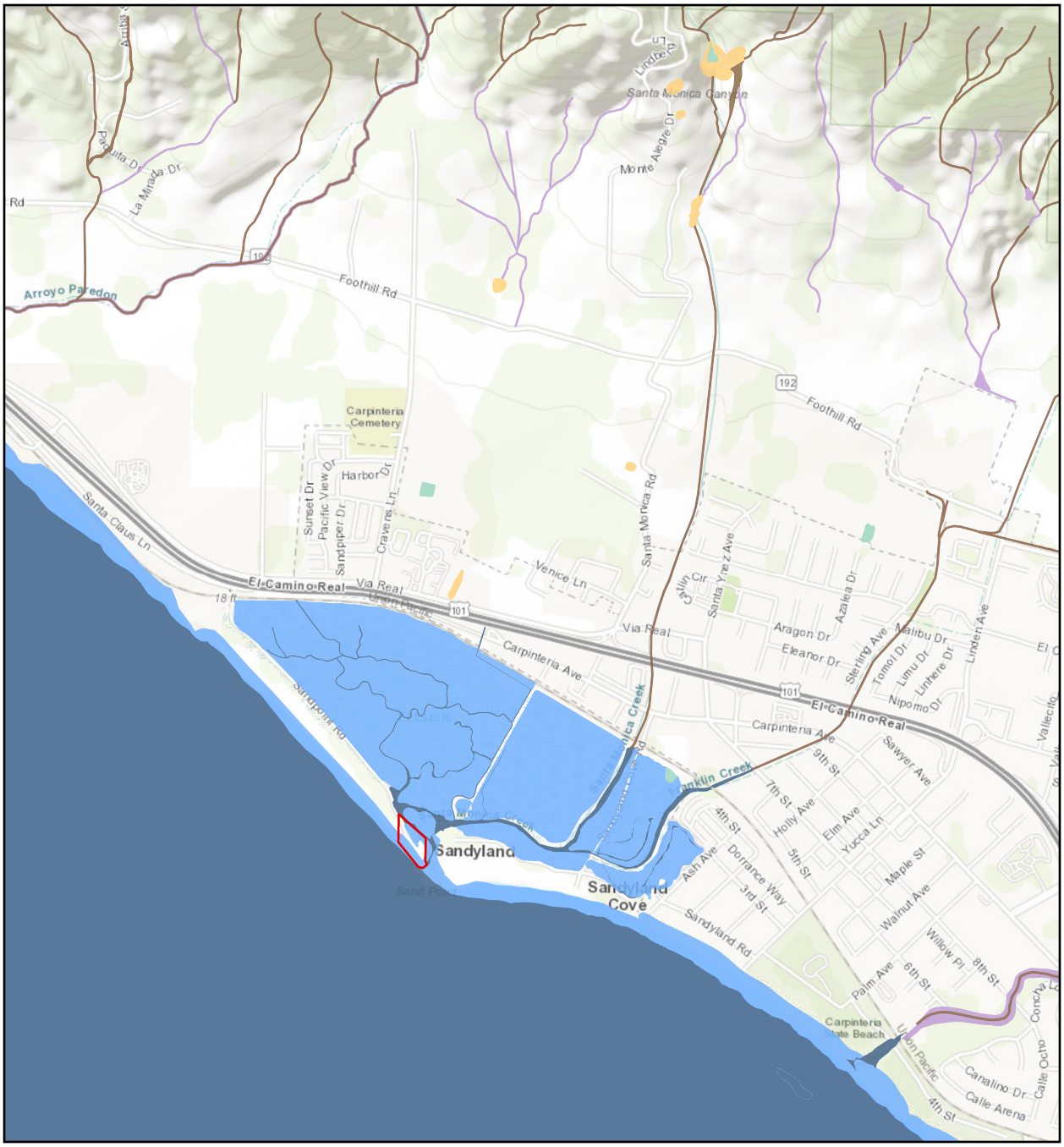
501 Sand Point Road
Map Center: 119.54034°W 34.39801°N
Santa Barbara County, California

Basemap: World Topographic

ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
December 18, 2019 09:35 AM by SAF

Figure 4. National Wetland Inventory



Legend

- Study Area
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Freshwater Pond
- Riverine

N

0 1,500 3,000 Feet

501 Sand Point Road
Map Center: 119.53354°W 34.40656°N
Santa Barbara County, California

Basemap: World Topographic
Data Source: United States Fish and Wildlife Service

Figure 5. Federal Emergency Management Agency Flood Insurance Rate Map

Legend

- Study Area
- Flood Zone*
- A
- AE
- AO
- VE
- X
- 0.2% ANNUAL CHANCE FLOOD HAZARD

N

0 1,000 2,000 Feet

501 Sand Point Road
Map Center: 119.53681°W 34.40014°N
Santa Barbara County, California

Imagery Source: USDA NAIP, 07/07/2018
Data Source: United States Geological Survey

8 PHOTOGRAPHS

Photo 1. Jurisdictional non-wetland water lacking vegetation with drift deposits at high tide line, view southeast, July 7, 2017.

Photo 2. In 2017 salt grass flats extended along the transition of the intertidal zone and foredune on the inland (east) portion of the sand spit. View northwest, November 11, 2017.

Photo 3. Tidally influenced sand deposits converted salt grass flats to sandy beach. View northwest, February 27, 2020.

Photo 4. Subtidal channel at north end of Study Area during low tide, view east, June 29, 2017

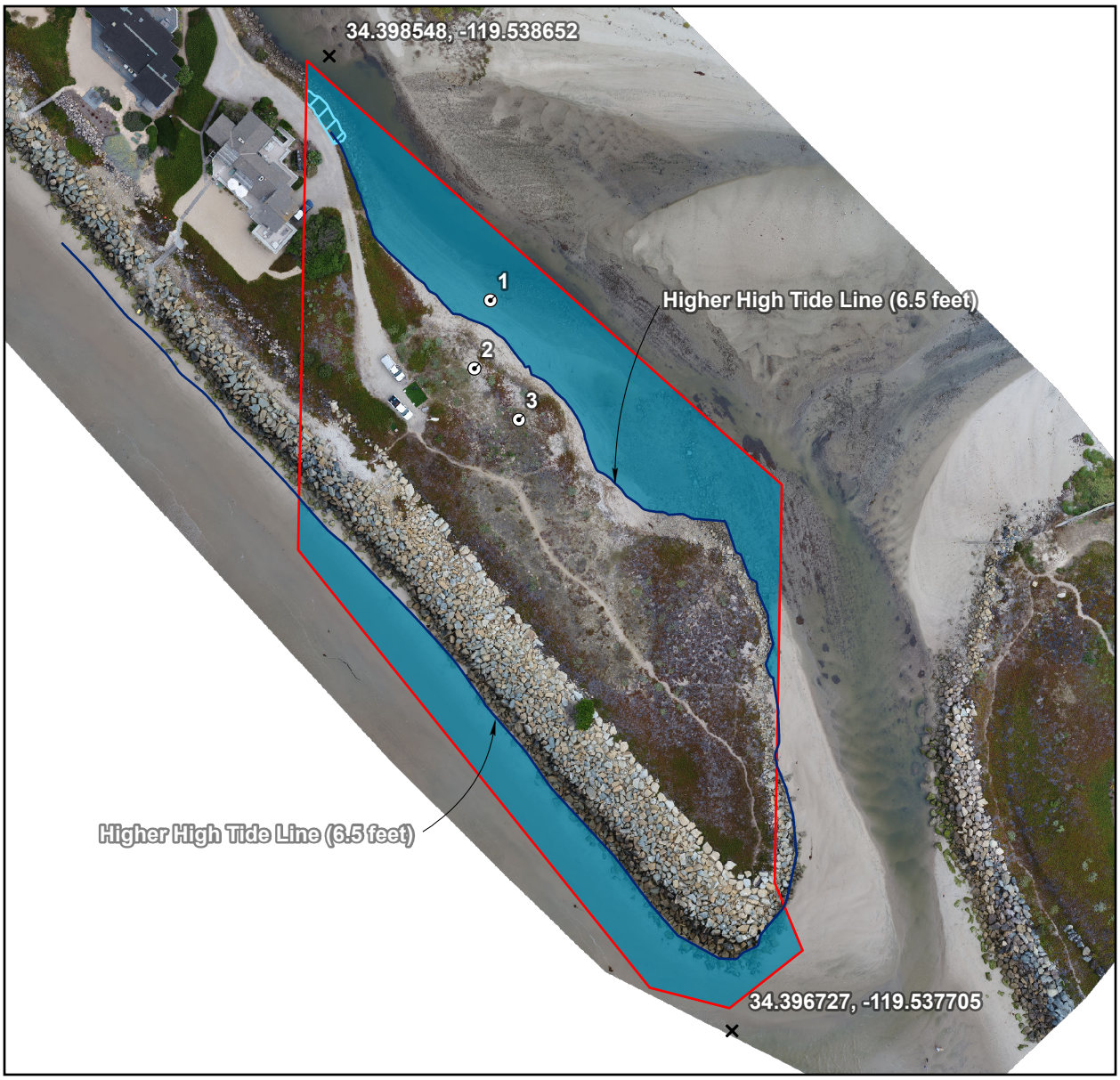
Photo 5. Study Area with small trail and scattered lupine (Lupinus *arboreus*), view east, July 7, 2017

Photo 6. Carpinteria Salt Marsh connection to Pacific Ocean on east side of Study Area, view north, July 7, 2017

Photo 7. Sea wall bounds south side of Study Area, view west, July 7, 2017

9 EXHIBIT A. AQUATIC RESOURCES DELINEATION MAP

Exhibit A. Aquatic Resources Delineation Map



Legend

- Study Area (2.88 acres)
- Site Control Point
- Sample Site
- One Parameter Wetland (0.01 acre)
  California Department of Fish and Wildlife
  California Coastal Commission
  County of Santa Barbara
- Tidal Non-Wetland Waters (0.96 acre)
  CWA Section 404 (USACE)
  California Department of Fish and Wildlife
  Regional Water Quality Control Board
  California Coastal Commission
  County of Santa Barbara

N

0 50 100 Feet

501 Sand Point Road
Map Center: 119.53811°W 34.39764°N
Santa Barbara County, California

Site Investigators: Katie Brown, Jacqueline Tilligkeit, Dan Meade

Vertical Datum: NAVD88 US Feet

10 APPENDICES

- Appendix A. FEMA/FIRM Zone Classification
- Appendix B. Custom USDA Soil Report
- Appendix C. NOAA Datums for 9411340, Santa Barbara CA
- Appendix D. Wetland Determination Data Forms
- Appendix E. Stantec Topographic Map 2019

APPENDIX A. FEMA/FIRM ZONE CLASSIFICATION

Moderate to Low Risk Areas

Zone	Description
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100- year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
C and X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100- year flood.

High Risk Areas

Zone	Description
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
A1-A30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.
V	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones.
VE, V1-30	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.

APPENDIX B. CUSTOM USDA SOIL REPORT

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

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

Quackenbush Study Area

Appendix A.

November 1, 2017

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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Contents

Soil Map

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

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,130 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: 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	1.4	48.9%
BE	Beaches	1.4	49.2%
Totals for Area of Interest		**2.9**	**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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APPENDIX C. NOAA DATUMS FOR 9411340, SANTA BARBARA CA

Datums for 9411340, Santa Barbara CA

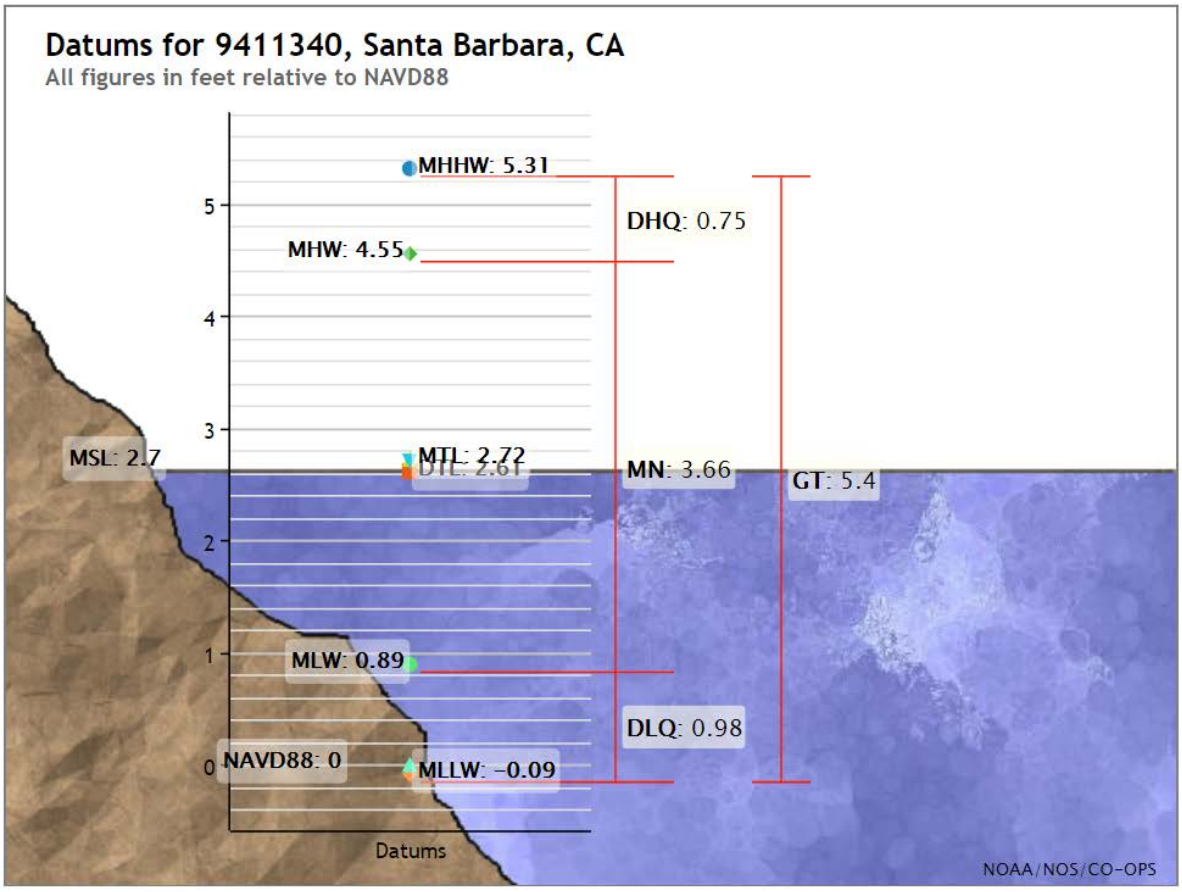
NOTICE: All data values are relative to the NAVD88.

Elevations on NAVD88

Station: 9411340, Santa Barbara, CA
Status: Accepted (Nov 7 2016)
Units: Feet
Control Station: 9410660 Los Angeles, CA

T.M.: 0
Epoch: 1983-2001
Datum: NAVD88

Datum	Value	Description
MHHW	5.31	Mean Higher-High Water
MHW	4.55	Mean High Water
MTL	2.72	Mean Tide Level
MSL	2.70	Mean Sea Level
DTL	2.61	Mean Diurnal Tide Level
MLW	0.89	Mean Low Water
MLLW	-0.09	Mean Lower-Low Water
NAVD88	0.00	North American Vertical Datum of 1988
CRD_OFFSET		Columbia River Datum Offset
STND	-3.25	Station Datum
GT	5.40	Great Diurnal Range
MN	3.66	Mean Range of Tide
DHQ	0.75	Mean Diurnal High Water Inequality
DLQ	0.98	Mean Diurnal Low Water Inequality
HWI	5.53	Greenwich High Water Interval (in hours)
LWI	11.58	Greenwich Low Water Interval (in hours)
Max Tide	7.54	Highest Observed Tide
Max Tide Date & Time	12/13/2012 16:36	Highest Observed Tide Date & Time
Min Tide	-2.98	Lowest Observed Tide
Min Tide Date & Time	12/17/1933 08:00	Lowest Observed Tide Date & Time
HAT	7.14	Highest Astronomical Tide
HAT Date & Time	12/02/1990 16:24	HAT Date and Time
LAT	-2.09	Lowest Astronomical Tide
LAT Date & Time	01/01/1987 00:18	LAT Date and Time



Available at:
https://tidesandcurrents.noaa.gov/datums.html?datum=NAVD88&units=0&epoch=0&id=9411340&name=Santa+Barbara&state=CA

APPENDIX D. WETLAND DETERMINATION DATA FORMS

A United States Army Corps of Engineers, Wetland Determination Data Form (2008 Arid West Supplement Version 2.0) was completed in the field for three sampling sites. The forms included here are copies of forms written in the field. The original forms are on file in our office.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 501 Sand Point City/County: Carpenteria Sampling Date: 7-7-17

Applicant/Owner: ~~Ned Gwatenbush~~ Sanddew LLC is owner as of 2019 State: CA Sampling Point: 1

Investigator(s): L. Althouse, K. Brown Section, Township, Range: T4NR27W

Landform (hillslope, terrace, etc.): Dune, floodplain Local relief (concave, convex, none): Convex Slope (%): 1

Subregion (LRR): LRRC Lat: 34.398098 Long: -119.53829 Datum: WGS84

Soil Map Unit Name: Aquents, fill areas NWI classification: Estuarine & Marine Wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. N/A			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. N/A			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Soil pit within tidal zone. Tide low during sampling. No live vegetation.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10"	10YR 5/2	100				S	S	
>10"	10YR 5/2	97	7.5YR 5/6	3			S	Saturated, redox around stone

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): >10"

Hydric Soil Present? Yes ___ No X

Remarks:

Soils saturated at 10".

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- X Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 10"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 10"

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 501 Sand Point City/County: Carpenteria Sampling Date: 7-7-17

Applicant/Owner: ~~Ned Gwaltney~~ Sanddew LLC is owner as of 2019 State: CA Sampling Point: 2

Investigator(s): L. Althouse, K. Brown Section, Township, Range: T4NR27W

Landform (hillslope, terrace, etc.): Dune, floodplain Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): LRRC Lat: 34.39797 Long: -119.58324 Datum: WGS84

Soil Map Unit Name: Aguerits, fill areas NWI classification: Estuarine & Marine Wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. N/A			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5' x 5')			
1. Distichlis spicata	10	Y	FAC
2. Jaumea carnosa	1	N	OBL
3. Heliotropium curvisicum	1	N	
4.			
5.			
6.			
7.			
8.			
	12 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1. N/A			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 88 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

Soil pit in higher high tide region adjacent to Carpenteria salt marsh.

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5 YR 5/3	100					S	Cobble & gravel
10-12	7.5 YR 5/3	100					S	Gravel
12-20	7.5 YR 5/3	100					S	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): >20"

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: QUAKENBUSH City/County: CARPENTERIA Sampling Date: 09-04-17

Applicant/Owner: ALEX QUAKENBUSH Sanddew LLC is owner as of 2019 State: CA Sampling Point: 3

Investigator(s): K. BROWN Section, Township, Range: T4N R27W

Landform (hillslope, terrace, etc.): DUNE FLOODPLAIN Local relief (concave, convex, none): CONVEX Slope (%): 1

Subregion (LRR): LRRC Lat: 34.397871 Long: -119.538209 Datum: WGS84

Soil Map Unit Name: AGUENTS, FILL AREAS NWI classification: Estuarine & Marine Wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:
UPLAND SOIL PIT WITH NO SIGS OF HYDROLOGY, HYDRIC SOILS, OR HYDROPHYTIC VEGETATION.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. N/A			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 2m x 2m)			
1. CARPOBROTUS CHILENSIS	85	Y	FACU
2. CYNODON DACTYLON	10	N	FACU
3. AMBROSIA PSILOSTACHYA	1	N	
4. CAMISSONIOPSIS CHEIRANTHIFOLIA ssp SUFFRUTICOSA	2	N	
5.			
6.			
7.			
8.			
	97	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. N/A			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 6/1	100					S	
8-20	7.5YR 6/1	95	5YR 6/8	5			S	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
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Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: N/A

Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
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- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology indicators.

APPENDIX E. STANTEC TOPOGRAPHIC MAP 2019

SURVEYOR'S NOTES

1. MAPPING

AERIAL TOPOGRAPHY
TOPOGRAPHIC MAPPING WAS COMPILED AT A SCALE OF 1"=30', WITH A 1 FOOT CONTOUR INTERVAL, USING STANDARD PHOTOGRAMMETRIC METHODS AND PROCEDURES BY STANTEC FROM AERIAL PHOTOGRAPHY DATED OCTOBER 25, 2019.

AERIAL PHOTOGRAPHY
THE AERIAL PHOTOGRAPHY USED AS THE BACKGROUND FOR THIS MAP WAS OBTAINED ON OCTOBER 25, 2019 BY STANTEC. THE PHOTOGRAPHY HAS BEEN CONVERTED INTO A DIGITAL FORMAT AND CORRECTED FOR HORIZONTAL AND VERTICAL DISTORTION USING STANDARD PHOTOGRAMMETRIC METHODS.

2. MAPPING COORDINATES

CALIFORNIA COORDINATE SYSTEM, NAD 83, (CCS83) ZONE 5 GRID (EPOCH 2007.0).

3. ELEVATIONS

ELEVATIONS SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). SEE CONTROL POINT LISTING.

4. BOUNDARY AND EASEMENTS

BOUNDARY AND EASEMENTS AS SHOWN HEREON ARE PER FIDELITY NATIONAL TITLE COMPANY REPORT NO. 420415009G-JH, DATED FEBRUARY 27, 2017 AND IS ASSUMED TO BE ACCURATE AND COMPLETE.

FEMA DESIGNATIONS PER MAP NUMBER 06083C1418H DATED 09/28/2018.

5. GENERAL NOTE

THE US ARMY CORPS OF ENGINEERS' APPROXIMATE JURISDICTION LIMITS EXTEND TO THE MEAN HIGH WATER (MHW) ELEVATION 4.55 NAVD88 FOR SECTION 10 HARBORS AND RIVERS ACT AND BETWEEN THE MEAN HIGHER HIGH WATER (MHHW) ELEVATION 5.4 AND THE HIGHEST ASTRONOMICAL TIDE (HAT) ELEVATION 7.14 NAVD88 FOR USACE CLEAN WATER ACT SECTION 404 ELEVATION 6.5 NAVD88. THE ELEVATIONS ABOVE REFERENCED ARE PER THE NOAA PUBLISHED DATA FOR SANTA BARBARA STATION 9411340 ACCEPTED NOVEMBER 7, 2016, PER NAVD88 DATUM EXPRESSED IN US FEET

CONTROL POINT LISTING

HORIZONTAL: NAD83 CA 5, US SURVEY FEET
VERTICAL: NAVD88, US SURVEY FEET

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	1,971,006.181	6,097,463.150	8.136	FD 60D
4	1,970,636.933	6,097,757.984	10.516	FD 1/2IN IP W/PLUG
100	1,970,512.095	6,097,731.811	16.044	SET ATGT + ON ROCK
101	1,970,735.941	6,097,540.902	16.448	SET ATGT + ON ROCK
102	1,971,039.126	6,097,444.780	8.103	SET ATGT + ON AC
200	1,971,756.110	6,096,975.257	7.624	FD 2" BRASS CAP (BM)

SURVEYOR'S STATEMENT

THIS MAP, AND THE SURVEY IT REPRESENTS, WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

KENNETH J. WILSON, PLS 7911

DATE: JANUARY 2, 2020

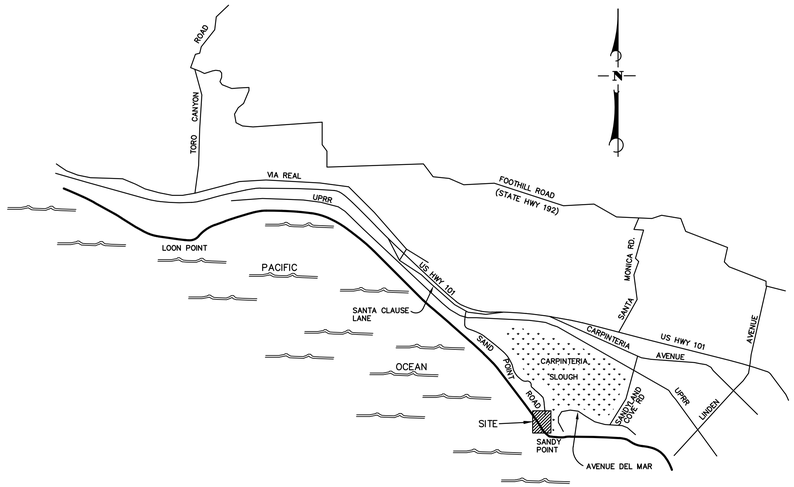
PROFESSIONAL LAND SURVEYOR
KENNETH J. WILSON
NO 7911
STATE OF CALIFORNIA

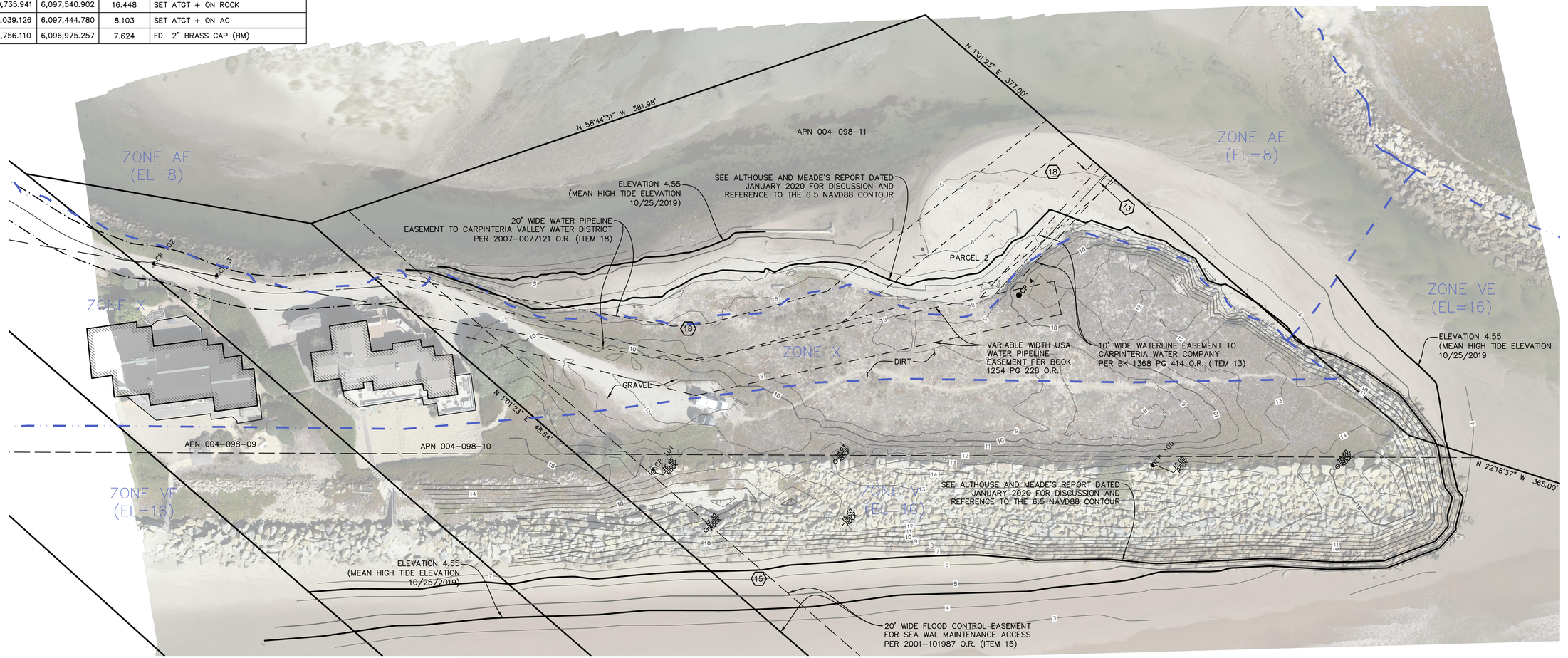
EXCEPTION NOTES

(NUMBER CORRESPONDS TO ITEM NUMBER IN PRELIMINARY TITLE REPORT. NOT ALL EXCEPTION ITEMS ARE NOTED.)

13. EASEMENT TO CARPINTERIA WATER COMPANY PER INSTRUMENT NO. 5360, BOOK 1368, PAGE 414, O.R.
15. EASEMENT TO COUNTY OF SANTA BARBARA PER INSTRUMENT NO. 2001-0101987 O.R.
18. EASEMENT TO CARPINTERIA VALLEY WATER DISTRICT PER INSTRUMENT NO. 2007-0077121 O.R.
19. EASEMENT TO CARPINTERIA SANITARY DISTRICT PER INSTRUMENT NO. 2011-57872 O.R. IS NOT LOCATABLE FROM RECORD INFORMATION

VICINITY MAP NO SCALE





SCALE: 1"=30'
0 30 60 90

NO.	DATE	REVISIONS	APPD.
1	10/25/19	UPDATE SURFACE AND ORTHO	
2	11/26/19	UPDATE MAP LABELS AND NOTES	
3	12/30/19	UPDATE MAP LABELS AND NOTES	

Stantec
111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532 Fax: (805) 966-9801

FIELD CREW: HMG
SURVEY COMPLETED: 10/25/19
OFFICE TECH: ECR & HMG
COMPILATION COMPLETED: 12/30/2019

EXHIBIT
501 SANDPOINT ROAD
CARPINTERIA, CALIFORNIA
JANUARY 2020

PROJECT NUMBER 2064153401
SHEET 1 OF 1
DWG 2064153401-TOPO 2019UPDATE.DWG

DWG PATH: V:\2064\ACTIVE\2064153401\GEOMATICS\CAD\2064153401-TOPO 2019UPDATE.DWG
PLOT DATE: 12/2/2020 9:51:28 AM
SAVED DATE: 12/2/2020

APPENDIX E. SOILS REPORT

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

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

Quackenbush Study Area

Appendix A.

November 1, 2017

Preface

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

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

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

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

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

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

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

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Soil Map

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

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,130 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: 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	1.4	48.9%
BE	Beaches	1.4	49.2%
Totals for Area of Interest		**2.9**	**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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APPENDIX F. SPECIAL STATUS PLANT SPECIES REPORTED FROM THE REGION

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Bloom Period	Habitat Preference	Potential to Occur
1.	Red sand-verbena	*Abronia maritima*	-/-	G3/S3?	4.2	Feb – Nov	Coastal dunes; <100m CCo, SCo, ChI; Baja CA	Present (one plant) in Study Area. High. Suitable occurs within the Study Area.
2.	Douglas' fiddleneck	*Amsinckia douglasiana*	-/-	G4/S4	4.2	Mar-May	Monterey shale, dry. Cismontane woodland, valley and foothill grassland	No. Suitable habitat is not present in the Study Area.
3.	Refugio manzanita	*Arctostaphylos refugioensis*	-/-	G3/S3	1B.2	Dec-Mar(May)	Chaparral (sandstone)	No. Suitable habitat is not present in the Study Area.
4.	Marsh sandwort	*Arenaria paludicola*	FE/CE	G1/S1	1B.1	May - August	Boggy meadows, marshes; <300 m. s CCo (Nipomo Mesa, SLO County, Santa Ana River, SCo)	Low. Marginal suitable habitat is present in the Study Area.
5.	Miles' milk-vetch	*Astragalus didymocarpus var. milesianus*	-/-	G5T2/S2	1B.2	Mar-Jun	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.
6.	Ventura Marsh milk-vetch	*Astragalus pycnostachyus var. lanosissimus*	FE/CE	G2T1/S1	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	Moderate. Suitable habitat is present in the Study Area.

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Bloom Period	Habitat Preference	Potential to Occur
7.	Coulter's saltbush	*Atriplex coulteri*	-/-	G3/S1S2	1B.2	Mar-Oct	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland	High. Suitable habitat is present in the Study Area.
8.	Davidson's saltscale	*Atriplex serenana var. davidsonii*	-/-	G5T1/S1	1B.2	Apr-Oct	Coastal bluffs; <200 m.	No. Suitable habitat is not present in the Study Area.
9.	Catalina mariposa lily	*Calochortus catalinae*	-/-	G3G4/S3S4	4.2	(Feb) Mar-Jun	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland	No. Suitable habitat is not present in the Study Area.
10.	Late-flowered mariposa-lily	*Calochortus fimbriatus*	-/-	G3/S3	1B.3	Jun-Aug	Dry, open coastal woodland, chaparral; <900m. SCoRO, WTR	No. Suitable habitat is not present in the Study Area.
11.	Palmer's mariposa-lily	*Calochortus palmeri var. palmeri*	-/-	G3T2/S2	1B.2	Apr-Jul	Meadows, vernally 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.
12.	Santa Barbara morning-glory	*Calystegia sepium ssp. binghamiae*	-/-	G5TXQ/SX	1A	Aug	Coastal marshes and swamps	Moderate. Suitable habitat is adjacent to Study Area.
13.	Southern tarplant	*Centromadia parryi ssp. australis*	-/-	G3T2/S2	1B.1	May-Nov	Often disturbed sites, near coast, along marsh edges, and on alkaline soils.	High. Suitable disturb habitat adjacent to salt marsh is present in Study Area.
14.	Island mountain-mahogany	*Cercocarpus betuloides var. blancheae*	-/-	G5T4/S4	4.3	Feb-May	Closed-cone coniferous forest, chaparral	No. Suitable habitat is not present in the Study Area.

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Bloom Period	Habitat Preference	Potential to Occur
15.	Salt marsh bird's-beak	*Chloropyron maritimum ssp. maritimum*	FE/CE	G4?T1/S1	1B.2	May-Oct(Nov)	Coastal salt marshes;<10 m. SCo, n Baja CA	High. Suitable habitat is present in the Study Area.
16.	Palmer's spineflower	*Chorizanthe palmeri*	-/-	G4/S4	4.2	Apr-Aug	Chaparral, cismontane woodland, valley and foothill grassland; rocky, serpentinite	No. Suitable habitat is not present in the Study Area.
17.	Long-spined spineflower	*Chorizanthe polygonoides var. longispina*	-/-	G5T3/S3	1B.2	Apr-Jul	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools; often clay	No. Suitable habitat is not present in the Study Area.
18.	Monkey-flower savory	*Clinopodium mimuloides*	-/-	G3/S3	4.2	Jun-Oct	Chaparral, north coast coniferous forest; streambanks, mesic	No. Appropriate habitat is not present in the Study Area.
19.	Small-flowered morning-glory	*Convolvulus simulans*	-/-	G4/S4	4.2	Mar-Jul	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, serpentinite seeps	No. Suitable habitat is not present in the Study Area.
20.	Rattan's cryptantha	*Cryptantha rattanii*	-/-	G4/S4	4.3	Apr-Jul	Cismontane woodland, riparian woodland, valley and foothill grassland	No. Suitable habitat is not present in the Study Area.

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Bloom Period	Habitat Preference	Potential to Occur
21.	Paniculate tarplant	*Deinandra paniculata*	-/-	G4/S4	4.2	(Mar) Apr-Nov(Dec)	Coastal scrub, valley and foothill grassland, vernal pools; usually vernally mesic, sometimes sandy	Moderate. Suitable habitat is present in the Study Area.
22.	Mt. Pinos larkspur	*Delphinium parryi ssp. purpureum*	-/-	G4T4/S4	4.3	May-Jun	Chaparral, mojavean desert scrub, pinyon and juniper woodland	No. Suitable habitat is not present in the Study Area.
23.	Umbrella larkspur	*Delphinium umbraculorum*	-/-	G3/S3	1B.3	Apr-Jun	Moist oak forest; 400-1600 m. SCoRO, WTR.	No. Suitable habitat is not present in the Study Area.
24.	Ojai fritillary	*Fritillaria ojaiensis*	-/-	G3/S3	1B.2	Feb-May	Rocky slopes, river basins; 300-500 m. SCoRO, WTR	No. Suitable habitat is not present in the Study Area.
25.	Mesa horkelia	*Horkelia cuneata var. puberula*	-/-	G4T1/S1	1B.1	Feb-Jul(Sep)	Dry, sandy coastal chaparral; gen 70-700 m. SCoRO, SCo.	No. Suitable habitat is not present in the Study Area.
26.	Southern California black walnut	*Juglans californica*	-/-	G4/S4	4.2	Mar-Aug	Chaparral, cismontane woodland, coastal scrub, riparian woodland; alluvial	No. Suitable habitat is not present in the Study Area.
27.	Contra Costa goldfields	*Lasthenia conjugens*	FE/-	G1/S1	1B.1	Mar-Jun	Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools; mesic	No. Suitable habitat is not present in the Study Area.

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Bloom Period	Habitat Preference	Potential to Occur
28.	Coulter's goldfields	*Lasthenia glabrata ssp. coulteri*	-/-	G4T2/S2	1B.1	Feb-Jun	Coastal marshes, swamps, saline places, vernal pools; <1000 m. s SCoRO, SCo, n ChI, PR, w DMoj	Moderate. Suitable habitat is present in the Study Area.
29.	Ocellated Humboldt lily	*Lilium humboldtii ssp. ocellatum*	-/-	G4T4?/S4?	4.2	Mar-Jul(Aug)	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland; openings	No. Suitable habitat is not present in the Study Area.
30.	Santa Barbara honeysuckle	*Lonicera subspicata var. subspicata*	-/-	G5T2?/S2?	1B.2	May-Aug(Dec-Feb)	Chaparral, cismontane woodland, coastal scrub; 35-1000 m. Santa Barbara and Los Angeles Counties	No. Suitable habitat is not present in the Study Area.
31.	Carmel Valley malacothrix	*Malacothrix saxatilis var. arachnoidea*	-/-	G5T2/S2	1B.2	(Mar)Jun-Dec	Chaparral (rocky), coastal scrub	No. Suitable habitat is not present in the Study Area.
32.	White-veined monardella	*Monardella hypoleuca ssp. hypoleuca*	-/-	G4T3/S3	1B.3	(Apr) May-Aug(Sep-Dec)	Chaparral and cismontane woodland; 50-1525 m.	No. Suitable habitat is not present in the Study Area.
33.	San Joaquin woollythreads	*Monolopia congdonii*	FE/-	G2/S2	1B.2	(Jan)Feb-May	Chenopod scrub, valley and foothill grassland (sandy)	No. Suitable habitat is not present in the Study Area.

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Bloom Period	Habitat Preference	Potential to Occur
34.	Gambel's water cress	*Nasturtium gambelii*	FE/CT	G1/S1	1B.1	Apr-Oct	Marshes, stream banks, lake margins; <1250 m. s CCo, SCo, to Mexico	Moderate. Suitable habitat is in the present in the Study Area.
35.	Ojai navarretia	*Navarretia ojaiensis*	-/-	G2/S2	1B.1	May-Jul	Chaparral (openings), coastal scrub (openings), valley and foothill grassland	No. Suitable habitat is not present in the Study Area.
36.	Chaparral nolina	*Nolina cismontana*	-/-	G3/S3	1B.2	(Mar) May-Jul	Chaparral, coastal scrub. Primarily on sandstone and shale substrates; also known from Gabbro.	No. Suitable habitat is not present in the Study Area.
37.	Hubby's phacelia	*Phacelia hubbyi*	-/-	G4/S4	4.2	Apr-Jul	Chaparral, coastal scrub, valley and foothill grassland; gravelly, rocky, talus	No. Suitable habitat is not present in the Study Area.
38.	Michael's rein orchid	*Piperia michaelii*	-/-	G3/S3	4.2	Apr-Aug	Coastal scrub, closed-cone coniferous forest, chaparral, cismontane woodland, lower montane coniferous forest	No. Suitable habitat is not present in the Study Area.
39.	Nuttall's scrub oak	*Quercus dumosa*	-/-	G3/S3	1B.1	Feb-Apr(May-Aug)	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.

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Bloom Period	Habitat Preference	Potential to Occur
40.	Hoffmann's sanicle	*Sanicula hoffmannii*	-/-	G3/S3	4.3	Mar-May	Broad-leafed 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.
41.	Black-flowered figwort	*Scrophularia atrata*	-/-	G2?/S2?	1B.2	Mar-Jul	Closed-cone coniferous forest, riparian scrub, dune habitats; in sand, diatomaceous shales, calcareous and other soil types. 10-250 m. s SCoRO	Moderate. Marginally suitable habitat is present in the Study Area.
42.	San Gabriel ragwort	*Senecio astephanus*	-/-	G3/S3	4.3	May-Jul	Coastal bluff scrub, chaparral. Rocky slopes.	No. Suitable habitat is not present in the Study Area.
43.	Southern jewelflower	*Streptanthus campestris*	-/-	G3/S3	1B.3	(Apr) May-Jul	Open rocky areas in chaparral, lower montane coniferous forest, pinon-juniper woodland;	No. Suitable habitat is not present in the Study Area.
44.	Woolly seablite	*Suaeda taxifolia*	-/-	G4/S4	4.2	Jan-Dec	Coastal bluff scrub, coastal dunes, marshes and swamps (margins of coastal salt).	Present (two plants) in Study Area. High. Suitable habitat is present in the Study Area.
45.	Sonoran maiden fern	*Thelypteris puberula var. sonorensis*	-/-	G5T3/S2	2B.2	Jan-Sep	Meadows and seeps along streams; 50-550 m. SCo, WTR, SnGb, SnJt, to AZ.	No. Suitable habitat is not present in the Study Area.

	Common Name	Scientific Name	Federal/State Status	Global/State Rank	CA Rare Plant Rank	Bloom Period	Habitat Preference	Potential to Occur
46.	Santa Ynez false lupine	*Thermopsis macrophylla*	-/CR	G1/S1	1B.3	Apr-Jun	Chaparral, often in open areas such as fuel breaks, after burns, on sandstone;	No. Suitable habitat is not present in the Study Area.

California Geographic Subregion Abbreviations:

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

California Rare Plant Ranks:

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

CRPR Threat Ranks:

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

Global/State Ranks:

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

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

APPENDIX G. SPECIAL STATUS ANIMAL SPECIES REPORTED FROM THE REGION

	Common Name	Scientific Name	Federal/ State Status	Global/ State Rank	CDFW Status	Nesting/ Breeding Period	Habitat Preference	Potential to Occur
1.	**Cooper's hawk**	*Accipiter cooperii*	-/-	G5/S4	WL	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.
2.	**Arroyo toad**	*Anaxyrus californicus*	FE/-	G2G3/S2 S3	SSC	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.
3.	**Northern California legless lizard**	*Anniella pulchra*	-/-	G3/S3	SSC	Early Spring to July	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential.	Yes. Appropriate habitat is present in the Study Area.
4.	**California legless lizard**	*Anniella sp.*	-/-	G3G4/S3 S4	SSC	Early Spring to July	Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Yes. Appropriate habitat is present in the Study Area.
5.	**Coastal whiptail**	*Aspidoscelis tigris stejnegeri*	-/-	G5T5/S3	SSC	May to August	Deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky.	No. Appropriate habitat is not present in the Study Area.
6.	**Obscure bumble bee**	*Bombus caliginosus*	-/-	G4?/S1S2	SA	April to October	Coastal areas, open grassy coastal prairies and Coast Range meadows.	Yes. Marginal habitat is present in the Study Area.
7.	**Western snowy plover**	*Charadrius alexandrinus nivosus*	FT/-	G3T3/S2S 3	SSC	March 15 - August 15	Sandy beaches, salt pond levees, & shorelines of large alkali lakes. Needs friable soils for nesting.	Yes. Appropriate habitat is present in the Study Area.

	Common Name	Scientific Name	Federal/ State Status	Global/ State Rank	CDFW Status	Nesting/ Breeding Period	Habitat Preference	Potential to Occur
8.	**Sandy beach tiger beetle**	*Cicindela hirticollis gravida*	-/-	G5T2/S2	SA	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.	Yes. Appropriate habitat is present in the Study Area.
9.	**Globose dune beetle**	*Coelus globosus*	-/-	G1G2/S1 S2	SA	n/a	Coastal sand dune habitat. Inhabits foredunes and sand hummocks.	Yes. Appropriate habitat is present in the Study Area.
10.	**Townsend's big-eared bat**	*Corynorhinus townsendii*	-/-	G3G4/S2	SSC	Spring - Summer	Caves, buildings, and mine tunnels. Cave like attics as day roosts. On coast roosts are normally within 100 m. of creeks.	No. Appropriate habitat is not present in the Study Area.
11.	**Yellow rail**	*Coturnicops noveboracensis*	-/-	G4/S1S2	SSC	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.
12.	**Monarch - California overwintering population**	*Danaus plexippus*	-/-	G4T2T3/ S2S3	SA	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.
13.	**Snowy egret**	*Egretta thula*	-/-	G5/S4	SA	March 15 - August 15	Marsh & swamp, meadow & seep, riparian forest, riparian woodland, wetland. Colonial nester, with nest sites situated in protected beds of dense tules.	No. Appropriate nesting habitat is not present in the Study Area.

	Common Name	Scientific Name	Federal/ State Status	Global/ State Rank	CDFW Status	Nesting/ Breeding Period	Habitat Preference	Potential to Occur
14.	**White-tailed kite**	*Elanus leucurus*	-/-	G5/S3S4	FP	March 15 - August 15	Nests in dense tree canopy near open foraging areas	No. Appropriate nesting habitat is not present in the Study Area.
15.	**Southwestern willow flycatcher**	*Empidonax traillii extimus*	FE/CE	G5T2/S1	SA	March 1 through August 31	Riparian woodlands in Southern California.	No. Appropriate habitat is not present in the Study Area.
16.	**Western pond turtle**	*Emys marmorata*	-/-	G3G4/S3	SSC	April - August	Permanent or semi-permanent streams, ponds, lakes.	No. Appropriate habitat is not present in the Study Area.
17.	**Tidewater goby**	*Eucyclogobius newberryi*	FE/-	G3/S3	SSC	n/a	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Low. The marsh mouth is always open. Appropriate habitat is present in the Study Area.
18.	**California condor**	*Gymnogyps californianus*	FE/CE	G1/S1	FP	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.
19.	**California black rail**	*Laterallus jamaicensis coturniculus*	-/CT	G3G4T1/ S1	FP	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.
20.	**San Diego desert woodrat**	*Neotoma lepida intermedia*	-/-	G5T3T4/ S3S4	SSC	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.

	Common Name	Scientific Name	Federal/ State Status	Global/ State Rank	CDFW Status	Nesting/ Breeding Period	Habitat Preference	Potential to Occur
21.	**Black-crowned night heron**	*Nycticorax nycticorax*	-/-	G5/S4	SA	March 15 - August 15	Marsh & swamp, riparian forest, riparian woodland, wetland. Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.	No. Appropriate habitat is not present in the Study Area.
22.	**Big free-tailed bat**	*Nyctinomops macrotis*	-/-	G5/S3	SSC	Spring - Summer	Low lying arid areas in Southern California with rock outcrops or cliffs.	No. Appropriate habitat is not present in the Study Area.
23.	**Steelhead - southern California DPS**	*Oncorhynchus mykiss irideus*	FE/-	G5T1Q/S 1	SA	February - April	Fed listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek, San Diego County)	Yes. Appropriate habitat is present in the Study Area.
24.	**Wandering (=saltmarsh) skipper**	*Panoquina errans*	-/-	G4G5/S2	SA	March to November	Found in coastal salt marshes with water nearby. Larvae feed on salt grass and other salt marsh species	Yes. Appropriate habitat is present in Study Area.
25.	**Belding's savannah sparrow**	*Passerculus sandwichensis beldingi*	-/CE	G5T3/S3	SA	March 15 - August 15	Coastal salt marshes. Nests in Salicornia on or about margins of tidal flats. Santa Barbara to San Diego Counties	Yes. Appropriate habitat is present in the Study Area.
26.	**California brown pelican**	*Pelecanus occidentalis californicus*	FD/FD	G4T3T4/ S3	FP	January - December	Colonial nester on coastal islands just outside the surf line	No. Appropriate nesting habitat is not present in the Study Area.

	Common Name	Scientific Name	Federal/ State Status	Global/ State Rank	CDFW Status	Nesting/ Breeding Period	Habitat Preference	Potential to Occur
27.	**Coast horned lizard**	*Phrynosoma blainvillii*	-/-	G3G4/S3 S4	SSC	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.
28.	**Light-footed Ridgway's rail**	*Rallus obsoletus levipes*	FE/CE	G5T1T2/ S1	FP	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.
29.	**Foothill yellow-legged frog**	*Rana boylii*	-/CCT	G3/S3	SSC	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.
30.	**California red-legged frog**	*Rana draytonii*	FT/-	G2G3/S2 S3	SSC	January - September	Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks for larval development.	No. Appropriate habitat is not present in the Study Area.
31.	**Bank swallow**	*Riparia riparia*	-/CT	G5/S2	SA	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.

	Common Name	Scientific Name	Federal/ State Status	Global/ State Rank	CDFW Status	Nesting/ Breeding Period	Habitat Preference	Potential to Occur
32.	**Coast patch-nosed snake**	*Salvadora hexalepis virgultea*	-/-	G5T4/S2S3	SSC	Between May and August	Coastal scrub. Brushy or shrubby vegetation in coastal Southern California. Requires small mammal burrows for refuge and overwintering sites.	No. Appropriate habitat is not present in the Study Area.
33.	**Yellow warbler**	*Setophaga petechia brewsteri*	-/-	G5/S3S4	SSC	March 15 - August 15	Nests in riparian plant associations, including willows, cottonwoods, etc.	No. Appropriate habitat is not present in Study Area.
34.	**California least tern**	*Sternula antillarum browni*	FE/CE	G4T2T3Q/S2	FP	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.
35.	**Coast Range newt**	*Taricha torosa*	-/-	G4/S4	SSC	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.
36.	**Two-striped gartersnake**	*Thamnophis hammondii*	-/-	G4/S3S4	SSC	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.
37.	**Least Bell's vireo**	*Vireo bellii pusillus*	FE/CE	G5T2/S2	SA	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.

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

Abbreviations:

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