
Appendix B

Biological Technical Report

DRAFT

**Biological Technical Report
Ocean Creek, LLC Project**

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JUNE 2022

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
ESA	federal Endangered Species Act
MBTA	Migratory Bird Treaty Act
MHCP	Multiple Habitat Conservation Program
OHWM	ordinary high water mark
PCE	primary constituent element
RWQCB	Regional Water Quality Control Board
SR	State Route
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

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Summary of Findings

This biological technical report was prepared to provide the existing conditions of the biological study area and evaluation of the proposed Ocean Creek, LLC project. The biological study area refers to the approximately 19-acre on-site and 1.66-acre off-site areas analyzed in this report. The Ocean Creek, LLC project is located in the City of Oceanside in San Diego County. The Oceanside Subarea Plan is used as a guidance document for development projects in the City of Oceanside, but has yet to be approved by the Oceanside City Council.

Dudek conducted vegetation mapping, jurisdictional delineation, and focused coastal California gnatcatcher (*Polioptila californica californica*) surveys in 2019 and 2020. Focused surveys for special-status plants were conducted in May and August 2020, and focused least Bell's vireo (*Vireo bellii pusillus*) surveys were completed in spring and summer 2020. This report documents the results of Dudek's fieldwork and provides an analysis of the biological impacts related to the proposed project.

Based on species composition and general physiognomy, Dudek mapped four vegetation communities and two land covers within the biological study area: Diegan coastal sage scrub (6.17 acres), non-native grassland (10.10 acres), eucalyptus woodland (0.10 acres), disturbed southern willow scrub (0.18 acres), disturbed habitat (2.91 acres), and urban/developed (1.06 acres). One feature mapped during the jurisdictional delineation is likely regulated by California Department of Fish and Wildlife: the southern slope of Loma Alta Creek. Two additional features—a swale and a ditch—were documented within the biological study area but are not waters of the United States or state.

Focused surveys for coastal California gnatcatcher confirmed the presence of two pairs on the site in separate locations within the biological study area. A portion of the site is designated as critical habitat for coastal California gnatcatcher. No least Bell's vireos were detected during the 2020 protocol surveys. Additional special-status wildlife species have high potential to occur within the biological study area, including southern California legless lizard (*Anniella stebbinsi*), orange-throated whiptail (*Aspidoscelis hyperythra*), San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*), and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). No special-status plants were observed.

The proposed project would result in 10.07 acres of on-site permanent impacts associated with the grading and development of the proposed project; and an additional 0.24 acres of permanent, off-site impacts from the extension of S. Oceanside Boulevard.

Of the overall impacts, there are significant impacts from the permanent loss of 8.65 acres of non-native grassland. Additionally, there are significant direct and/or indirect effects on designated critical habitat, special-status wildlife species and their habitat, jurisdictional resources, and wildlife corridors/habitat linkages.

Mitigation to reduce these impacts to a less-than-significant level includes open space preserve designation and management of Diegan coastal sage scrub and southern willow scrub; conservation of native vegetation; pre-construction nesting bird surveys; biological monitoring during clearing, grubbing, and grading; best management practices; directional fencing and signage to prevent intrusion into biological habitat; and prohibition of invasive species in planting palettes. The proposed project also includes the enhancement of the southern slope of Loma Alta Creek and the restoration of previously disturbed habitat to coastal sage scrub to provide a wetland buffer for Loma Alta Creek.

1 Introduction

1.1 Purpose of the Report

This biological technical report summarizes the methods and results of biological studies conducted on Ocean Creek, LLC project (proposed project) site to describe the existing conditions of the biological resources on the project site and associated off-site area, including vegetation, jurisdictional resources, flora, wildlife, potential for special-status species, and wildlife movement. This biological technical report presents the evaluation of the biological significance of these resources and potential project impacts, and recommends measures to avoid, minimize, or mitigate potential impacts where feasible to less-than-significant levels.

1.2 Location and Project Description

1.2.1 Location

The approximately 19-acre project site is located south of the intersection of Crouch Street and Skylark Drive in the City of Oceanside (City) on Assessor's Parcel Numbers 151-270-50-00 and 151-270-56-00.

The project site is bounded by Loma Alta Creek, the Crouch Street light rail station, and undeveloped disturbed land to the north; Crouch Street to the east/southeast; private residences off Rue de la Montagne to the south; and commercial properties off Union Plaza Court to the west. The project site is located approximately 0.6 miles east of Interstate 5, 1 mile northwest of State Route (SR) 78, and 1.5 miles southeast of SR-76 (Figure 1). The site is located on the U.S. Geological Survey 7.5-minute San Luis Rey quadrangle map on Section 25, in Township 11 South, Range 5 West of the San Bernardino Base and Meridian. The approximate center of the project site is at 33.193545, -117.353033 (decimal degrees).

1.2.2 Project Description

The proposed project is a mixed-use development located along S. Oceanside Boulevard and directly adjacent to the North County Transit District Crouch Street Sprinter Station (Figure 2). The proposed project would consist of 295 residential units and 3,000 square feet of commercial/retail to provide for a mix of uses adjacent to the existing Crouch Street Sprinter Station. Building heights would accommodate four-story buildings up to 50 feet in height. Access to the site would be provided by the extension of S. Oceanside Boulevard, with one driveway proposed across from the existing Crouch Street Sprinter Station, and a second driveway located farther to west, between the Sprinter Station and Union Plaza Court. Internal circulation would provide access through the project site from S. Oceanside Boulevard to individual units and parking spaces.

As part of the proposed project, the southern slope of Loma Alta Creek and adjacent disturbed habitat will be enhanced and restored. The restoration includes enhancement of 0.18 acres of riparian habitat from currently disturbed southern willow scrub vegetation to higher quality southern willow scrub (enhancement site), and restoration of 0.40 acres of coastal sage scrub habitat from adjacent disturbed upland habitat (restoration site). Restoration for the 0.58-acre enhancement and restoration site is proposed through the treatment of non-native weeds and invasive vegetation, removal of accumulated trash, and application of native seed. A 3-year maintenance and monitoring period will follow implementation to promote successful establishment of target native habitat and

adequate reduction of non-native vegetation, including persistent invasive species. The enhancement and restoration site will be included in the biological open space easement and will serve as a biological buffer for the proposed project, as required by the Oceanside Subarea Plan (City of Oceanside 2010). The Biological Open Space and Wetland Buffer Restoration Plan is provided as Appendix A to this biological technical report.

1.2.3 Project Terms

Project site. This term describes the approximately 19-acre area proposed for the mixed use residential development, including S. Oceanside Boulevard, 295 apartment units, and 3,000 square feet of commercial/retail uses, and includes approximately 12.87-acres of previously graded pad areas and approximately 3.57 acres of Open Space/vegetated slopes located south of S. Oceanside Boulevard, north and west of Crouch Street. It is noted that the “project site” is synonymous with project ownership; however, only two Assessor’s Parcel Numbers (APNs) (151-270-50-00 and 151-270-56-00) are considered “on-site”, while the road improvements are “off-site” but part of the biological study area, for a total of approximately 19.10 acres. Part of the open space will be located on-site and part of it will be within APN 151-270-53-00.

Proposed project. The proposed project refers to the Ocean Creek, LLC apartment buildings, retail, amenities, and associated roads.

Off-site area. This includes the 1.66-acre portion of the proposed project that is located outside of the project site boundary including the areas south and east of Crouch Street, as well as where S. Oceanside Boulevard will be extended.

Biological study area. The biological study area refers to the on-site and off-site areas analyzed in this report and totals approximately 20.52 acres.

2 Regulatory Context

2.1 Federal

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (ESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and animal species, and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. The ESA defines an endangered species as “any species that is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Under the ESA, it is unlawful to take any listed species, and “take” is defined as, “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

The ESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement. Upon development of a habitat conservation plan, USFWS can issue incidental take permits for listed species.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the “indiscriminate slaughter” of migratory birds by market hunters and others. Each of the treaties protects selected species of birds and provides for closed and open seasons for hunting game birds. The MBTA protects over 800 species of birds and prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, “take” is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA to prohibit only intentional take. Unintentional or accidental take is not prohibited (DOI 2017). Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Two species of eagles that are native to the United States, the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), were granted additional protection within the United States under the Bald and Golden Eagle Protection Act (16 USC 668–668d) to prevent the species from becoming extinct.

2.1.3 Clean Water Act

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and/or fill material into “waters of the United States.” On April 21, 2020, the Navigable Waters Protection Rule was adopted and became effective on June 22, 2020. The notable changes from the previous definition of waters of the United States is that there is a clearer definition of which waters are and are not jurisdictional, there is a new definition of “adjacency,” ephemeral waters are no longer considered waters of the United States, and ditches are explicitly excluded as waters of the United States. The term “adjacent wetlands” (a subset of waters of the United States) is defined in Title 33 of the Code of Federal Regulations (CFR), Section 328.3(c)(16) (33 CFR 328.3[c][16]), as “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.” In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the “ordinary high water mark” (OHWM) which is defined in 33 CFR 328.3(c)(7) as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a 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.”

2.2 State

2.2.1 California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA), which prohibits the “take” of plant and animal species designated by the California Fish and Game Commission as endangered or threatened in the state of California. Under CESA Section 86, take is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA Section 2053 stipulates that state agencies may not approve projects that will “jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy.”

CESA defines an endangered species as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.” CESA defines a threatened species as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the [California Fish and Game] Commission as rare on or before January 1, 1985, is a threatened species.” A candidate species is defined as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the Commission has published a notice of proposed regulation to add the species to either list.” CESA does not list invertebrate species.

CESA authorizes the taking of threatened, endangered, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed species that are also state-listed species. In certain circumstances, CESA allows CDFW to adopt a CESA incidental take authorization as satisfactory for California Environmental Quality Act (CEQA) purposes based on finding that the federal permit adequately protects the species and is consistent with state law.

A CESA permit may not authorize the take of “fully protected” species that are protected in other provisions of the California Fish and Game Code, discussed further below.

2.2.2 California Fish and Game Code

Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code provide that designated fully protected species may not be taken or possessed without a permit. Incidental take of these species is not authorized by law.

Pursuant to Section 3503.5 of the California Fish and Game Code, it is unlawful to take, possess, or destroy any birds of prey; or to take, possess, or destroy any nest or eggs of such birds. Birds of prey refer to species in the orders Falconiformes and Strigiformes.

Nests of all other birds (except English sparrow [*Passer domesticus*] and European starling [*Sturnus vulgaris*]) are protected under Sections 3503 and 3513 of the California Fish and Game Code.

Pursuant to Section 1602 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. Diversion, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife requires authorization from CDFW by means of entering into an agreement pursuant to Section 1602 of the California Fish and Game Code.

2.2.3 Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (Porter–Cologne Act) protects water quality and the beneficial uses of water. It applies to surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the Regional Water Quality Control Boards (RWQCBs) develop regional basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of statewide plans and basin plans. Waters regulated under the Porter–Cologne Act include isolated waters that are not regulated by USACE. RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a “water of the state” (California Water Code, Section 13260[a]). Waters of the state are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code, Section 13050[e]). Developments with impacts on jurisdictional waters must demonstrate compliance with the goals of the Porter–Cologne Act by developing stormwater pollution prevention plans, standard urban stormwater mitigation plans, and other measures to obtain a Clean Water Act Section 401 certification. If a Clean Water Act Section 404 permit is not required for the project, the RWQCB may still require a permit (i.e., Waste Discharge Requirement) for impacts to waters of the state under the Porter–Cologne Act.

2.2.4 California Environmental Quality Act

CEQA (California Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines (14 CCR 15000 et seq.) require identification of a project's potentially significant impacts on biological resources and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15000 et seq.). A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not currently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or ... [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c). CEQA also requires identification of a project's potentially significant impacts on riparian habitats (such as wetlands, bays, estuaries, and marshes) and other sensitive natural communities, including habitats occupied by endangered, rare, and threatened species.

In Title 14 of the California Code of Regulations (CCR), Section 1.72 (14 CCR, Section 1.72), CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation."

In 14 CCR 1.56, CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." Diversion, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife requires authorization from CDFW by means of entering into an agreement pursuant to Section 1602 of the California Fish and Game Code.

CDFW recognizes that all plants with California Rare Plant Rank (CRPR) 1A, 1B, 2, and some ranked 3, of the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants in California (CNPS 2020) may meet the criteria for listing as threatened or endangered and should be considered under CEQA (CDFW 2020). Some of the CRPR 3 and 4 plants meet the criteria for determination as "rare" or "endangered" as defined in Section 1901, Chapter 10 (Native Plant Protection Act), Division 2, of the California Fish and Game Code, as well as Section 2062 and Section 2067, Chapter 1.5 (CESA), Division 3. Therefore, consideration under CEQA for these CRPR 3 and 4 species is strongly recommended by CNPS (CNPS 2020).

For purposes of this report, animals considered "rare" under CEQA include endangered or threatened species, Birds of Conservation Concern (USFWS 2008), California Species of Special Concern (CDFW 2019a), and fully protected species.

Section IV, Appendix G (Environmental Checklist Form) of the CEQA Guidelines (14 CCR 15000 et seq.) requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game [now CDFW] or the U.S. Fish and Wildlife Service."

The criteria used to determine the significance of impacts to biological resources under CEQA are provided in Chapter 6, Anticipated Project Impacts and Analysis of Significance.

2.3 Local

2.3.1 North County Multiple Habitat Conservation Program

The North County Multiple Habitat Conservation Program (MHCP) is a long-term regional conservation plan established to protect sensitive species and habitats in northern San Diego County. The MHCP is divided into seven Subarea Plans—one for each jurisdiction within the MHCP—that are permitted and implemented separately from one another. The City of Carlsbad is the only city under the MHCP that has an approved and permitted Subarea Plan. The City of Oceanside Subarea Plan (Subarea Plan) has been prepared and is used as a guidance document for development projects in the City of Oceanside, but the Subarea Plan has not been approved or permitted (City of Oceanside 2010). The project area is located within a Biological Core and Linkage Area identified in the North County MHCP (Figure 2-4 in SANDAG 2003).

2.3.2 City of Oceanside Subarea Plan

The overall goal of the Oceanside Subarea Plan is to contribute to regional biodiversity and the viability of rare, unique, or sensitive biological resources throughout the City of Oceanside and the larger region while allowing public and private development to occur consistent with the City's General Plan and Capital Improvement Program. In addition, the plan calls for the conservation of 90% to 100% of all hardline conservation areas; conservation of a minimum of 2,511 acres of existing native habitats as a biological preserve in the City of Oceanside; conservation of a minimum of 95% of rare and narrow endemic species populations within the preserve and a minimum of 80% throughout the City as a whole; and restoration of a minimum of 164 acres of coastal sage scrub habitat within the City of Oceanside, of which 145 acres will be within a wildlife corridor planning zone. Parcels within the wildlife corridor planning zone contribute to the north-south regional gnatcatcher steppingstone corridor. Although the Oceanside Subarea Plan is used as a guidance document for development projects in the City of Oceanside, the Subarea Plan has yet to be approved by the Oceanside City Council, and incidental take authority has therefore not been transferred to the City of Oceanside from USFWS and CDFW.

The Oceanside Subarea Plan identifies undeveloped lands within the City where conservation and management will achieve the Subarea Plan's biological goals while minimizing adverse effects on lands uses, economics, or private property rights. In addition, the Subarea Plan establishes preserve planning zones, the existing biological conditions and goals of which were used as foundations for their designation; however, the zones are defined for effective implementation of the Subarea Plan. Brief descriptions of the preserve planning zones are provided below:

- **Wildlife Corridor Planning Zone.** The Wildlife Corridor Planning Zone extends from U.S. Marine Corps Base Camp Pendleton south to Buena Vista Creek. This zone varies in width from 1 to 2 miles along most of its length and is centered roughly on El Camino Real and the associated San Diego Gas & Electric Company (SDG&E) electric transmission corridor. It encompasses those habitat parcels that potentially contribute to the north-south, regional gnatcatcher steppingstone corridor, recognizing that existing Preserve lands north of the San Luis Rey River complete the steppingstone corridor connection to U.S. Marine Corps Base Camp Pendleton. The project site is located outside of the Wildlife Corridor Planning Zone. However, the Subarea Plan has specific standards for wildlife road crossings. For example, new roads or improvements to existing roads must include wildlife crossing improvements to accommodate safe animal movement

between occupied habitats on either side of the road. Any new road should be located in the least environmentally damaging location.

- **Pre-Approved Mitigation Areas.** These areas represent land areas that have significant resource value and therefore will qualify for on-site mitigation credit. Development is allowed in pre-approved mitigation areas, subject to planning guidelines to avoid, minimize, and fully mitigate impacts. The project site is not located within a pre-approved mitigation area.
- **Agricultural Exclusion Zone.** This zone includes lands north of the San Luis Rey River that are planned for agricultural uses under the Oceanside General Plan. Ongoing agricultural practices may continue in this area as long as they do not remove existing natural habitats. The project site is not located within an agricultural exclusion zone.
- **Off-Site Mitigation Zone.** This zone includes all other parcels within the City of Oceanside that support natural vegetation outside of the Wildlife Corridor Planning Zone, agriculture exclusion zone, and coastal zone. The off-site mitigation zone includes several pre-approved mitigation areas. The project site is not located within an off-site mitigation zone.
- **Coastal Zone.** This zone all areas within the City's coastal zone where the federal Coastal Zone Management Act and California Coastal Act policies apply. The project site is not located within the coastal zone.

In addition to preserve planning zones, the Subarea Plan also identifies specific "hardline" and "softline" preserves. Generally, hardline preserves are areas that are already preserved to Subarea Plan standards and softline preserves are areas specifically targeted for preservation through application of Subarea Plan standards and policies. Portions of the project site are located within a hardline preserve (Figure 3). The Oceanside Subarea Plan describes hardline preserves as areas specifically targeted for future preservation through the application of the Subarea Plan standards and policies. Hardline preserves are also considered part of Focused Planning Areas. Preserve areas within the Subarea Plan area prohibit the following land uses: all forms of development, agricultural uses, active recreation, mineral extraction, landfills, itinerant worker camps, roads or other transportation facilities, most flood control projects, and brush control or fuel management, except for existing firebreaks that must be maintained for safety reasons within 100 feet of existing buildings (City of Oceanside 2010). Any implementation of these prohibited land uses within the preserve would require written concurrence from the City and CDFW and USFWS (the wildlife agencies) through an amendment process. Conditionally allowed land uses in preserve areas include passive recreation (i.e., hiking, birdwatching, and fishing); utility projects that include full restoration of temporarily impacted habitat, flood control, or siltation basins that support natural vegetation and habitat value; and maintenance of existing firebreaks adjacent to existing buildings.

Wetland Buffers

Wetland buffers generally refer to an area that extends perpendicularly into upland areas from the delineated edge of wetland or riparian areas. Wetland buffer areas establish an upland zone adjacent to wetlands designed to avoid and minimize indirect effects on wetland functions (e.g., species habitat, water quality maintenance, flood capacity). Under Section 5.2.4 of the Subarea Plan (City of Oceanside 2010):

Wherever development or other discretionary actions are proposed in or adjacent to riparian habitats (not including the San Luis Rey River), the riparian area and other wetlands or associated natural habitats shall be designated as biological open space and incorporated into the Preserve. In addition, a minimum 50-foot biological buffer, plus a minimum 50-foot planning buffer (total

width of both equals 100 feet) shall be established for upland habitats, beginning at the outer edge of riparian vegetation. The planning buffer serves as an area of transition between the biological buffer and specified land uses on adjoining uplands. Foot paths, bikeways, and passive recreational uses may be incorporated into planning buffers, but buildings, roads, or other intensive uses are prohibited. The following uses are prohibited in the 50-foot biological buffer: (1) new development, (2) foot paths, bikeways, and passive recreational uses not already planned, and (3) fuel modification activities for new development. In the event that natural habitats do not currently (at the time of proposed action) cover the 50-foot buffer area, native habitats appropriate to the location and soils shall be restored as a condition of project approval. In most cases, coastal sage scrub vegetation shall be the preferred habitat to restore within the biological buffer.

However, since the Subarea Plan has not been approved by the City, these buffers and setbacks are subject to reduction based on approval from the City and the wildlife agencies.

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3 Survey Methods

3.1 Literature Review

Prior to conducting field surveys, Dudek reviewed regional California Natural Diversity Database occurrence data¹ (CDFW 2019b), the Rare Plant Inventory¹ (CNPS 2020), USFWS occurrence data¹ and critical habitat (USFWS 2019a), the San Diego Geographic Information Source (SanGIS 2017), the National Wetlands Inventory (USFWS 2019b), and the U.S. Department of Agriculture's Natural Resources Conservation Service Web Soil Survey (USDA 2019a) to analyze the occurrence potential of special-status species and jurisdictional waters that are known to occur or may potentially occur within the biological study area.

General information regarding wildlife species present in the region was obtained from Unitt (2004) for birds, Tremor et al. (2017) for mammals, and Stebbins (2003) and California Herps (CaliforniaHerps.com 2020) for reptiles and amphibians.

3.2 Survey Schedule

The 2019 and 2020 surveys and site conditions are presented in Table 1.

Table 1. Survey Details and Conditions

Date	Time	Survey Type	Personnel	Survey Conditions
<i>Vegetation Mapping, Jurisdictional Delineation (JD), and Rare Plant Surveys</i>				
8/5/2019	9:12 a.m.–12:32 p.m.	Vegetation mapping and JD	CA, CS	72°F–80°F; 0% cloud cover, 0–1 mph winds
2/13/2020	2:00 p.m.–5:00 p.m.	JD update and USACE site visit	CA, CS	Not recorded
2/25/2020	9:30 a.m.–10:45 p.m.	JD update	PS	Not recorded
5/15/2020	7:58 a.m.–2:48 p.m.	Rare plants	KD	63°F–72°F; 0%–10% cloud cover; 0–4 mph winds
8/13/2020	6:05 a.m.–10:47 p.m.	Rare plants	KD	66°F–77°F; 100% cloud cover; 0–5 mph winds
<i>Coastal California Gnatcatcher (CAGN) Surveys</i>				
7/31/2019	6:00 a.m.–11:59 a.m.	CAGN	EB	64°F–83°F; 0%–80% cloud cover, 0–4 mph winds
8/14/2019	6:00 a.m.–9:51 a.m.	CAGN	EB, KD	65°F–70°F; 0%–100% cloud cover; 0–6 mph winds
8/28/2019	6:11 a.m.–10:53 a.m.	CAGN	EB, KD, SC	61°F–85°F; 0%–80% cloud cover; 0–5 mph winds

¹ U.S. Geological Survey 7.5-minute San Luis Rey quadrangle and surrounding seven quadrangles: Las Pulgas Canyon, Morro Hill, Bonsall, Oceanside, San Marcos, Encinitas, and Rancho Santa Fe.

Table 1. Survey Details and Conditions

Date	Time	Survey Type	Personnel	Survey Conditions
9/11/2019	6:04 a.m.– 10:18 a.m.	CAGN	EB, KD, SC	60°F–87°F; 0%–100% cloud cover; 0–5 mph winds
9/25/2019	6:04 a.m.– 11:06 a.m.	CAGN	EB	59°F–73°F; 0%–100% cloud cover; 0–4 mph winds
10/11/2019	6:30 a.m.– 10:50 a.m.	CAGN	EB, KD	52°F–77°F; 0%–100% cloud cover; 0–4 mph winds
10/25/2019	8:11 a.m.– 11:16 a.m.	CAGN	EB	58°F–76°F; 0%–100% cloud cover; 0–5 mph winds
11/8/2019	8:10 a.m.– 11:25 a.m.	CAGN	EB	66°F–68°F; 0%–100% cloud cover; 0–5 mph winds
11/22/2019	7:28 a.m.– 11:40 a.m.	CAGN	EB	49°F–70°F; 0%–100% cloud cover; 0–4 mph winds
Least Bell's Vireo (LBVI) Surveys				
04/30/2020	6:55 a.m.– 8:05 a.m.	LBVI	AH	64°F; 100% cloud cover; 0–1 mph wind
05/11/2020	6:49 a.m.– 7:30 a.m.	LBVI	PS	61°F–64°F; 20%–90% cloud cover; 0–1 mph wind
05/21/2020	7:29 a.m.– 8:34 a.m.	LBVI	AH; SF	56°F–61°F; 20% cloud cover; 1–3 mph wind
06/01/2020	7:00 a.m.– 8:00 a.m.	LBVI	SC; JS	58°F–61°F; 20%–50% cloud cover; 1–3 mph wind
06/12/2020	6:00 a.m.– 6:45 a.m.	LBVI	PS; SC	61°F; 90%–100% cloud cover; 0–2 mph wind
06/27/2020	6:50 a.m.– 7:30 a.m.	LBVI	SC	67°F; 100% cloud cover; 0–2 mph wind
07/11/2020	7:30 a.m.– 8:30 a.m.	LBVI	SC	74°F–76°F; 0%–10% cloud cover; 2–5 mph wind
07/25/2020	7:15 a.m.– 8:15 a.m.	LBVI	SC	66°F–67°F; 100% cloud cover; 2–10 mph wind

Personnel: AH = Anita Hayworth; CA = Callie Amoaku; CS = Cody Schaaf; EB = Erin Bergman; JS = Jeremy Sison; KD = Katie Dayton; PS = Patricia Schuyler; SC = Shana Carey; SF = Stuart Fraser.

3.3 Vegetation Mapping

Vegetation communities were evaluated within the biological study area on an aerial map at a 200 scale (1 inch = 200 feet). These boundaries and locations were digitized and downloaded by Dudek geographic information system (GIS) technicians using ArcGIS software. Vegetation communities and land covers were mapped using the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) as modified by the County and noted in *Vegetation Communities of San Diego County* (Oberbauer et al. 2008).

3.4 Jurisdictional Delineation

The wetlands delineation was performed in accordance with the 1987 U.S. Army Corps of Engineers *Wetlands Delineation Manual* (USACE 1987), the USACE/EPA *Rapanos* guidance (USACE and EPA 2007), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a), *A Field Guide*

to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b), and the Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2010). The Field Indicators of Hydric Soils in the United State (USDA 2018a) and Arid West 2016 Regional Wetland Plant List (Lichvar et al. 2016) were used to support the delineation. Waters, including wetlands, regulated by RWQCB typically include those identified following the USACE guidance. Streambeds regulated by CDFW typically include non-wetland waters mapped for USACE, and riparian habitat includes hydrophytic vegetation adjacent to streambeds.

3.5 Special-Status Plants

Special-status plant species considered in this report are those that are (1) species listed by federal and/or state agencies, proposed for listing as threatened or endangered, or are candidate species (CDFW 2020); (2) species with a CRPR (CNPS 2020); or (3) species listed on the Oceanside Subarea Plan Proposed Covered Species list (City of Oceanside 2010).

Focused surveys for special-status plants were conducted in May and August 2020. Prior to special-status plant surveys, Dudek evaluated plant records in the San Luis Rey quadrangle and the surrounding seven quadrangles, including Las Pulgas Canyon, Morro Hill, Bonsall, Oceanside, San Marcos, Encinitas, and Rancho Santa Fe (CDFW 2019b; CNPS 2020; USFWS 2019a) to determine target species. In addition to Dudek's knowledge of biological resources and regional distribution of each species, elevation, habitat, and soils present within the rare plant survey area were evaluated to determine the potential for various special-status plant species to occur. Field survey methods conformed to CNPS *Botanical Survey Guidelines* (CNPS 2001); *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFG 2000); and *General Rare Plant Survey Guidelines* (Cypher 2002). Surveys were conducted by walking meandering transects throughout the project site to detect special-status species.

3.6 Special-Status Wildlife

All wildlife species detected during the field surveys by sight, vocalizations, burrows, tracks, scat, and other signs were recorded. Binoculars (10×40) were used to aid in the identification of observed wildlife.

Special-status wildlife species considered in this report are those that are (1) listed by federal and/or state agencies, proposed for listing as threatened or endangered, or are candidate species (CDFW 2019a); (2) Species of Special Concern and Bird of Conservation Concern species (CDFW 2019a; USFWS 2008); (3) fully protected species (CDFW 2019a); or (4) listed on the Oceanside Subarea Plan Proposed Covered Species list (City of Oceanside 2010).

Focused surveys were conducted for coastal California gnatcatcher (*Poliioptila californica californica*) in 2019 and for least Bell's vireo (*Vireo bellii pusillus*) in 2020. These surveys are described in detail below.

3.6.1 Coastal California Gnatcatcher

Nine focused surveys for coastal California gnatcatcher were performed within suitable habitat between July 31, 2019, and November 22, 2019, by coastal California gnatcatcher-permitted biologist Erin Bergman (TE-53771B-0) according to the schedule in Table 1. The surveys were conducted following the currently accepted

USFWS protocol: *Coastal California Gnatcatcher* (*Poliophtila californica californica*) *Presence/Absence Survey Protocol* (USFWS 1997). Coastal California gnatcatchers were documented on site using a variety of features that helped distinguish individuals from one another in order to assist with determining the number of pairs/individuals. Some distinguishing features include male cap color (variation in the darkness of the black cap) and male cap thickness, width, and length. Coastal California gnatcatcher color patterns, unique markings, behaviors, pitch of call, and song variation were used to separate each observation.

Non-coastal California gnatcatcher-permitted biologists Kathleen Dayton and Shana Carey accompanied Ms. Bergman as passive observers, which included sitting quietly with little or no movement for prolonged periods while studying coastal California gnatcatcher movements with binoculars and carefully listening to vocalizations. Only the coastal California gnatcatcher-permitted biologist used audio-playback techniques.

Survey routes for site visits completely covered the areas of suitable coastal California gnatcatcher habitat on site as well as the adjacent non-native grassland, as shown on Figure 4. Appropriate birding binoculars (8×42) were used to aid in detecting and identifying bird species. A recording of coastal California gnatcatcher vocalizations was used to elicit a response from the species. The recording was played approximately every 50 to 100 feet, and when a coastal California gnatcatcher was detected, the playing of the recording ceased to avoid harassment. A 100-scale (1 inch = 100 feet) aerial photograph of the study area overlaid with the vegetation and site boundaries was used to map any coastal California gnatcatcher detected. Weather conditions, time of day, and season were within protocol limits and appropriate for the detection of gnatcatchers, as shown in Table 1.

3.6.2 Least Bell's Vireo

A Section 10(a)(1)(A) permit is not required to perform presence/absence surveys for least Bell's vireo. Dudek wildlife biologists Anita Hayworth, Patricia Schuyler, Stuart Fraser, Shana Carey, and Jeremy Sison conducted least Bell's vireo surveys (Table 1). Focused surveys for these species were initiated on April 30, 2020, and were completed on July 25, 2020.

The eight surveys for least Bell's vireo followed the currently accepted *Least Bell's Vireo Survey Guidelines* (USFWS 2001), which states that a minimum of eight survey visits should be made to all riparian areas and any other potential least Bell's vireo habitats between April 10 and July 31. The site visits are required to be conducted at least 10 days apart to maximize the detection of early and late arrivals, females, non-vocal birds, and nesting pairs. Taped playback of vireo vocalizations was not used during the surveys. Surveys were conducted between dawn and noon and were not conducted during periods of excessive or abnormal cold, heat, wind, rain, or other inclement weather. The route was arranged to cover all suitable habitat on site, which consists of the southern slope of Loma Alta Creek. Binoculars (10×50) were used to aid in detecting and identifying wildlife species.

4 Physical Characteristics

4.1 Site Description

Previous land uses for the proposed project area included open space, vacant land, and potentially farming. Prior grading activities have occurred within the project site. In 1964, fill soils were placed at the base of hillside to level the lower area within the project site (Benton 1964, as cited in Leighton 2021). A water main was constructed beneath the swale (described below) during this time as well and is still present on site. The graded area was regraded in the mid-1980s, which included (1) removal of the previously placed fill soils, (2) limited removal of alluvial soils, (3) excavation of a buttress for the proposed cut slopes on the western side of Crouch Street, (4) placement of compacted fill for the graded pad, and (5) excavation of fill to create a borrow site in the graded pad. The borrow site was filled with compacted fill in 1989. Prior grading and development also included the construction of Crouch Street (Leighton 2021).

A number of dirt roads exist on the perimeter of the flat grassland areas of the site, suggesting prior access for vehicles and/or farm equipment. Several itinerant encampments and litter piles were discovered during 2019 surveys in various locations on-site, suggesting frequent human access and utilization.

The proposed project site supports primarily native vegetation in the site's southern and eastern upland areas, and naturalized vegetation in the site's western and northern previously disturbed lowlands. Additionally, portions of the project site burned in a small brush fire several weeks after vegetation mapping was conducted in August 2019. The off-site area includes 0.24 acres of disturbed habitat and urban/developed land covers immediately west of the project site, as well as approximately 1.42 acres of coastal sage scrub east of Crouch Street.

Elevations on site range from approximately 30 feet above mean sea level to 190 feet above mean sea level. Topography generally slopes from the southeast to the northwest in upland areas; these areas support steep hills and several canyons. The site's lowlands are flat and lacking topographic diversity.

4.2 Soils

Soil on site is classified as Las Flores loamy fine sand, 15% to 30% slopes, eroded; Carlsbad-Urban land complex, 2% to 9% slopes; Carlsbad gravelly loamy sand, 2% to 5% slopes; Salinas clay loam, 0% to 2% slopes; and made land (USDA 2019a). All three of these soil types are "predominantly non-hydric" or "non-hydric" (USDA 2018b). The soils are shown on Figure 5. Additionally, the entire lowlands were graded and filled between 1964 and 1989. While only the northern portion of the project site is mapped as made land by U.S. Department of Agriculture (2019a), Figure 5 shows an overlay of the fill areas mapped by Leighton (2021).

4.3 Hydrology

Ocean Creek, LLC is located entirely within the Carlsbad Hydrological Unit (904.00) and more specifically, within the Loma Alta Hydrological Area (904.10) (RWQCB 2016). The U.S. Geological Survey (2020) maps this area in the Loma Alta Creek–Frontal Gulf of Santa Catalina Hydrologic Subarea within the San Marcos Creek–Frontal Gulf of Santa Catalina Hydrologic Area located within the San Luis Rey–Escondido Hydrologic Unit (Figure 6). The main drainage in this area is Loma Alta Creek, which runs parallel to Oceanside Boulevard along the northwest boundary

of the project site and drains to the west. Loma Alta Creek outlets into the Pacific Ocean approximately 1.5 miles west of the site.

5 Results

5.1 Vegetation Communities

Dudek mapped four vegetation communities and two land covers within the biological study area: Diegan coastal sage scrub, non-native grassland, eucalyptus woodland, disturbed southern willow scrub, disturbed habitat, and urban/developed. See Figure 7 and Table 2.

Table 2. Vegetation Communities and Land Covers

Vegetation/Land Cover Type	On-Site Acreage	Off-Site Acreage	Total Acreage
Diegan coastal sage scrub	4.75	1.24	6.17
Disturbed habitat	2.87	0.04	2.91
Eucalyptus woodland	0.10	—	0.10
Non-native grassland	10.10	—	10.10
Southern willow scrub (disturbed)	0.18	—	0.18
Urban/developed	0.87	0.19	1.06
Total*	18.86	1.66	20.52

*May not total due to rounding.

5.1.1 Diegan Coastal Sage Scrub

The majority of the southern and eastern upland portions of the biological study area consists of Diegan coastal sage scrub dominated by coyotebrush (*Baccharis pilularis*) and California sagebrush (*Artemisia californica*); several non-native species, mainly black mustard (*Brassica nigra*) and fennel (*Foeniculum vulgare*), are intermixed. The sage scrub habitat to the west of Crouch Street has several concrete drainage channels and remnants of irrigation pipes and sprinklers, suggesting that it was once part of a restoration project for the residential development to the south.

5.1.2 Disturbed Habitat

Disturbed areas surrounding and bisecting the non-native grassland on the western and northeast biological study area are dominated by Hottentot fig (*Carpobrotus edulis*), but include several native species common in disturbed areas, including dove weed (*Croton setiger*) and clustered tarweed (*Deinandra fasciculata*). Additionally, several patches of disturbed habitat dominated by black mustard, castorbean (*Ricinus communis*), and ornamental species such as *Acacia* sp. occur adjacent to the Diegan coastal sage scrub throughout the biological study area. Additional disturbed habitat areas exist above the Diegan coastal sage scrub in the southern and eastern corners of the site where evidence of recent mowing and vegetation clearing was observed during surveys.

5.1.3 Eucalyptus Woodland

One small patch of eucalyptus woodland exists in the southwest portion of the project site comprised of river redgum (*Eucalyptus camaldulensis*) and Tasmanian bluegum (*Eucalyptus globulus*).

5.1.4 Non-Native Grassland

Non-native grassland comprises most of the northwest portion of the biological study area where it is dominated by naturalized species including non-native bromes (*Bromus* spp.), Maltese star-thistle (*Centaurea melitensis*), and shortpod mustard (*Hirschfeldia incana*). The non-native grassland supports sparse native species (i.e., Menzies' golden bush [*Isocoma menziesii*] and western ragweed [*Ambrosia psilostachya*]), but the absolute percent covers were too low to map as a separate native vegetation community. The non-native grassland has been graded and filled in the past, and a brush fire burned a significant portion of this vegetation community in mid-August 2019 after the initial vegetation mapping was completed.

5.1.5 Southern Willow Scrub (Disturbed)

The southern slope of Loma Alta Creek is located within the project site. It is comprised of scattered arroyo willow (*Salix lasiolepis*), mulefat (*Baccharis salicifolia* ssp. *salicifolia*), coyotebrush (*Baccharis pilularis* ssp. *consanguinea*), and Canadian horseweed (*Erigeron canadensis*); however, Hottentot fig and scattered castorbean make up more than 25% absolute cover on this slope. It is mapped as a "disturbed" form of southern willow scrub based on the high percent cover of non-native species combined with the low percent cover of native riparian species.

5.1.6 Urban/Developed

There is urban/developed land along the northern boundary of the biological study area near the Crouch Street Sprinter Station, in a southern area of ornamental vegetation adjacent to existing residences off Rue de la Montagne, and in the off-site area.

5.2 Flora and Fauna

A total of 177 plants were observed during 2019 and 2020 surveys, including 73 native (41%) and 104 non-native (59%) species. A cumulative list of plant species observed by Dudek during all surveys is presented in Appendix B, Plant Species List. Latin and common names for plant species with a CRPR follow the CNPS On-Line Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2020). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2019) and common names follow the California Natural Community list (CDFW 2019c) or the U.S. Department of Agriculture Natural Resources Conservation Service Plants Database (USDA 2019b).

A total of 35 wildlife species were observed during 2019 surveys, including 27 birds, 5 invertebrates, 2 mammals, and 1 reptile. All wildlife species observed or detected during the surveys were recorded and are presented in Appendix C, Wildlife Species List. Latin and common names of animals follow Crother (2017) for reptiles and amphibians, American Ornithological Society (AOS 2018) for birds, Wilson and Reeder (2005) for mammals, and North American Butterfly Association (NABA 2016) or San Diego Natural History Museum (SDNHM 2002) for butterflies.

5.3 Special-Status Plants

No special-status plants were observed during focused surveys in 2020. Special-status plants evaluated but that have low potential or are not expected to occur are described in Appendix D, Special-Status Plant Species Not Expected to Occur within the Biological Study Area.

5.4 Special-Status Wildlife

5.4.1 Coastal California Gnatcatcher

Coastal California gnatcatcher occur on the project site. Focused surveys confirmed the presence of two pairs on the site in separate locations (Figure 8). Appendix E includes the *2019 Focused Coastal California Gnatcatcher Survey Report for the Proposed Ocean Creek Project*. A portion of the site is designated as critical habitat for coastal California gnatcatcher (Figure 8). The USFWS (72 FR 72010–72213) describes designation of critical habitat through considering the “physical and biological features (primary constituent elements [PCEs]) that are essential to the conservation of the species and that may require special management considerations or protection. These include, but are not limited to: (1) Space for individual and population growth and for normal behavior; (2) Food, water, air, light, minerals, or other nutritional or physiological requirements; (3) Cover or shelter; (4) Sites for breeding, reproduction, or rearing (or development) of offspring; and (5) Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species.” It is known that juvenile coastal California gnatcatchers disperse from their natal territory using habitat linkages or corridors connecting areas of suitable Diegan coastal sage scrub. Additionally, although much less frequently, California gnatcatchers may use chaparral, grassland, or riparian habitat that is near sage scrub habitat for foraging, natal dispersal, or (very infrequently) for nesting (Campbell et al. 1998, as cited in 72 FR 72010–72213).

The focused surveys for coastal California gnatcatcher included all of the designated critical habitat within the project site (see Figure 4 for survey routes), including both Diegan coastal sage scrub and non-native grassland. Surveys were conducted between July 2019 and November 2019, and no coastal California gnatcatchers were detected outside of the Diegan coastal sage scrub, despite surveys overlapping with both the breeding season and dispersal season. The non-native grassland has been graded in the past and the overall height of the grasses, forbs, and scattered shrubs are likely too short to provide adequate habitat for foraging opportunities. Additionally, the grassland area located near the Crouch Street Sprinter Station is used by people experiencing homelessness, and nearby residents have been observed walking dogs through this area. The human activity combined with a lack of suitable vegetation may deter the gnatcatchers from using this area during foraging and/or dispersal. The disturbed habitat and developed land within the biological study area do not provide any habitat for these species. The eucalyptus woodland may provide dispersal habitat, but no coastal California gnatcatchers were observed in these habitat types despite the survey routes overlapping or occurring adjacent to these areas as well.

Therefore, based on the observed use of the Diegan coastal sage scrub by coastal California gnatcatcher, and the lack of use by this species in other habitat types, the critical habitat designated on site includes both areas that provide PCEs (i.e., Diegan coastal sage scrub) and areas that do not provide PCEs (i.e., non-native grassland, disturbed habitat, developed land, and eucalyptus woodland).

5.4.2 Least Bell's Vireo

Least Bell's vireo is known to occur approximately 0.5 miles northwest of the project site. The sparsely vegetated portion of the southern slope and main portion of Loma Alta Creek adjacent to the site has moderate potential to support least Bell's vireo; however, surveys in 2020 were negative. Appendix F includes the 2020 focused survey report for least Bell's vireo. There is no designated critical habitat for least Bell's vireo in the biological study area.

5.4.3 Other Special-Status Species

Additional special-status species detected or with potential to occur on-site are included in Appendix G1, Special-Status Wildlife Species Detected or Potentially Occurring within the Biological Study Area. Special-status species with high potential to occur on site include Southern California legless lizard (*Anniella stebbinsi*), orange-throated whiptail (*Aspidoscelis hyperythra*), San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*), and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). Special-status wildlife that occur in the vicinity but do not have potential to occur based on lack of habitat, elevation, or range are included in Appendix G2, Special-Status Wildlife Species with Low Potential and Not Expected to Occur within the Biological Study Area.

5.5 Jurisdictional Resources

There are two additional features within the project site and off-site area that were identified during site visits. One feature is a man-made swale that bisects the non-native grassland west of Crouch Street near the northwest portion of the project site. The 0.34-acre feature is 460 linear feet and averages 28 feet in width. This man-made feature lacks hydrological indicators, including hydrophytic vegetation and evidence of surface flow. There is a concrete culvert at the north end of the feature that is situated slightly higher than the feature; no staining, water marks, or any other signs of hydrology were evident on the culvert. A water line is located below this swale and an easement runs through this portion of the site (City of Oceanside 2019). This swale exists because the City of Oceanside would not allow the property owner to place fill over the waterline easement when the site was graded and filled (see Section 4.2, Soils). The as-built grading plan indicates that berms were built in order to prevent any runoff from entering this swale except direct rainfall and North County Transit District later moved the berms and added erosion control measures related to drainage of the eastern portion of the graded pad. The culvert drains into the City's storm drain system, which ultimately outlets into Loma Alta Creek.

The second feature is a drainage ditch just west of the project site boundary but is located within a portion of the off-site area. It is concrete-lined for the majority of the length, but the concrete breaks up, and the ditch is earthen-bottomed at the very northern extent. Similar to the swale, it was constructed in uplands and drains runoff from the residential development just south/southwest of it. A brow ditch located south of the ditch collects sheet flow and irrigation runoff from the residential development drains into the ditch as well, although the flow is via sheet flow because there is no defined ditch or feature connecting the brow ditch and the concrete-lined ditch. There is an underground sewer line that runs from the residential development down slope and is located beneath the constructed ditch (City of Oceanside 2019). The ditch outlets into Loma Alta Creek. Dudek attended two batching meetings with CDFW and RWQCB staff in September 2019 and May 2020. CDFW and RWQCB both stated that these features would not be regulated by either agency. On May 27, 2020, USACE issued an Approved Jurisdictional Determination stating that waters of the United States do not occur on the biological study area.

Arid West Ephemeral and Intermittent Streams Ordinary High Water Mark Datasheets for the features described above are provided in Appendix H.

According to the National Wetlands Inventory (USFWS 2019b), no wetlands are mapped on site. Loma Alta Creek is located northwest of the project site, with the southern slope of the creek located within the project site. The slope is mapped as disturbed southern willow scrub, which would likely be regulated by CDFW as riparian habitat; the creek below the ordinary high water mark would be regulated by USACE, RWQCB, and CDFW, but this is outside the project boundary. Per Section 5.2.4 of the Subarea Plan (City of Oceanside 2010), this riparian habitat would likely require a biological and planning buffer if development is proposed adjacent to the creek.

5.6 Wildlife Corridors/Habitat Linkages

The project site is located outside of the Wildlife Corridor Planning Zone designated by the Oceanside Subarea Plan (City of Oceanside 2010). The site is surrounded by development, which limits movement of larger mammals. While relatively isolated from large undeveloped areas and other preserves, the Diegan coastal sage scrub supports coastal California gnatcatcher and likely serves as a stepping-stone for dispersing individuals as well as habitat for the resident pairs. The Diegan coastal sage scrub also supports a variety of birds, reptiles, invertebrates, and small mammals commonly found in upland scrub.

Urban-adapted species observed or that could commonly occur in the non-native grassland and disturbed areas in the lowlands include California ground squirrel (*Spermophilus [Otospermophilus] beecheyi*), desert cottontail (*Sylvilagus audubonii*), western fence lizard (*Sceloporus occidentalis*), common side-blotched lizard (*Uta stansburiana*), horned lark (*Eremophila alpestris*), American crow (*Corvus brachyrhynchos*), house finch (*Haemorhous mexicanus*), and California towhee (*Melospiza crissalis*).

5.7 Wetland Buffer

Per Section 5.2.4 of the Draft Subarea Plan (City of Oceanside 2010), a 50-foot buffer biological buffer and 50-foot planning buffer are recommended from the edge of the disturbed southern willow scrub. This 100-foot buffer is shown on Figure 7; however, the Draft Subarea Plan provides that “In the event that natural habitats do not currently (at the time of proposed action) cover the 50-foot buffer area, native habitats appropriate to the location and soils shall be restored as a condition of project approval.” The Draft Subarea Plan further states that “coastal sage scrub vegetation [is] be the preferred habitat to restore within the biological buffer.”

The existing habitat and vegetation communities within the project site along Loma Alta Creek are summarized in Table 3. As shown in the table, these areas largely consist of non-native grassland and disturbed habitat. The degraded character of this area is consistent with the negative presence of least Bell’s vireo during protocol surveys.

Table 3. Vegetation Communities/Land Covers within the Wetland Buffer

Vegetation Community/Land Cover	Area of Vegetation Community/Land Cover (Acres)				
	50-Foot Biological Buffer	50-Foot Planning Buffer	50-Foot Biological Buffer (Off Site)	50-Foot Planning Buffer (Off Site)	Total
Disturbed habitat	0.61	0.14	0.02	0.03	0.79
Non-native grassland	<0.00	0.56	—	—	0.56

Urban/developed	—	—	0.01	0.07	0.08
Total^a	0.61	0.70	0.02	0.10	1.43

Note:

^a Totals may not sum precisely due to rounding.

6 Anticipated Project Impacts and Analysis of Significance

This section addresses direct, indirect, and cumulative impacts to biological resources that would result from implementation of the proposed project.

Direct impacts are defined as those that result in the direct removal of a biological resource through clearing, grubbing, and/or grading. These impacts are further classified as temporary or permanent: temporary impacts primarily result from staging or work areas outside the permanent footprint that will be restored to its pre-project conditions, and permanent impacts refer to the buildings, roads, and other permanent structures. Indirect impacts primarily result from adverse “edge effects” as either short-term indirect impacts related to construction activities or long-term indirect impacts associated with the proximity of apartments to open space areas.

Cumulative impacts refer to incremental individual environmental effects over the long-term implementation of the project when considered together with other impacts from other projects in the area. These impacts taken individually may be minor, but can become collectively significant as they occur over a period of time.

6.1 Explanation of Findings of Significance

Impacts to special-status vegetation communities, special-status plants, special-status wildlife species, jurisdictional resources, and wildlife movement must be quantified and analyzed to determine whether such impacts are significant under CEQA. CEQA Guidelines Section 15064(b) states that an ironclad definition of “significant” effect is not possible because the significance of an activity may vary with the setting. Appendix G of the Guidelines, however, does provide “examples of consequences which may be deemed to be a significant effect on the environment” (14 CCR 15064[e]). These effects include substantial effects on rare or endangered species of animals or plants or the habitat of the species. Guidelines Section 15065(a) is also helpful in defining whether a project may have “a significant effect on the environment.” Under that section, a proposed project may have a significant effect on the environment if the project has the potential to: (1) substantially degrade the quality of the environment; (2) substantially reduce the habitat of a fish or wildlife species; (3) cause a fish or wildlife population to drop below self-sustaining levels; (4) threaten to eliminate a plant or animal community; (5) substantially reduce the number or restrict the range of an endangered, rare or threatened species; or (6) eliminate important examples of the major period of California history or prehistory.

6.2 Direct Impacts

The on-site impacts consist of permanent impacts from the proposed project. The permanent impacts consist of (1) the grading and development of the proposed project and (2) off-site impacts from the extension of S. Oceanside.

6.2.1 Vegetation Communities

The proposed project would result in permanent direct impacts. These impacts are summarized in Table 4 shown on Figure 9.

Table 4. Permanent Impacts to Vegetation Communities and Land Covers

Vegetation/Land Cover Type	Impacts (Acres)		Total Impacts (Acres) ^a	Mitigation	
	<i>Development</i>	<i>S. Oceanside Blvd (Acres)</i>		<i>Ratio^b</i>	<i>Acres Required</i>
Diegan coastal sage scrub	—	—	—	3:1	0
Disturbed habitat	0.96	0.04	1.00	0	0
Eucalyptus woodland	0.07	—	0.07	0	0
Non-native grassland	8.65	—	8.65	0.5:1	4.33
Southern willow scrub (disturbed)	—	—	—	3:1	—
Urban/developed	0.40	0.19	0.59	0	0
Total^b	10.07	0.24	10.31	NA	4.33

Notes:^a Acreages may not sum precisely due to rounding.^b Per Table 5-2 in the Subarea Plan (City of Oceanside 2010).

Impacts to non-native grassland require mitigation per Table 5-2, Mitigation Standards for Impacts to Natural Vegetation and Habitat, in the Subarea Plan (City of Oceanside 2010). Permanent impacts non-native grassland is considered a potentially significant impact. The permanent loss of this vegetation community shall be mitigated to less than significant through the conservation of native habitats, as described in mitigation measure (MM-) BIO-1 (Designation of Open Space), provided in Section 7.1, Minimization and Mitigation Measures.

Permanent impacts to disturbed habitat totaling 1.00 acres, eucalyptus woodland totaling 0.07 acres, and 0.59 acres of urban/developed are considered less than significant and no mitigation is required.

6.2.2 Special-Status Plant Species

No special-status plants were observed during focused surveys in 2020. Therefore, the project would not result in direct impacts to special-status plant species. Special-status plants evaluated but not expected to occur are described in Appendix D.

6.2.3 Special-Status Wildlife Species

Coastal California gnatcatcher

Coastal California gnatcatcher occur on the project site. Focused surveys confirmed the presence of two pairs on the site in separate locations, and the Diegan coastal sage scrub within the project boundary is considered occupied coastal California gnatcatcher habitat.

There are 4.20 acres of permanent impacts to designated critical habitat for coastal California gnatcatcher (Table 5) (Figure 10); however, these impacts are to non-native grassland, eucalyptus woodland, and disturbed habitat that do not provide PCEs, as described in Section 5.4.1, Coastal California Gnatcatcher. Therefore, the impacts to critical habitat that do not provide PCEs are considered a less-than-significant impact.

Table 5. Impacts to Designated Critical Habitat for Coastal California Gnatcatcher

Vegetation/Land Cover Type	Total Acreage in Biological Study Area	Temporary Impacts (Acres)	Permanent Impacts (Acres)
<i>Designated Critical Habitat with Primary Constituent Elements (Significant Impact)</i>			
Diegan coastal sage scrub	5.40	—	—
<i>Designated Critical Habitat with No Primary Constituent Elements (Less Than Significant Impact)</i>			
Disturbed habitat	0.62		0.20
Eucalyptus woodland	0.09	—	0.06
Non-native grassland	5.39	—	3.94
Southern willow scrub (disturbed)	—	—	—
Urban/developed	0.13	—	—
Subtotal (No PCEs)	6.23	—	4.20

Note: PCE = primary constituent element.

Least Bell's vireo

Least Bell's vireo is known to occur approximately 0.5 miles northwest of the project site. The vegetated portion of Loma Alta Creek adjacent to the proposed project footprint has moderate potential to support least Bell's vireo. Protocol surveys for least Bell's vireo in 2020 were negative. Since there are no direct impacts to the disturbed southern willow scrub, there are no significant direct impacts to least Bell's vireo habitat.

Other Special Status Species

Additional special-status species with high potential to occur on site are included in Appendix G1 and include southern California legless lizard, orange-throated whiptail, San Diegan tiger whiptail, and Southern California rufous-crowned sparrow. These species would primarily occur in the Diegan coastal sage scrub but could occasionally use the non-native grassland. Impacts to the non-native grassland could result in loss of foraging and/or breeding and nesting habitat for these species and would be considered a potentially significant impact. The permanent loss of habitat shall be mitigated to less than significant through the conservation of native habitats, as described in MM-BIO-1 (Designation of Open Space), provided in Section 7.1.

Special-status wildlife that occur in the vicinity but do not have potential to occur based on lack of habitat, elevation, or range are included in Appendix G2.

The California Fish and Game Code protects bird nests and the MBTA prohibits the intentional take of any migratory bird or any part, nest, or eggs of any such bird. If clearing, grubbing, or other activities that result in the removal of vegetation occur during the nesting bird season, any impacts to active nests or the young of nesting bird species would be potentially significant. This impact shall be mitigated to less than significant through nesting bird surveys and establishment of appropriate buffers, as described in MM-BIO-2 (Nesting Bird Surveys), provided in Section 7.1.

6.2.4 Jurisdictional Resources

There are two features likely regulated by resource agencies within the biological study area: the southern slope of Loma Alta Creek, and an unvegetated channel east of Crouch Street. There are no direct grading impacts to either of these jurisdictional resources. As described in Section 1.2.2, Project Description, the southern slope of Loma Alta Creek is proposed to be enhanced through a Revegetation Plan; however, such enhancement activity would focus on removal of invasive plant species and replacement with native habitat, which would be managed and monitored over a 3-year period to ensure successful implementation. Because this slope is going to be enhanced, which includes removal of non-native species, this is considered a potential impact to CDFW riparian habitat and may require notification to CDFW as described in MM-BIO-3 (CDFW Notification & Permits), which is provided in Section 7.1.

6.2.5 Wildlife Corridors/Habitat Linkages

The project site is located outside of the Wildlife Corridor Planning Zone designated by the Oceanside Subarea Plan (City of Oceanside 2010). The site is surrounded by development to the north, west, and south, which limits movement of larger mammals. While relatively isolated from large undeveloped areas and other preserves, the Diegan coastal sage scrub supports coastal California gnatcatcher and likely serves as a stepping-stone for dispersing individuals as well as habitat for the resident pairs. Two pairs of coastal California gnatcatchers were documented nesting on site during the 2019 surveys. There are more than 9 acres of Diegan coastal sage scrub remaining undisturbed on site. No impacts to wildlife corridors or habitat linkages would occur as a result of the proposed project and impacts would be less than significant.

6.2.6 Wetland Buffer

Section 2.3.2 describes the wetland buffer per Section 5.2.4 of the Subarea Plan (City of Oceanside 2010), which states that a minimum 50-foot biological buffer, plus a minimum 50-foot planning buffer (total width of both equals 100 feet) shall be established for upland habitats, beginning at the outer edge of riparian vegetation.

The proposed project includes the connection of S. Oceanside Boulevard through the project site, connecting to Crouch Street, consistent with the City of Oceanside General Plan Circulation Element. S. Oceanside Boulevard will become a dedicated public street providing circulation through the project site. This connection is required for access and frontage purposes, and also serves to relieve some traffic at the S. Oceanside Boulevard/Crouch Street intersection, as well as providing another connection consistent with the City's General Plan Circulation Element. This extension of S. Oceanside Boulevard goes through the wetland buffer because the existing terminus of S. Oceanside Boulevard on the west side of the project site and partial improvements serving the North County Transit District Crouch Street Sprinter Station on the east side of the project site preclude moving S. Oceanside Boulevard to the south and out of the biological buffer (Figure 9). Therefore, the street section for S. Oceanside Boulevard was designed to be as narrow as possible while still meeting City requirements. Design considerations included removing parking from S. Oceanside Boulevard, eliminating the landscaped parking and sidewalk along the north side of S. Oceanside Boulevard, and not providing a separate, dedicated bike lane. Based on the minimized right-of-way, the proposed wetland buffer will range in width from 30 to 47 feet, as depicted on Figure 2. Because the project would not achieve the 50-foot biological buffer and additional 50-foot planning buffer, the extension of S. Oceanside Boulevard would represent a potentially significant impact. As a result of the proposed wetland buffer being less than the Subarea Plan's 100-foot requirement, the width of the buffer has been maximized based on the constraints of the proposed S. Oceanside Boulevard connection to Crouch Road and the

project's proposed mitigation in the form of restoration and enhancement on the north side of S. Oceanside Boulevard, as well as installing fencing and signage to restrict access to Loma Alta Creek. The City and the wildlife agencies agreed to a reduced buffer with restoration and enhancement along Loma Alta Creek (see Appendix A for the Biological Open Space and Wetland Buffer Restoration Plan).

6.3 Indirect Impacts

6.3.1 Vegetation Communities and/or Special-Status Plants

Short-Term Indirect Impacts

Potential short-term or temporary indirect impacts to special-status vegetation communities and special-status plants (if they occur) in the biological study area would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Potential short-term indirect impacts could affect special-status vegetation communities within the biological study area, and special-status plants that have a moderate to high potential to occur in the biological study area. These impacts are described in detail in the following paragraphs and shall be mitigated to less than significant through MM-BIO-4 (Biological Monitoring) and MM-BIO-5 (Temporary Installation of Fencing), provided in Section 7.1.

Generation of Fugitive Dust. Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases.

Changes in Hydrology. Construction could result in hydrologic impacts adjacent to and downstream of the limits of grading.

Chemical Pollutants. Erosion, sedimentation, and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect special-status vegetation communities and/or special-status plants. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants.

Long-Term Indirect Impacts

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed project to special-status vegetation communities and/or special-status plants after construction. Permanent indirect impacts that could affect special-status vegetation communities include chemical pollutants, altered hydrology, non-native invasive species, and increased human activity. Each of these potential indirect impacts is discussed in the following paragraphs and shall be mitigated through MM-BIO-4 (Biological Monitoring) and MM-BIO-6 (Invasive Species Prohibition), provided in Section 7.1.

Chemical Pollutants. The effects of chemical pollutants on vegetation communities and special-status plant species are described above. During landscaping activities, herbicides may be used to prevent vegetation from reoccurring around structures. However, weed control treatments shall include only legally permitted chemical, manual, and mechanical methods. Additionally, the herbicides used during landscaping activities will be contained within the project impact footprint (Fusco Engineering 2020).

Altered Hydrology. Water would be used for landscaping purposes that may alter the on-site hydrologic regime. These hydrologic alterations may affect special-status vegetation communities and special-status plant communities. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants (*Linepithema humile*), which can compete with native ant species that could be seed dispersers or plant pollinators. However, the water, and associated runoff, used during landscaping activities will be contained within the project impact footprint, and long-term indirect impacts associated with altered hydrology are not expected (Fusco Engineering 2020).

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including, but not limited to, exotic plant competition for light, water, and nutrients, and the formation of thatches that block sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and unique vegetation communities. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within vegetation communities and special-status plant populations. However, the proposed development is situated in a previously graded area already disturbed by non-native species and human activity. The native vegetation areas (i.e., Diegan coastal sage scrub) will be located within an open space easement and managed to reduce the number of non-native species in those areas.

Increased Human Activity. The proposed development will contain 295 apartment units and 3,000 square feet of commercial/retail. Increased human activity could result in the potential for trampling of vegetation outside of the impact footprint, as well as soil compaction, and could affect the viability of plant communities. Trampling can alter the ecosystem, creating gaps in vegetation and allow exotic, non-native plant species to become established, leading to soil erosion. Trampling may also affect the rate of rainfall interception and evapotranspiration, soil moisture, water penetration pathways, surface flows, and erosion. An increased human population increases the risk for damage to vegetation communities and/or special-status plants.

6.3.2 Special-Status Wildlife Species

Short-Term Indirect Impacts

Short-term, construction-related, or temporary indirect impacts to special-status wildlife species that occur within the biological study area (e.g., coastal California gnatcatcher, Southern California rufous-crowned sparrow, southern California legless lizard, orange-throated whiptail, and San Diegan tiger whiptail) would primarily result from construction activities. Potential temporary indirect impacts could occur as a result of generation of fugitive dust, noise, chemical pollutants, and increased human activity. These impacts are described in detail in the following paragraphs and shall be mitigated to less than significant through MM-BIO-4 (Biological Monitoring) and MM-BIO-5 (Temporary Installation of Fencing), provided in Section 7.1.

Generation of Fugitive Dust. Dust and applications for fugitive dust control can impact vegetation surrounding the limits of grading, resulting in changes in the community structure and function. These changes could result in impacts to suitable habitat for special-status wildlife species.

Noise. Construction-related noise could occur from equipment used during vegetation clearing and construction of the residences and associated infrastructure. Noise impacts can have a variety of indirect impacts on wildlife species, including increased stress, weakened immune systems, altered foraging behavior, displacement due to

startle, degraded communication with conspecifics (e.g., masking), damaged hearing from extremely loud noises, and increased vulnerability to predators (Lovich and Ennen 2011; Brattstrom and Bondello 1983, cited in Lovich and Ennen 2011).

Chemical Pollutants. Accidental spills of hazardous chemicals could contaminate nearby surface waters and groundwater and indirectly impact wildlife species through poisoning or altering suitable habitat.

Increased Human Activity. Increased human activity associated with the construction activities can deter wildlife from using habitat areas near the proposed project footprint.

Long-Term Indirect Impacts

Potential long-term or permanent indirect impacts to special-status wildlife species that occur within the biological study area include non-native, invasive plant and animal species and increased human activity. These impacts are described in detail in the following paragraphs and shall be mitigated to less than significant through MM-BIO-4 (Biological Monitoring) and MM-BIO-6 (Invasive Species Prohibition), provided in Section 7.1.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including, but not limited to, the fact that exotic plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and subsequently suitable habitat for special-status wildlife species. However, the proposed development is situated in a previously graded area already disturbed by non-native species and human disturbance. The native vegetation areas (i.e., Diegan coastal sage scrub) will be located within an open space easement and managed to reduce the number of non-native species in those areas.

Increased Human Activity. The proposed development will contain 295 apartment units and 3,000 square feet of commercial/retail. Increased human activity could result in the potential for trampling of vegetation outside of the impacts footprint, and soil compaction could affect the viability and function of suitable habitat for wildlife species. An increased human population increases the risk for damage to suitable habitat for wildlife species. In addition, increased human activity can deter wildlife from using habitat areas near the proposed project footprint. However, the proposed development is situated in a previously graded area with existing human disturbance. The native vegetation areas (i.e., Diegan coastal sage scrub) will be located within an open space easement and managed to reduce minimize human activity in those areas.

Collision. The proposed development will include non-reflective glass windows to help reduce potential bird collisions with windows.

6.3.3 Jurisdictional Resources

Short-Term Indirect Impacts

Potential short-term or temporary indirect impacts to jurisdictional resources in, or adjacent to, the biological study area would primarily result from construction activities and include impacts related to or resulting from the

generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants, including herbicides. Potential short-term indirect impacts that could affect jurisdictional aquatic resources within, or adjacent to, the biological study area are described in detail in the following paragraphs and shall be mitigated to less than significant through MM-BIO-4 (Biological Monitoring) and MM-BIO-5 (Temporary Installation of Fencing), provided in Section 7.1.

Generation of Fugitive Dust. As stated above, excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, and transpiration, as well as increased penetration of phytotoxic gaseous pollutants and increased incidence of pests and diseases.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts in Loma Alta Creek adjacent to and downstream of the construction area. The effects of changes in hydrology would be similar to those described in Section 6.3.1, Vegetation Communities and/or Special-Status Plants.

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect jurisdictional resources. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants.

Long-Term Indirect Impacts

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed project to jurisdictional aquatic resources after construction. Permanent indirect impacts that could affect jurisdictional aquatic resources include chemical pollutants, altered hydrology, non-native invasive species, and increased human activity. Each of these potential indirect impacts is discussed in detail in the following paragraphs and shall be mitigated to less than significant through MM-BIO-4 (Biological Monitoring) and MM-BIO-6 (Invasive Species Prohibition), provided in Section 7.1.

Chemical Pollutants. The effects of chemical pollutants on jurisdictional resources are described above.

Altered Hydrology. Water used for landscaping purposes may alter the adjacent hydrologic regime. These hydrologic alterations may affect nearby jurisdictional resources. However, the water, and associated runoff, used during landscaping activities will be contained within the project impact footprint, and long-term indirect impacts associated with altered hydrology are not expected (Fuscoe Engineering 2020). The extension of S. Oceanside Boulevard is designed to direct road runoff into the storm drain system, which would connect to water quality basins for treatment prior to discharging into Loma Alta Creek. Further, as part of the proposed project, the southern slope of Loma Alta Creek will be enhanced to remove non-native species and allow for regeneration of native riparian vegetation. This type of enhancement improves hydrology.

Non-Native, Invasive Plant and Animal Species. The effects of non-native, invasive plant and animal species would be similar to those described in Section 6.3.1. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within nearby jurisdictional resources. However, the proposed development is situated in a previously graded area already disturbed by non-native species and human activity. The native vegetation areas (i.e., Diegan coastal sage scrub) will be located within an open space easement and managed to reduce the number of non-native species in those areas. As part of the proposed project, the southern slope of Loma Alta Creek will be enhanced to remove non-native species and allow for regeneration of native riparian vegetation. Further, the landscaping design along the future S. Oceanside Boulevard would mimic the native coastal sage scrub species from this area.

Increased Human Activity. The effects of increased human activity would be similar to those described in Section 6.3.1. An increased human population increases the risk for damage to jurisdictional resources; however, the enhancement of the southern slope of Loma Alta Creek and restoration of the adjacent disturbed habitat to coastal sage scrub includes fencing and signage to prevent easy access into the creek. The jurisdictional resources are located in the open space preserve and will be managed in perpetuity.

6.3.4 Wildlife Corridors/Habitat Linkages

Short-Term Indirect Impacts

Short-term indirect impacts to habitat connectivity and wildlife corridors could result from increased human activity. These impacts are described in detail in the following paragraphs and shall be mitigated to less than significant through MM-BIO-4 (Biological Monitoring) and MM-BIO-5 (Temporary Installation of Fencing), provided in Section 7.1.

Increased Human Activity. Project construction would occur during the daytime and would not affect wildlife species such as mammals that are most active in evenings and nighttime. Wildlife species such as birds, rabbits, and lizards are active in the daytime, but use a variety of habitats and could continue using other areas within and adjacent to the biological study area for wildlife movement.

Long-Term Indirect Impacts

Long-term indirect impacts include increased human activity and lighting. These impacts are described in detail as follows and shall be mitigated to less than significant through MM-BIO-4 (Biological Monitoring) and MM-BIO-6 (Invasive Species Prohibition), provided in Section 7.1.

Increased Human Activity. The proposed development will contain 295 apartment units and 3,000 square feet of commercial/retail. Increased human activity can deter wildlife from using habitat areas near the proposed project footprint. However, the proposed development is situated in a previously graded area with existing human disturbance. The native vegetation areas (i.e., Diegan coastal sage scrub) will be located within an open space easement and managed to reduce minimize human activity in those areas.

Lighting. Lighting will be directed downward and away from the open space easement where wildlife occurs in more abundance. The buildings and parking areas would include lighting designed to minimize light pollution and preserve dark skies, while enhancing safety, security, and functionality.

6.4 Cumulative Impacts

The cumulative biological study area is the area covered by the Oceanside Subarea Plan (City of Oceanside 2010). Direct impacts to special-status plant species (if they occur on site) and special-status wildlife could occur due to project implementation but would be mitigated per the Oceanside Subarea Plan and therefore would not contribute to any cumulative sensitive species impacts. The project would implement standard best management practices, which would avoid contributions towards a cumulative indirect impact to special-status wildlife species and sensitive habitats. As with all other projects, the proposed project would be required to comply with the California Fish and Game Code and MBTA to avoid impacts to nesting birds. Therefore, the project is not anticipated to result in significant cumulative impacts to regional biological resources.

7 Avoidance, Minimization, and Mitigation Measures

There are potential direct and indirect significant impacts to vegetation communities, special-status plants, coastal California gnatcatcher and their habitat, other special-status wildlife species, jurisdictional resources, and wildlife corridors/habitat linkages.

7.1 Minimization and Mitigation Measures

The following minimization and mitigation measures shall be implemented to reduce potential direct and indirect impacts to less than significant.

MM-BIO-1 Designation of Open Space. Mitigation for the impacts to non-native grassland will consist of the following measures:

- The applicant will offset permanent impacts to 8.65 acres of non-native grassland at a 0.5:1 mitigation ratio through the conservation of Diegan coastal sage scrub in an open space easement (see Open Space Conservation Easement table).
- The open space will be conserved in perpetuity with an open space easement and managed by a qualified land manager.
- The open space will be managed, maintained, and monitored through implementation of a habitat management plan. The habitat management plan includes, but is not limited to, invasive species control, trash removal, biological monitoring, and fencing.

Open Space Conservation Easement

Vegetation Community	Mitigation Required (Acres)		Total Open Space Easement (Acres)
	<i>Diegan Coastal Sage Scrub</i>	<i>Non-Native Grassland</i>	
Diegan coastal sage scrub		4.33	3.93
Disturbed habitat	—	—	
Disturbed habitat (restored to CSS; restoration site)	—	—	0.40
Southern willow scrub (disturbed) (enhancement site)	—	—	0.18
Urban/developed	—	—	—
Total	0	4.33	4.51

Notes: CSS = coastal sage scrub.

MM-BIO-2 Nesting Bird Surveys. Construction-related ground-disturbing activities (e.g., clearing/grubbing, grading, and other intensive activities) that occur during the breeding season (typically February 1 through September 15) shall require a one-time biological survey for nesting bird species to be conducted within the limits of grading and a 500-foot buffer within 72 hours prior to construction. This survey is necessary to ensure avoidance of impacts to nesting raptors and/or birds protected

by the federal Migratory Bird Treaty Act and California Fish and Game Code, Sections 3503 and 3513. If any active nests are detected, the area shall be flagged and mapped on the construction plans or a biological resources figure, and the information provided to the construction supervisor and any personnel working near the nest buffer. Active nests will have buffers established around them (e.g., 250 feet for passerines to 500 feet for raptors) by the project biologist in the field with brightly colored flagging tape, conspicuous fencing, or other appropriate barriers or signage. The project biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to avoid inadvertent impacts to these nests. The project biologist may adjust the 250-foot or 500-foot setback at his or her discretion depending on the species and the location of the nest (e.g., if the nest is well protected in an area buffered by dense vegetation). However, if needed, additional qualified monitor(s) shall be provided in order to monitor active nest(s) or other project activities in order to ensure all of the project biologist's duties are completed. Once the nest is no longer occupied for the season, construction may proceed in the setback areas.

If construction activities, particularly clearing/grubbing, grading, and other intensive activities, stop for more than 3 days, an additional nesting bird survey shall be conducted within the proposed impact area and a 500-foot buffer.

Prior to the initiation of vegetation clearing activities outside of the nesting season, a coastal California gnatcatcher-permitted biologist will perform a minimum of three focused surveys, on separate days, to determine the presence of coastal California gnatcatcher nest building activities, egg incubation activities, or brood rearing activities. The surveys will begin a maximum of 7 days prior to project construction and one survey will be conducted the day immediately prior to the initiation of work. The Permittee will notify the U.S. Fish and Wildlife Service (USFWS) at least 7 days prior to the initiation of surveys and within 24 hours of locating any coastal California gnatcatchers.

If a California gnatcatcher nest is found in, or within 500 feet of project construction, the biologist will postpone work within 500 feet of the nest and contact USFWS to discuss (1) the best approach to avoid/minimize impacts to nesting birds (e.g., sound walls) and (2) a nest monitoring program acceptable to USFWS. If sound walls are proposed, an analysis showing that noise generated by construction activities would not exceed 60 dBA hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species). Subsequent to these discussions, work may be initiated subject to implementation of the agreed-upon avoidance/minimization approach and nest monitoring program. Nest success or failure will be established by regular and frequent trips to the site, as determined by the biologist, and through a schedule approved by USFWS. The biologist will determine whether bird activity is being disrupted. If the biologist determines that bird activity is being disrupted, the Permittee will stop work and coordinate with USFWS to review the avoidance/minimization approach. Coordination between the Permittee and USFWS to review the avoidance/minimization approach will occur within 48 hours. Upon agreement as to the necessary revisions to the avoidance/minimization approach, work may resume subject to the revisions and continued nest monitoring. Nest monitoring will continue until fledglings have dispersed or the nest has been determined to be a failure, as approved by USFWS. Additionally,

any measures provided in the habitat conservation plan shall take precedence over measures in this document.

MM-BIO-3 CDFW Notification and Permits. Prior to vegetation removal along the slope of Loma Alta Creek, the applicant or its designee shall obtain a California Department of Fish and Wildlife (CDFW) 1600 Streambed Alteration Agreement or concurrence from CDFW that an agreement is not required.

MM-BIO-4 Biological Monitoring. To prevent inadvertent disturbance to areas outside the limits of grading for each phase, all grading of native habitat shall be monitored by a biologist. The biological monitor(s) shall be contracted to perform biological monitoring during all clearing and grubbing activities.

The project biologist(s) also shall perform the following duties:

- a. Attend the pre-construction meeting with the contractor and other key construction personnel prior to clearing and grubbing to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).
- b. During clearing and grubbing, the project biologist shall conduct meetings with the contractor and other key construction personnel each morning prior to construction activities in order to go over the proposed activities for the day, and for the monitor(s) to describe the importance of restricting work to designated areas and of minimizing harm to or harassment of wildlife prior to clearing and grubbing.
- c. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing and grubbing.
- d. Supervise and monitor vegetation clearing and grubbing weekly to ensure against direct and indirect impacts to biological resources that are intended to be protected and preserved and to document that protective fencing is intact.
- e. Flush wildlife species (i.e., reptiles, mammals, avian, or other mobile species) from occupied habitat areas immediately prior to brush-clearing activities. This does not include disturbance of nesting birds (see MM-BIO-2) or “flushing” of federally listed species (i.e., coastal California gnatcatcher).
- f. Periodically monitor the construction site to verify that the project is implementing the following stormwater pollution prevention plan best management practices: dust control, silt fencing, removal of construction debris and a clean work area, covered trash receptacles that are animal-proof and weather-proof, prohibition of pets on the construction site, and a speed limit of 15 miles per hour during daylight.
- g. Periodically monitor the construction site after grading is completed and during the construction phase to see that artificial security light fixtures are directed away from open space and are shielded, and to document that no unauthorized impacts have occurred.
- h. Keep monitoring notes for the duration of the proposed project for submittal in a final report to substantiate the biological supervision of the vegetation clearing and grading activities and the protection of the biological resources.
- i. Prepare a monitoring report after the construction activities are completed, which describes the biological monitoring activities, including a monitoring log; photos of the site before, during, and after the grading and clearing activities; and a list of special-status species observed.

- MM-BIO-5** **Temporary Installation of Fencing.** To prevent inadvertent disturbance to areas outside the limits of grading for each phase, the contractor shall install temporary fencing, or utilize existing fencing, along the limits of grading.
- MM-BIO-6** **Invasive Species Prohibition.** The final landscape plans shall be reviewed by the project biologist and a qualified botanist to confirm that there are no invasive plant species as included on the most recent version of the California Invasive Plant Council Inventory for the project region.
- MM-BIO-7** **Permanent Fencing and Signage.** To prevent inadvertent disturbance to areas designated for permanent preservation, the applicant or their designee shall install permanent fencing and signage.

7.2 Regional Resource Planning Context – Compliance Review

City of Oceanside MHCP Subarea Plan

The City requested that S. Oceanside Boulevard be extended east to Crouch Street and that a trail be established adjacent to Loma Alta Creek on the south side of S. Oceanside Boulevard. These project features encroach into the 50-foot wetland buffer and the additional 50-foot planning buffer from Loma Alta Creek. This encroachment requires approval from the City of Oceanside and the wildlife agencies for an alternative buffer configuration. Based on meetings with the City and the wildlife agencies, a reduced buffer configuration was agreed on with the proposed project's enhancement activities along the southern slope of Loma Alta Creek and restoration of coastal sage scrub adjacent to the creek. These areas will be included in the open space easement and managed in perpetuity. Almost 4 acres of coastal sage scrub on site is not within the designated hardline preserve; however, the overall open space easement will include contiguous areas of coastal sage scrub, resulting in a more cohesive preserve. Lighting along the open space preserve will be low level and facing away from the open space areas, consistent with the draft Subarea Plan.

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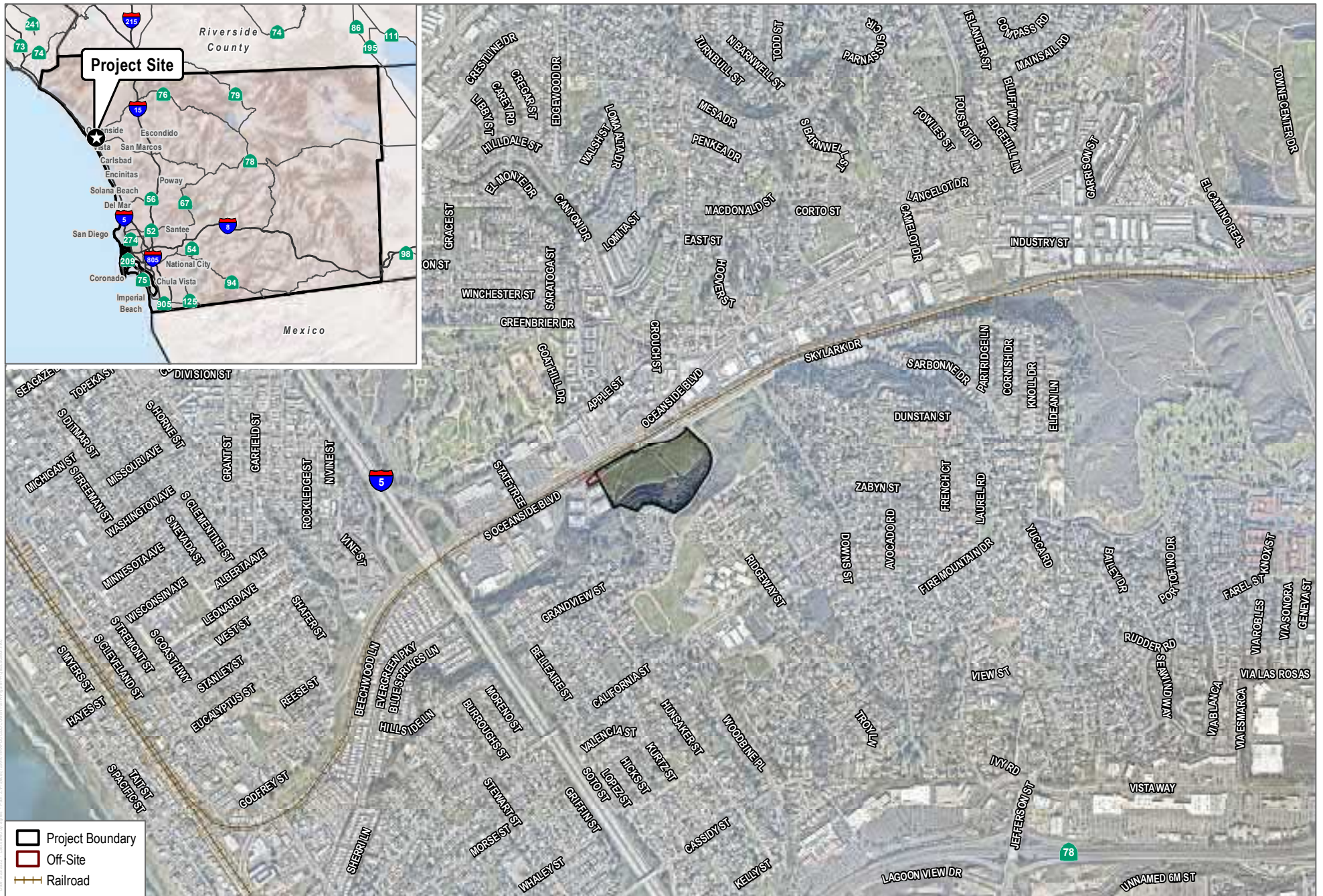
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SOURCE: Fuscoe 2022; SANGIS 2020, 2022

DUDEK



0 1,000 2,000 Feet

FIGURE 1
Project Location
Ocean Creek, LLC

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SOURCE: Fuscoe 2022; SANGIS 2020, 2022

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SOURCE: Fuscoe 2022; CDFW 2020; USFWS 2020; City Oceanside 2018; SANGIS 2020, 2022

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SOURCE: Fuscoe 2022; SANGIS 2020, 2022

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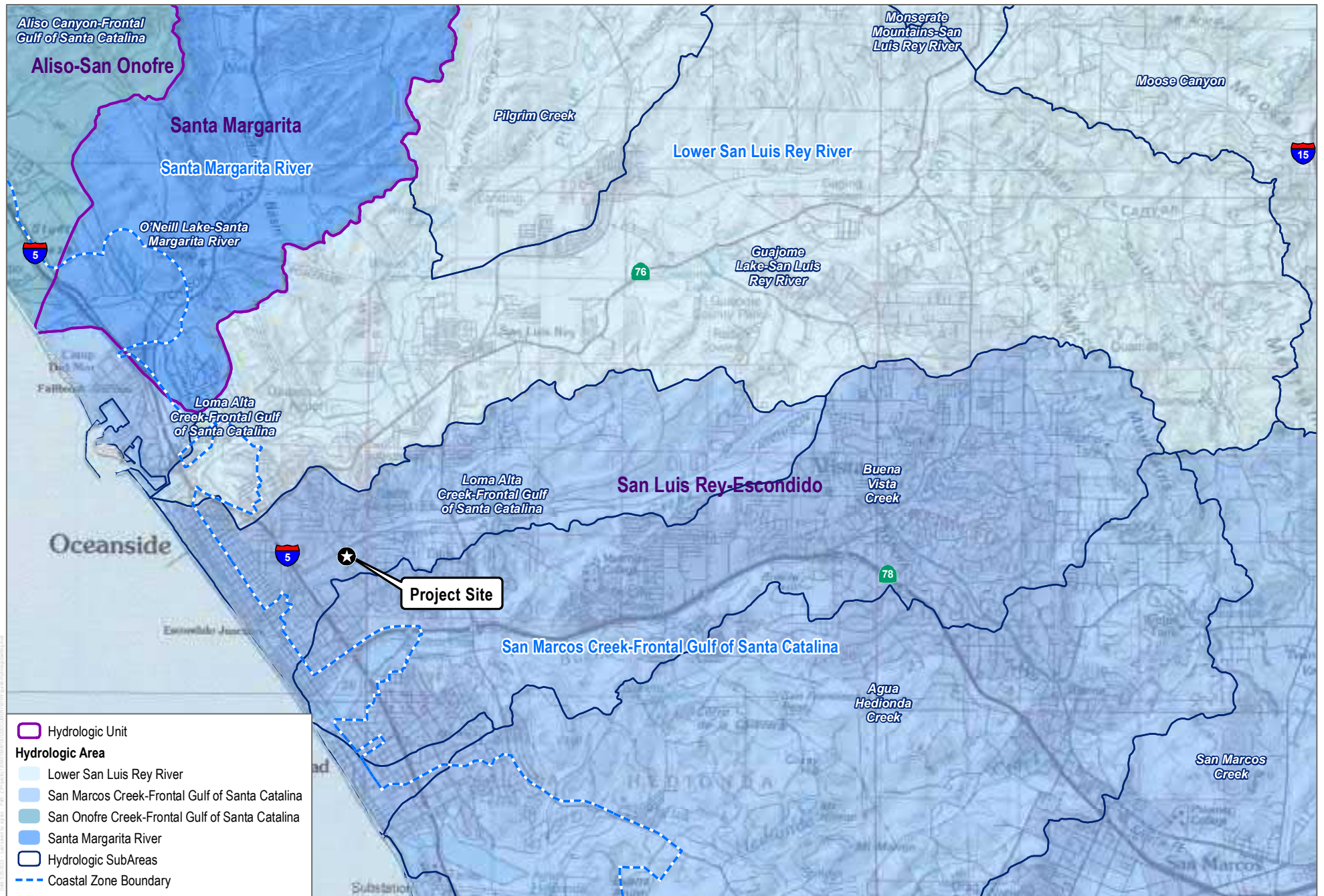
SOURCE: Leighton and Associates, Inc., 2020; Fuscoe 2022; SANGIS 2020, 2022

FIGURE 5

Soils

Ocean Creek, LLC

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SOURCE: USGS 7.5-Minute Series Las Pulgas Canyon, Morro Hill, Bonsall, Oceanside, San Luis Rey, San Marcos Quadrangles; USGS 2020; SANGIS 2022

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SOURCE: Fuscoe 2022; SANGIS 2020, 2022

FIGURE 7
Vegetation Communities and Landcovers and Jurisdictional Delineation

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SOURCE: Fuscoe 2022; USFWS 2020; SANGIS 2020, 2022

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SOURCE: Fuscoe 2022; SANGIS 2020, 2022

DUDEK



0 100 200 Feet

Impacts to Vegetation Communities and Landcovers and Jurisdictional Delineation

Ocean Creek, LLC

FIGURE 9

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SOURCE: Fuscoe 2022; USFWS 2021; SANGIS 2017, 2022

FIGURE 10
Impacts to Special-Status Wildlife and Plants
Ocean Creek, LLC

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SOURCE: Fuscoe 2022; City Oceanside 2018; SANGIS 2020, 2022

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Appendix A

Biological Open Space and Wetland Buffer Restoration Plan

DRAFT

**Ocean Creek, LLC Project
Biological Open Space and Wetland Buffer Restoration Plan**

Prepared for:

Ocean Creek, LLC

12250 El Camino Real, Suite 380

San Diego, California 92130

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FEBRUARY 2022

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1 Introduction

This conceptual restoration plan (restoration plan) describes methods for enhancement to biological open space for on-site wetlands and restoration of wetland buffer habitat (enhancement and restoration project) for the proposed Ocean Creek, LLC project (proposed project) located in the City of Oceanside, California (Figure 1, Project Location). As a requirement of the Oceanside Subarea Habitat Conservation Plan/Natural Community Conservation Plan (Subarea Plan) within the North County Multiple Habitat Conservation Program (MHCP), development or other discretionary actions proposed in or adjacent to riparian habitats require the riparian area and other wetlands or associated natural habitats to be designated as biological open space and incorporated into the Subarea Plan Preserve system (City of Oceanside 2010). Additionally, a biological buffer and planning buffer (wetland buffer) shall be established for upland habitats, beginning at the outer edge of riparian vegetation.

The enhancement and restoration project includes enhancement of 0.18 acres of riparian habitat from currently disturbed southern willow scrub vegetation to higher-quality southern willow scrub (enhancement site) and restoration of 0.40 acres of coastal sage scrub habitat from adjacent disturbed upland habitat (restoration site). Restoration for the 0.58-acre enhancement and restoration site is proposed through the treatment of non-native weeds and invasive vegetation, removal of accumulated trash, and application of native seed. A 3-year maintenance and monitoring period will follow implementation to promote successful establishment of target native habitat and adequate reduction of non-native vegetation, including persistent invasive species. The restoration site will be included in the biological open space easement and will serve as a biological buffer for the proposed project, as required by the Subarea Plan.

1.1 Project Description

The proposed project is a multifamily mixed-use development on a 12.87-acre developable pad area between Loma Alta Creek and the toe of natural slopes to the south (Figure 2, Proposed Project, and Figure 3, Existing Conditions), as well as off-site improvements over a project site of approximately 19 acres. The proposed project site is located along South Oceanside Boulevard and directly adjacent to the North County Transit District Crouch Street Sprinter Station. As currently designed, the proposed project would consist of 295 residential units and 3,000 square feet of commercial/retail to provide for a mix of uses adjacent to the existing Crouch Street Sprinter Station. Building heights would accommodate four-story buildings. Access to the site would be provided from Crouch Street by a driveway on the eastern side of the site, with secondary access from South Oceanside Boulevard from the west. Internal circulation would include the extension of South Oceanside Boulevard through the project site, connecting to Crouch Street.

1.2 Regional Planning Context

The proposed project site is located within the Oceanside Subarea Plan area of the MHCP. The MHCP is a long-term regional conservation plan established to protect sensitive species and habitats in northern San Diego County. The MHCP is divided into seven subarea plans—one for each jurisdiction within the MHCP—that are permitted and implemented separately from one another. The Oceanside Subarea Plan has been prepared and is used as a guidance document for development projects in the City, but the Subarea Plan has not been approved by the Oceanside City Council or permitted (City of Oceanside 2010). The proposed project is located within a Biological Core and Linkage Area identified in the North County MHCP (SANDAG 2003, Figure 2-4).

The overall goal of the Subarea Plan is to contribute to regional biodiversity and the viability of rare, unique, or sensitive biological resources throughout the City and the larger region while allowing public and private development to occur consistent with the City's general plan and capital improvement program. The Subarea Plan identifies undeveloped lands within the City where conservation and management will achieve the Subarea Plan's biological goals while minimizing adverse effects on land use, economics, or private property rights.

1.2.1 Wetland Buffers

The Subarea Plan describes wetland buffers as areas that generally extend perpendicularly into upland areas from the delineated edge of wetland or riparian areas. Wetland buffer areas establish an upland zone adjacent to wetlands designed to avoid and minimize indirect effects on wetland functions (e.g., species habitat, water quality maintenance, flood capacity). Under Section 5.2.4 of the Subarea Plan (City of Oceanside 2010, p. 5-19):

Wherever development or other discretionary actions are proposed in or adjacent to riparian habitats (not including the San Luis Rey River), the riparian area and other wetlands or associated natural habitats shall be designated as biological open space and incorporated into the Preserve. In addition, a minimum 50-foot biological buffer, plus a minimum 50-foot planning buffer (total width of both equals 100 feet) shall be established for upland habitats, beginning at the outer edge of riparian vegetation. The planning buffer serves as an area of transition between the biological buffer and specified land uses on adjoining uplands. Foot paths, bikeways, and passive recreational uses may be incorporated into planning buffers, but buildings, roads, or other intensive uses are prohibited. The following uses are prohibited in the 50-foot biological buffer: (1) new development, (2) foot paths, bikeways, and passive recreational uses not already planned, and (3) fuel modification activities for new development. In the event that natural habitats do not currently (at the time of proposed action) cover the 50-foot buffer area, native habitats appropriate to the location and soils shall be restored as a condition of project approval. In most cases, coastal sage scrub vegetation shall be the preferred habitat to restore within the biological buffer.

However, since the Subarea Plan has not been adopted, these buffers and setbacks are subject to reduction based on approval from the City, the California Department of Fish and Wildlife (CDFW), and the U.S. Fish and Wildlife Service (USFWS) (CDFW and USFWS are also referred to in this document as "the wildlife agencies").

1.2.2 Subarea Plan Project Context

The City requested that South Oceanside Boulevard be extended east to Crouch Street. This project feature encroaches into the 50-foot wetland buffer and the additional 50-foot planning buffer from Loma Alta Creek. This project proposes a reduced buffer to accommodate the extension of South Oceanside Boulevard, but with enhancement of the biological open space (riparian area) and restoration of the buffer area from disturbed habitat to coastal sage scrub, which is the preferred habitat type according to the Subarea Plan. This encroachment and alternative buffer configuration requires approval from the City, CDFW, and USFWS.

1.3 Restoration Approach

The goal of this restoration plan is to provide a functional lift of habitat value (enhancement and restoration) for on-site preserve areas designated as biological open space and wetland buffer under the Subarea Plan. Enhancement

is proposed for existing disturbed riparian habitat located on the southern bank of Loma Alta Creek. Restoration to coastal sage scrub habitat is proposed for adjacent disturbed habitat to serve as a buffer for the biological open space.

The enhancement and restoration strategy includes a combination of initial non-native vegetation removal and control, trash removal, and revegetation with locally appropriate native planting and seeding. A 3-year maintenance and monitoring plan is included to promote long-term success of native vegetation establishment and control of weeds and invasive species. Initial and follow-up weed control and removal of accumulated trash will allow native vegetation species to gain a foothold or grow to maturity in areas previously dominated by non-native weeds and invasive vegetation and trash. Applied seed and installed riparian tree cuttings will promote native species richness and reduce the likelihood of weed reinfestation.

Proposed revegetation treatment includes a combination of riparian understory and canopy species and coastal sage scrub groundcover and shrub species typically found in healthy local native habitats. Species specified in the revegetation are anticipated to increase habitat value for native wildlife and provide visual screening of riparian resources through introducing a planting palette that includes a diversity of vertical structure. Establishment of native cover, along with installation of barrier fencing, will also serve as a deterrent to unauthorized ingress into the restoration site; previously, people accessing the site have contributed to suppression of native vegetation cover development on site through trampling, accumulation of trash, and other impacts.

Wetland enhancement shall include repairing the functions of a disturbed wetland, which will result in a lift in aquatic function but not an increase in area. Upland restoration shall include converting disturbed habitat to native coastal sage scrub, which will result in a lift in habitat function and native habitat area and allow the restored area to serve as a buffer for Loma Alta Creek.

Total area proposed for the enhancement and restoration project includes 0.18 acres of southern willow scrub enhancement and 0.40 acres of coastal sage scrub restoration. The enhancement of the disturbed southern willow scrub and establishment of the wetland buffer will align with Loma Alta Creek, extending from the northern project site limits south to the northern edge of the proposed extension of South Oceanside Boulevard. The proposed wetland buffer will range in width from 30 to 47 feet, as depicted on Figure 4, Proposed Restoration and Enhancement Areas, and Figure 5, Restoration Plan Cross-Section. Although the proposed wetland buffer is less than the Subarea Plan's 100-foot requirement, the width has been maximized based on the constraints of the proposed South Oceanside Boulevard connection to Crouch Road. Approval of the width reduction has been provided from the City of Oceanside and the wildlife agencies.

1.4 Responsible Parties

1.4.1 Owner

The owner (Owner) will be responsible for all management and financial costs associated with implementation, maintenance, and biological monitoring proposed for this enhancement and restoration project.

The Owner representative is currently Ocean Creek, LLC, whose contact information appears on the cover of this document. The Owner and their designated construction management team will coordinate access to the enhancement and restoration site for the City, applicable wildlife agency representatives, contractors, and biological personnel throughout implementation and the maintenance and monitoring period.

1.4.2 Monitoring Biologist

The Owner will contract with a qualified biological consultant (Monitoring Biologist) to monitor and report on restoration work described in this restoration plan. The Monitoring Biologist must have knowledge and understanding of the native and non-native plant species and natural plant communities present within all work areas described in this restoration plan. Training and previous experience in habitat restoration projects in Southern California are required.

The Monitoring Biologist will oversee and coordinate implementation of the proposed enhancement and restoration, interpret the restoration plan and regulatory requirements, monitor the work of the Restoration Contractor, and conduct horticultural monitoring and reporting during installation and through the maintenance and monitoring period. The Monitoring Biologist shall also determine whether any additional measures are necessary for site protection or to promote successful project completion. The Monitoring Biologist must hold a Pest Control Adviser license to make specific pest control recommendations.

1.4.3 Restoration Contractor

The Owner will hire a project installation contractor and/or maintenance contractor (Restoration Contractor). The Restoration Contractor will be a qualified, licensed company, with experience in native vegetation restoration establishment and maintenance. During the installation phase, the Restoration Contractor will be responsible for performing project installation, including initial site clearing (trash and non-native vegetation), seeding, planting, perimeter control, and erosion control. During the post-installation monitoring and maintenance phase, the Restoration Contractor will be responsible for weed control, erosion control, trash removal, replanting, and if necessary, supplemental watering. In addition to tasks listed above and described in this restoration plan, the Restoration Contractor shall be responsible for implementation of all tasks required to promote project success, as directed by the Monitoring Biologist and the Owner.

Use of herbicides requires the contractor or hired subcontractor to possess a current Qualified Applicator License or Qualified Applicator Certificate to perform chemical control.

2 Existing Site Conditions

The approximately 19-acre proposed project site is located south of the intersection of Crouch Street and Skylark Drive in the City of Oceanside on Assessor's Parcel Numbers 151-270-50-00 and 151-270-56-00.

The proposed project site is bounded by Loma Alta Creek, the Crouch Street Sprinter Station, and undeveloped disturbed land to the north; private residences off Grandview Street to the east; Grandview Street and private residences off Rue de la Montagne to the south; and commercial properties off Union Plaza Court to the west. The proposed project site is located approximately 0.6 miles northeast of Interstate 5, 1 mile northwest of State Route (SR) 78, and 1.5 miles southeast of SR-76 (Figure 1). The proposed project site is located on the U.S. Geological Service 7.5-minute San Luis Rey quadrangle map on Section 25, Township 11 South, Range 5 West of the San Bernardino Base and Meridian. The approximate center of the project site is at 33.193545, -117.353033 (decimal degrees).

The enhancement and restoration site is located in the northwest corner of the proposed project site on Assessor's Parcel Number 151-270-56-00, and is bounded off site by the rail right-of-way to the north and the existing terminus of South Oceanside Boulevard to the west. The proposed extension of South Oceanside Boulevard will serve as the southern limits to the restoration site (wetland buffer area), which is currently undeveloped disturbed land.

2.1 Soils

Soil within the restoration site is classified as made land (USDA 2019). This area was graded and filled from various projects conducted between 1964 and 1989 (Leighton 2021).

2.2 Hydrology

The enhancement and restoration site is located along Loma Alta Creek, which includes the southern creek bank. The enhancement and restoration site is located entirely within the Carlsbad Hydrological Unit (904.00) and more specifically, within the Loma Alta Hydrological Area (904.10) (RWQCB 2016). The U.S. Geological Survey (2020, Figure 6) maps this area in the Loma Alta Creek–Frontal Gulf of Santa Catalina Hydrologic Subarea within the San Marcos Creek–Frontal Gulf of Santa Catalina Hydrologic Area, located within the San Luis Rey–Escondido Hydrologic Unit. Loma Alta Creek drains to the west and outlets into the Pacific Ocean approximately 1.5 miles west of the enhancement and restoration site.

The creek bank is mapped as disturbed southern willow scrub (see Section 2.3.2, Southern Willow Scrub), which would likely be regulated by CDFW as riparian habitat, and all portions of the creek below the ordinary high water mark would be regulated by the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and CDFW (Figure 3).

2.3 Vegetation

Dudek mapped one vegetation community and one land cover within the enhancement and restoration site: disturbed southern willow scrub and disturbed habitat (Figure 3).

2.3.1 Disturbed Habitat

Disturbed areas located in uplands within and directly adjacent to the enhancement and restoration site are dominated by hottentot fig (*Carpobrotus edulis*) and non-native brome grasses (*Bromus* spp.) but include a mix of native and non-native species common in disturbed areas. Non-native species include tamarisk (*Tamarix ramosissima*), castorbean (*Ricinus communis*), horehound (*Marrubium vulgare*), and tree tobacco (*Nicotiana glauca*). Native species include Menzies' golden bush (*Isocoma menziesii*), coyotebrush (*Baccharis pilularis* ssp. *consanguinea*), and western ragweed (*Ambrosia psilostachya*).

2.3.2 Southern Willow Scrub (Disturbed)

The southern slope of Loma Alta Creek is located within the project site. It consists of scattered arroyo willow (*Salix lasiolepis*), mulefat (*Baccharis salicifolia* ssp. *salicifolia*), coyotebrush, and Canadian horseweed (*Erigeron canadensis*); however, hottentot fig and mature castorbean make up more than 25% absolute cover on this slope. It is mapped as a disturbed form of southern willow scrub based on the high percentage of cover of non-native species combined with the low percentage of cover of native riparian species.

2.4 Special-Status Plants

No special-status plants were observed during focused surveys in 2020 as documented in the Biological Technical Report (BTR) for the proposed project (Dudek 2021). Special-status plants evaluated but that have low potential or are not expected to occur are described in Appendix D of the BTR, Special-Status Plant Species Not Expected to Occur within the Biological Study Area.

2.5 Special-Status Wildlife

Least Bell's vireo (*Vireo bellii pusillus*) is known to occur approximately 0.5 miles northwest of the proposed project site. The sparsely vegetated portion of the southern slope and main portion of Loma Alta Creek adjacent to the site has moderate potential to support least Bell's vireo; however, the protocol surveys in 2020 were negative for least Bell's vireo. There is no designated critical habitat for least Bell's vireo within the enhancement and restoration site.

2.6 Jurisdictional Resources

The southern slope of Loma Alta Creek is the only jurisdictional resource likely regulated by the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and CDFW within the enhancement and restoration site.

3 Restoration Work Plan

The proposed enhancement and restoration project includes enhancement of existing disturbed riparian wetland habitat and restoration of native upland habitat from existing disturbed habitat located along the southern margin of Loma Alta Creek. Restoration shall include enhancement of southern willow scrub and restoration of coastal sage scrub vegetation communities. Methods used to achieve healthy and functioning native habitat include the following:

- Complete removal of all trash and inorganic debris
- Removal and/or treatment of all existing non-native weeds and invasive vegetation
- Collection and installation of willows (*Salix* spp.) and mulefat pole cuttings found from healthy native riparian habitat on/or adjacent to the site
- Seeding the riparian enhancement area with a native riparian (southern willow scrub) seed mix and the upland restoration area with a coastal sage scrub seed mix
- Installation of a barrier fence between the wetland buffer habitat (coastal sage scrub restoration) and the proposed extension of South Oceanside Boulevard to deter entry into the restoration site
- Implementation of a 3-year post-installation maintenance program to ensure effective control of non-native vegetation and promote native habitat revegetation
- Retaining a qualified Monitoring Biologist to conduct site monitoring and reporting, and to provide recommendations from installation through the duration of the 3-year maintenance period
- Development of success criteria to ensure successful control of non-native vegetation and to promote establishment of target native vegetation

3.1 Rationale for Expecting Implementation Success

Success will be largely dependent on native plant development and adequate treatment of pervasive non-natives to encourage the establishment of native annual and perennial species. A native seed mix will be applied to provide initial colonization and long-term establishment of native species in bare areas, with cuttings collected from native riparian trees installed in the southern willow scrub area to promote development of the riparian canopy. Additionally, the seed mix will contribute to the existing seed bank and support long-term stability of habitat regeneration.

The selected seed mixes include species that were observed to occur within and adjacent to the temporary impact area or that are known to be regionally acceptable. By mimicking the habitat types that occur on site in adjacent areas, the measures described in this restoration plan are anticipated to produce successional vegetation communities that will trend toward ecologically stable native climax habitats.

3.2 Project Schedule

This preliminary enhancement and restoration project schedule is contingent upon approval of the proposed project by the City and the applicable resource agencies. Upon issuance of appropriate approvals, work would be anticipated to begin in the fall season with non-native vegetation and invasive species removal and initial control

implemented following the conclusion of the breeding/nesting bird season. A preliminary project schedule is shown in Table 1.

Table 1. Preliminary Project Schedule

Task	Date
Site preparation (perimeter staking and barrier fence installation)	Fall
Initial invasive/non-native plant removal and control (outside the breeding/nesting bird season)	Fall
Grow-kill non-native vegetation treatment	Fall–winter
Cutting installation	Early winter
Seed application	Winter
Three-year maintenance and monitoring period	Years 1–3 ^a
Transfer management to Subarea Plan Preserve system	Spring of Year 3
Note: ^a Commencing with the completion of seed application and extending 3 years.	

3.3 Implementation Plan

3.3.1 Site Preparation

The following activities are required during installation and during the 3-year maintenance and monitoring period. The Restoration Contractor shall maintain all site features, including boundary markers and erosion-control features (as needed), in proper condition through the end of the enhancement and restoration project maintenance and monitoring period or until approved for removal by the Monitoring Biologist.

Boundary Markers/Protection Fencing

Prior to the start of enhancement and restoration project implementation, the site limits shall be flagged by the Monitoring Biologist. The Restoration Contractor shall install T-post and high-visibility polypropylene rope fencing along the enhancement and restoration site perimeter at a minimum of every 10 feet on center and at all changes of direction. All stakes and designated flagging shall be removed and replaced with permanent barrier fencing, which is described in Section 3.3.6.

Erosion Control/Best Management Practices

Applicable erosion-control measures in the form of best management practices (BMPs) shall be installed, as necessary, during implementation of enhancement and restoration. As no soil disturbance is anticipated for the enhancement and restoration project, BMPs shall only be used as recommended if vegetation removal exposes surface soils, requiring additional surface stabilization. BMPs shall be maintained until new native vegetation is sufficiently established to provide adequate stabilization. All degraded or non-functioning BMPs shall be replaced as needed.

As practicable, BMPs (excluding silt fencing) shall be constructed from biodegradable material and shall be 100% certified weed-seed free. If the use of non-biodegradable materials is unavoidable due to availability or necessity of

function, all non-biodegradable materials shall be completely removed from the site when they are no longer required to provide stabilization or at the end of the long-term monitoring period.

3.3.2 Trash and Inorganic Debris Removal

Prior to native seeding and in conjunction with initial non-native weed and invasive vegetation removal and control, all trash and inorganic debris shall be completely removed from the site and disposed of in an approved waste facility. Accumulated material includes trash displaced from upstream and trash and debris either dumped or abandoned on site. Due to on-site issues with itinerant encampments, coordination with City law enforcement is required to ensure contractor safety.

3.3.3 Initial Non-Native Vegetation Removal and Control

All non-native weed and invasive vegetation present on the enhancement and restoration site shall be physically removed and/or controlled in place during project implementation followed by a series of grow-kill treatment cycles. The initial non-native weed and invasive vegetation removal phase will consist of hand-removal, chemical treatment, and mechanical removal, or a combination of these techniques. Removals during enhancement and restoration project implementation is considered an initial step in overall weed and invasive vegetation control, with at least one round of follow-up control conducted prior to seed application (grow-kill cycle) and continued consistent treatment employed for the long-term maintenance phase (discussed below). Removed non-native vegetation must be collected and disposed of off site at an approved landfill facility.

Mature perennial invasive vegetation with a well-developed root system shall be stump-cut to within 12 inches of grade and treated with herbicide. The root ball/rhizome shall remain in place to protect against soil erosion, but all aboveground vegetation shall be completely removed from the site. Stump treatment is required within the first 5 minutes of treatment to promote translocation of herbicide into the roots and promote kill.

Mature invasive and ornamental trees surveyed on site and required for stump-cut treatment include tamarisk, tree tobacco, castorbean, and Washington fan palm (*Washingtonia robusta*). The Monitoring Biologist will survey the site prior to removals and flag all trees for removal. Additional species may be added based on survey results at the time of work.

Hottentot fig (ice plant) mats shall be treated with a systemic herbicide and allowed to die in place. It is expected that within 2 months of treatment, material will be adequately desiccated to allow it to be broken apart with hand tools and hauled off site. The dead weed material shall be cleared enough to expose surface soils throughout.

Herbaceous non-native annuals and dead standing biomass shall be removed by hand, or by a combination of hand-removal and string trimming (weed whipping). All cut biomass shall be collected and completely removed from the site.

Following initial treatment and removal of collected non-native biomass, a minimum of one weed grow-kill cycle will be implemented prior to application of native seed. Because this is a non-irrigated site, it is recommended that initial weed control be conducted in early to mid-fall to allow for early season precipitation to stimulate weed seed germination. Application of herbicide will be conducted when non-native annual and herbaceous perennial germination has adequately emerged throughout the site, but prior to the development of flower/seed heads. If the

first treatment is completed early in the season, the Monitoring Biologist may recommend a second grow-kill treatment prior to application of seed.

Guidelines for non-native control and removals and requirements for herbicide application are included in Section 4.2, Non-Native Invasive Plant Control.

3.3.4 Seeding and Cutting Installation

Due to the on-site infestation of non-native weeds and invasive vegetation, it is expected that initial removals will open bare patches of soil, adequate for application of native seed mixes and cuttings. Applying native seed and installing cuttings will increase the likelihood of successful native habitat establishment. The restoration plan includes seeding with locally appropriate riparian and coastal sage scrub propagules, as well as collection and installation of cuttings from healthy native willow (*Salix* spp.) trees and mulefat shrubs.

Seed mixes were designed to mimic the native composition found in healthy native habitats in the local vicinity, providing vertical structural diversity and screening through a mix of groundcover, shrubs, and canopy species. Seeding palettes proposed for the enhancement and restoration project were developed based on site surveys and documentation of existing native vegetation in similar healthy habitats (Tables 2 and 3). All seed mixes specified include a combination of quick-germinating native annual species and woody perennial shrub species. The faster-germinating nurse crop species are included for rapid establishment in the presence of suitable soil moisture and provide erosion control. Seeded perennial shrub species will germinate and grow slowly but will contribute to long-term understory habitat composition for southern willow scrub enhancement and will provide the primary cover for the coastal sage scrub restoration.

Table 2. Southern Willow Scrub Seed Mix Palette

Hydroseed Mix		Minimum Percent Live Seed ^a	Rate (Pounds/Acre)
Botanical Name	Common Name		
<i>Ambrosia psilostachya</i>	western ragweed	20	2.0
<i>Anemopsis californica</i>	yerba mansa	27	2.0
<i>Artemisia douglasiana</i>	Douglas' sagewort	6	3.0
<i>Artemisia dracunculoides</i>	wild tarragon	5	2.0
<i>Distichlis spicata</i>	saltgrass	68	3.0
<i>Elymus condensatus</i>	giant wild rye	53	2.0
<i>Elymus triticoides</i>	creeping ryegrass	72	2.0
<i>Juncus mexicana</i>	Mexican rush	24	2.0
<i>Oenothera elata</i> ssp. <i>hookeri</i>	Hooker's evening primrose	82	0.5
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry	59	2.0
Total			20.5

Note:

^a To achieve the desired percentage of pure live seed, pounds of seed shall be adjusted if percentage of purity/percentage of germination is less than specified.

Table 3. Coastal Sage Scrub Seed Mix

Hydroseed Mix		Minimum Percent Live Seed ^a	Rate (Pounds/Acre)
Scientific Name	Common Name		
<i>Acemispom glaber</i>	deerweed	76	2.5
<i>Ambrosia psilostachya</i>	western ragweed	20	1.5
<i>Artemisia californica</i>	California sagebrush	8	3.0
<i>Elymus condensatus</i>	giant wild rye	53	2.0
<i>Encelia californica</i>	California brittle bush	14	1.5
<i>Eriogonum fasciculatum</i>	California buckwheat	11	6.0
<i>Eriophyllum confertifolium</i>	golden yarrow	15	2.0
<i>Isocoma menziesii</i>	Menzies' golden bush	30	2.0
<i>Lasthenia gracilis</i>	needle goldfields	30	1.0
<i>Lupinus bicolor</i>	miniature lupine	83	3.0
<i>Lupinus succulentus</i>	arroyo lupine	83	1.5
<i>Rhus integrifolia</i>	lemonade berry	69	2.0
<i>Salvia mellifera</i>	black sage	35	2.0
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry	59	2.0
<i>Stipa lepida</i>	foothill needlegrass	64	2.0
		Total Pounds/Acre	34.0

Note:

^a To achieve the desired percentage of pure live seed, pounds of seed shall be adjusted if percentage of purity/percentage of germination is less than specified.

Live propagules will be used in the form of locally collected mulefat and native willow cuttings. Planting perennial woody shrubs is expected to provide the majority of long-term habitat composition and structure for the southern willow scrub enhancement, including development of a tall shrub and tree canopy.

To the extent possible, all native propagules (cuttings and seed) used for the project shall originate within 25 miles of the site. Cuttings for on-site planting shall be collected on site or in adjacent healthy habitat. For seed species that function as erosion control or that do not exist in large enough quantities within the specified collection area, the Monitoring Biologist may provide substitutions or approval for seed collected outside the local area or for commercially grown seed.

Cutting Installation

Cutting collection and installation shall be conducted in the fall/winter, when environmental conditions are optimal, and shall avoid unseasonably hot and dry weather. Cuttings shall be installed within 5 days of collection, which is anticipated for winter following the start of seasonal dormancy for willow species. Cutting placement shall require approval of the Monitoring Biologist prior to planting. Locations shall be flagged in the field based on recommended spacing, grouping, and site conditions.

Individual cuttings shall be harvested from native willow and mulefat plants located in Loma Alta Creek within 1 mile of the site. Cuttings shall be harvested in the early winter following leaf drop and the start of seasonal dormancy. No more than 5% of plant mass shall be harvested from any existing plant. Live cuttings, approximately 0.75 to 1.5 inches in diameter, shall be cut from live plants and stripped of branches and leaves. Individual cuttings shall be 18–24 inches in length. Cuttings shall be directly installed into the soil within 1 vertical foot of perennial flowing water, or verification of saturated soil in the planting hole. The Monitoring Biologist shall

determine the total number of cuttings installed based on the total bare ground area following initial non-native plant removal.

Seed Application

Seed shall be applied either by hand-broadcasting or hydroseeding. Hand-seeding shall only be conducted in the riparian restoration areas if existing native cover is dense and the likelihood of seed-soil contact is limited. For all areas, initial non-native weed control/minimum one round of grow-kill weed treatment and cutting installation shall be complete and verified by the Monitoring Biologist prior to seeding. All existing native organic vegetative matter (e.g., standing snags, leaf duff, and wracking) shall remain in place.

For hand-seeding, the top 2 inches of the surface soil shall first be raked to break surface compaction. The seed shall be mixed with sand or inert bran and broadcast evenly throughout designated areas with a belly grinder, including around and under existing native vegetation protected in place. Following broadcast, the applied seed and surface soil shall be turned over, spreading the seed within the top 2 inches of the topsoil.

For hydroseeding, the seed mix shall be combined with a slurry mix that includes soil tackifiers and fiber mulch for soil stability. The hydrosurry mixture shall contain the specified seed mix at the prescribed rate per acre, along with mulch components that may consist of 100% virgin wood fiber mulch at 2,000 pounds per acre, agricultural gypsum at 1,000 pounds per acre, and a commercial guar-gum-based binder at 150 pounds per acre. The mulch components may be modified depending on site conditions and soils, as recommended by the Monitoring Biologist. When the hydromulch is applied to areas with existing native shrubs, an effort shall be made to minimize covering vegetation with the hydrosurry mixture. Labels for all hydrosurry components and/or seed mixes shall require inspection and approval by the Monitoring Biologist prior to mixing and application/broadcast.

3.3.5 Irrigation

No irrigation system or supplemental watering is specified for this enhancement and restoration project.

3.3.6 Permanent Barrier Fencing and Signage

Prior to completion of installation, a permanent barrier fence shall be installed along the project limits directly parallel to the new extension of South Oceanside Boulevard and along the east and west enhancement and restoration project limits. The fencing shall serve as a deterrent for entry into the enhancement and restoration site. Design shall be either a three-rail peeler core post style fence with a top rail height of 48 inches, or an equivalent design provided by the owner and approved by the City.

Signs will be placed at approximately 100-foot on-center intervals along the fence line. The signs will inform the public of the sensitivity of the Preserve area and that trespassing is prohibited. Signs will be permanent outdoor signs constructed of 0.125-inch-thick (minimum) aluminum and will be attached to fence posts with theft-resistant hardware. The signs will measure at least 8 inches by 12 inches and will have 1-inch-tall (minimum) letters.

4 Maintenance

Following successful installation, a 3-year maintenance period shall be implemented to promote growth and long-term viability of target habitats, to obtain successful kill of initially removed and treated non-native vegetation, and to substantially reduce the reoccurrence of weeds. The maintenance period shall consist primarily of regular weed control, general trash removal, and fence repair. Remedial action, including supplemental cutting installation or reseeding may be recommended as a contingency if revegetation does not establish sufficiently to adequately reduce weed reoccurrence. To ensure the long-term viability of the biological open space and wetland buffer, periodic maintenance is expected in perpetuity under a separate long-term management plan, as required by the Subarea Plan.

4.1 Maintenance Schedule

The 3-year maintenance program shall begin when the installation has been certified as complete by the Monitoring Biologist. Non-native weed and invasive vegetation control is expected to dictate the maintenance schedule initially and taper substantially with effective treatment and native plant establishment.

Non-native weed and invasive vegetation control efforts shall focus on the growing season (December through July). Additional maintenance visits shall be required if control is not properly timed with non-native plant growth or if treatment is ineffective. Visits are expected to reduce each year until only two visits are required during the final year. Additional visits to control weeds or remove trash may be required, as deemed necessary by the Monitoring Biologist.

4.2 Non-Native Invasive Plant Control

Non-native plant control consists of the control and/or physical removal of all perennial and annual non-native vegetation for the duration of the maintenance period. A variety of methods shall be used to effectively control target invasive plants.

Initial control shall include removal of all non-native plants present on site, as discussed in detail in Section 3.3.3, Initial Non-Native Vegetation Removal and Control.

An integrated pest management (IPM) approach will be used to control non-native weeds and invasive vegetation. The approach uses a combination of techniques, including hand-removal, mechanical methods, and chemical treatment, to effectively control target invasive plants.

Follow-up herbicide applications may be necessary for highly aggressive species that cannot be killed with one herbicide application. Follow-up herbicide treatment will be conducted at the biologically appropriate time when the recovering plants are still relatively small and before they have time to regain strength and vigor. Persistent invasive perennials expected to require multiple treatments to successfully kill include castorbean, hottentot fig, and tamarisk. Other persistent perennial invasive species identified locally that will may require multiple treatments if allowed to establish include pampas grass (*Cortaderia selloana*), sweet fennel (*Foeniculum vulgare*), Spanish sunflower (*Pulicaria paludosa*), gum trees (*Eucalyptus* sp.), giant reed (*Arundo donax*), umbrella sedge (*Cyperus involucratus*), and artichoke thistle (*Cynara cardunculus*).

Non-native weed and invasive vegetation seedlings shall be controlled before seed-set or shading out emerging natives. In addition to control of non-native annual and perennial plant cover, depletion of the on-site non-native plant seed bank is required to limit future seed production of non-native weed and invasive vegetation through seasonally timed treatment. All debris and slash generated from non-native weed and invasive vegetation removal activities shall be properly disposed of off site.

As practicable, non-native and invasive vegetation clearing shall be completed outside the bird breeding season (February 15 through September 1). During the maintenance phase, non-native invasive vegetation shall be controlled and prevented from growing to the size and structure to support nesting birds. Any initial clearing or removal of accumulated biomass conducted during the bird breeding season shall require additional avoidance measures in coordination with the Monitoring Biologist.

4.2.1 Target Non-Native Weeds and Invasive Vegetation

Non-native weeds and invasive plants targeted for control are generally aggressive, rapidly colonizing plant species that compromise the quality and functions of natural habitats within the region. In some instances, non-native invasive plants can also compromise safety by exacerbating fire hazards in upland and transitional wetland areas.

Although all non-native plants shall be controlled during maintenance events, species listed by the California Invasive Plant Council (Cal-IPC) in the California Invasive Plant Inventory (Cal-IPC 2017) throughout the southwestern region of the California Floristic Province as a moderate to high threat of ecological impact to wetland/riparian vegetation communities shall be prioritized, as they tend to be difficult to control and easily spread. Non-native plant species listed in Table 4 include species documented within and near the restoration site that are expected to be the focus of control. Additional species that merit focused control efforts include species listed by Cal-IPC as a limited threat to native vegetation communities but that are considered locally persistent and problematic. To adapt to changing conditions, the Monitoring Biologist may recommend additional non-native species for focused treatment, including species that are not listed by Cal-IPC as invasive but that locally reoccur and inhibit development of native vegetation.

Table 4. Target Non-Native Plant Species Documented at the Restoration Site

Scientific Name	Common Name	Cal-IPC Threat Rating
<i>Bromus rubens</i>	red brome	High
<i>Carpobrotus edulis</i> ^a	hottentot fig	High
<i>Tamarix ramosissima</i> ^a	tamarisk	High
<i>Atriplex semibaccata</i> ^a	Australian saltbush	Moderate
<i>Avena barbata</i>	slender oat	Moderate
<i>Brassica nigra</i>	black mustard	Moderate
<i>Bromus diandrus</i>	ripgut brome	Moderate
<i>Carduus pycnocephalus</i>	Italian thistle	Moderate
<i>Centaurea melitensis</i>	tocalote	Moderate
<i>Festuca myuros</i>	rat-tail fescue	Moderate
<i>Hirschfeldia incana</i>	shortpod mustard	Moderate
<i>Nicotiana glauca</i> ^a	tree tobacco	Moderate
<i>Oxalis pes-caprae</i> ^a	Bermuda buttercup	Moderate
<i>Bromus hordeaceus</i>	soft brome	Limited
<i>Erodium cicutarium</i>	redstem stork's bill	Limited

Table 4. Target Non-Native Plant Species Documented at the Restoration Site

Scientific Name	Common Name	Cal-IPC Threat Rating
<i>Glebionis coronaria</i>	crown daisy	Limited
<i>Hypochaeris glabra</i>	smooth cat's ear	Limited
<i>Marrubium vulgare</i>	horehound	Limited
<i>Sisymbrium irio</i>	London rocket	Limited
<i>Chenopodium album</i>	lamb's quarters	Not listed
<i>Lepidium didymum</i>	lesser swine-cress	Not listed
<i>Malva parviflora</i>	cheeseweed	Not listed
<i>Melilotus indicus</i>	annual yellow sweetclover	Not listed
<i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	Not listed
<i>Sonchus asper</i>	spiny sowthistle	Not listed
<i>Sonchus oleraceus</i>	common sowthistle	Not listed
<i>Urtica urens</i>	stinging nettle	Not listed

Notes: Cal-IPC = California Invasive Plant Council.

^a Perennial invasive species.

4.2.2 Non-Native Plant Control Techniques

The control method(s) used will depend on several variables, including, but not limited to, the particular species targeted for control, the overall area to be treated/removed, the time of year, and the proximity to sensitive resources. The proposed IPM approach shall use a combination of techniques, including hand-removal, mechanical methods, and chemical treatment, to effectively control and remove target non-native invasive plants. The Restoration Contractor, through consultation with the Monitoring Biologist, shall provide properly timed treatment to reduce cover of well-established non-native invasive plants, eliminate reinfestation, and adequately deplete the existing non-native invasive seedbank.

Hand-Removal

Hand-removal/physical extraction of non-native plants shall be used around dense groupings of native species or clusters to be protected in place, amid standing water, or where other control methods are impractical or would cause damage to the native species.

Annual non-native plants shall be targeted for hand-removal and removed before seed-set (spring–summer). Maintenance efforts will be timed with non-native plant life cycles to effectively control prior to seed-set. If hand-removal is possible only after seed-set, then seed heads shall be cut off, bagged, and removed from the site prior to biomass removal.

Mechanical Methods

Mechanical control includes removing low-lying herbaceous non-native plants with string-trimmers and cutting large shrubs and trees to grade with chainsaws or handheld loppers.

Use of string-trimming is effective for biomass removal in large areas devoid of, or significantly low in, native cover. Cutting with string-trimmers is the preferred method for removal of dense non-native annual grass and herbaceous growth. Care is required to prevent damage to adjacent native vegetation, primarily emerging seedlings

and herbaceous species. String-trimming shall only be used amid native vegetation if pre-approved by the Monitoring Biologist.

Cutting with chainsaws or loppers is intended for initial removal of large woody biomass and is usually used in conjunction with cut-stump herbicide application to prevent resprout.

Chemical Treatment

Chemical (or herbicide) treatment shall be used for highly invasive plants with root systems that make physical removal impractical. Herbicide treatment is also beneficial because it does not turn up surface soils, exposing buried seed. The Monitoring Biologist will coordinate with the Restoration Contractor/pesticide applicator to identify specific locations where herbicides may be used. Herbicide treatment may follow hand- and mechanical-removal activities to increase the effectiveness of subsequent chemical treatment. Herbicide treatment for this program shall be limited to brush application or spot treatment with close-radius spot-sprayers or wicking devices to prevent damage to adjacent native vegetation or overspray into open water. Broadcast-spray rigs shall not be used.

Follow-up applications may be necessary for highly aggressive species that require multiple herbicide applications, including stump resprouts. Follow-up herbicide treatment shall be conducted when the recovering non-native plant is still relatively small, before it has time to regain strength and vigor.

The Restoration Contractor shall be required to review and comply with all local policies for herbicide and pesticide use prior to work. Herbicide treatments shall follow all federal and state laws and regulations, label directions, and safety precautions under the supervision of a licensed or certified Pest Control Adviser, as appropriate.

The contractor performing pest control shall have a valid Qualified Applicator Certificate or Qualified Applicator License from the State of California, as appropriate to the contractor's situation.

4.3 Trash and Debris Removal

Trash and debris shall be removed by hand during regular maintenance visits. Trash and debris consist of all human-generated materials, or debris dumped, thrown, washed, or blown into or left within the restoration site. Trash and inorganic debris washed or blown onto the site shall be removed regularly. Deadwood and leaf litter of native trees and shrubs shall not be removed and shall be allowed to remain on site to decompose naturally for the replenishment of soil nutrients and minerals. Downed logs and leaf litter provide valuable microhabitats for invertebrates, reptiles, small mammals, and birds.

If evidence of new itinerant encampments is observed within the restoration site, the Restoration Contractor will immediately contact the City, the Owner, and the Monitoring Biologist. The Restoration Contractor will not remove any established encampments, but will rely on City personnel to conduct all evictions and remove personal property and trash associated with the encampments.

4.4 Fencing and Signage

All fencing and signage shall be kept functional and in good condition for the duration of the maintenance period. The Restoration Contractor shall repair/replace any damaged or missing signs or sections of fencing, as needed. If vandalism is suspected, the Restoration Contractor shall notify the Monitoring Biologist, the City, and the Owner.

5 Monitoring and Reporting

Upon successful completion of restoration installation, as determined by the Monitoring Biologist, the 3-year long-term monitoring period will begin. Long-term monitoring shall include biological monitoring visits conducted periodically, as specified in the following sections, for the duration of the 3-year long-term monitoring period, to track project progress and assess Restoration Contractor maintenance; in addition, an annual quantitative assessment will evaluate progress toward achievement of established success criteria.

5.1 Success Criteria

Success criteria were established to adequately evaluate the success of the enhancement and restoration project. Successful enhancement/restoration shall be achieved through the initial removal and follow-up control of existing non-native vegetation within the enhancement and restoration site and replacement by self-sustaining native vegetation providing cover capable of resisting reinfestation by non-natives.

Table 5. Success Criteria

Year	% Minimum Relative Native Cover		% Maximum Relative Non-Native Cover	
	<i>Southern Willow Scrub Wetlands</i>	<i>Coastal Sage Scrub Uplands</i>	<i>All Non-Native Weeds and Invasive Species</i>	<i>Cal-IPC Rated Moderate-High Threat Perennial Invasive Species</i>
1	20	20	10	10
2	40	40	10	5
3	50	60	10	5

Note: Cal-IPC = California Invasive Plant Council.

5.2 Biological Monitoring

Biological monitoring will be used to assess seedling recruitment from native seed application and natural sources, establishment and growth of installed cuttings, presence/reduction of non-native or invasive plant species, trash or debris accumulation, erosion and/or drainage conditions on site, wildlife presence/absence, and condition of perimeter fencing/signage.

Each visit shall be documented with a site observation report, which shall be provided to the Owner and the Restoration Contractor. Any project deficiencies shall be noted in the site observation report, with accompanying recommendations for maintenance or remedial actions.

Photographs taken on site will be included in reports, as needed, to document specific site conditions or to illustrate recommendations for site maintenance.

The Monitoring Biologist shall conduct monitoring quarterly for Years 1 and 2 and twice yearly for Year 3 of the maintenance and monitoring period.

Annual qualitative assessment of vegetation cover will be visually estimated based on cover, constancy, and composition of plant species as developed for the Vegetation Rapid Assessment Protocol (CNPS 2004). Qualitative

assessment will include an estimate of the percentage of overall cover for both the southern willow scrub enhancement area and the coastal sage scrub restoration area. Cover estimates will include classifying each vegetation community area into percentage of cover categories <5%, 5%–9%, 10%–19%, 20%–29%, 30%–39%, 40%–49%, 50%–59%, 60%–80%, and >80%. All data will be used to determine total percentage of native species cover and composition, percentage of non-native invasive perennial cover and composition, and percentage of non-native vegetation cover and composition.

Due to the small size of the enhancement and restoration site, quantitative data collection methods, such as the use of a point-intercept transect, are impractical to determine percentage of cover and distribution of plant species. Evaluation of native and non-native percentage of vegetative cover shall be obtained through visual estimation. Qualitative evaluation and comparison to performance standards shall be conducted by the Monitoring Biologist during the spring monitoring visit through the duration of the long-term monitoring period.

Permanent photo-documentation points will be established at key locations to visually document the status of the vegetation on site. Photo-documentation points will be mapped and included in all annual reports (see Section 5.3). Photographs shall be captured in the spring of each year. Additionally, photographs will be taken of any significant management issues or biological observations, including photographs of changing conditions within the enhancement and restoration site.

Cover of perennial non-natives shall be determined by visual inspections of the site during all site visits to evaluate effectiveness of treatment. Removal shall be recommended immediately if perennial non-natives are detected. Fall monitoring should assess compliance with the intended yearly guideline and need for re-seeding and/or weeding.

5.3 Annual Reports

Monitoring reports will be submitted annually for distribution to the City and wildlife agencies during the 3-year maintenance and monitoring period. Annual reports outlining the results of the habitat monitoring will be generated following the anniversary date of the start of the maintenance and monitoring period. The maintenance and monitoring period will begin upon completion of enhancement and restoration project installation. The monitoring reports will describe the existing conditions of the enhancement and restoration site derived from qualitative field observations. The reports will provide a comparison of annual performance criteria with field conditions; identify all shortcomings of the enhancement and restoration project, project implementation, etc.; and recommend remedial measures necessary for the successful completion of the project. Each yearly report will provide a summary of the accumulated data. Annual reports also will include the following:

- A list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities
- Figures, including photographs, depicting site progress
- Maps identifying monitoring areas, planting zones, and weed removal areas as appropriate
- Percentages of vegetation cover by visual estimation

6 Project Completion

The Owner shall notify the City and wildlife agencies at the end of the 3-year monitoring period and shall request confirmation that the enhancement and restoration project has met performance goals. Early release may be possible if performance standards are met early and the City and wildlife agencies agree with the level of establishment within the enhancement and restoration site. With completion of the enhancement and restoration, the combined biological open space area and wetland buffer will be managed as part of the proposed project's open space easement in perpetuity.

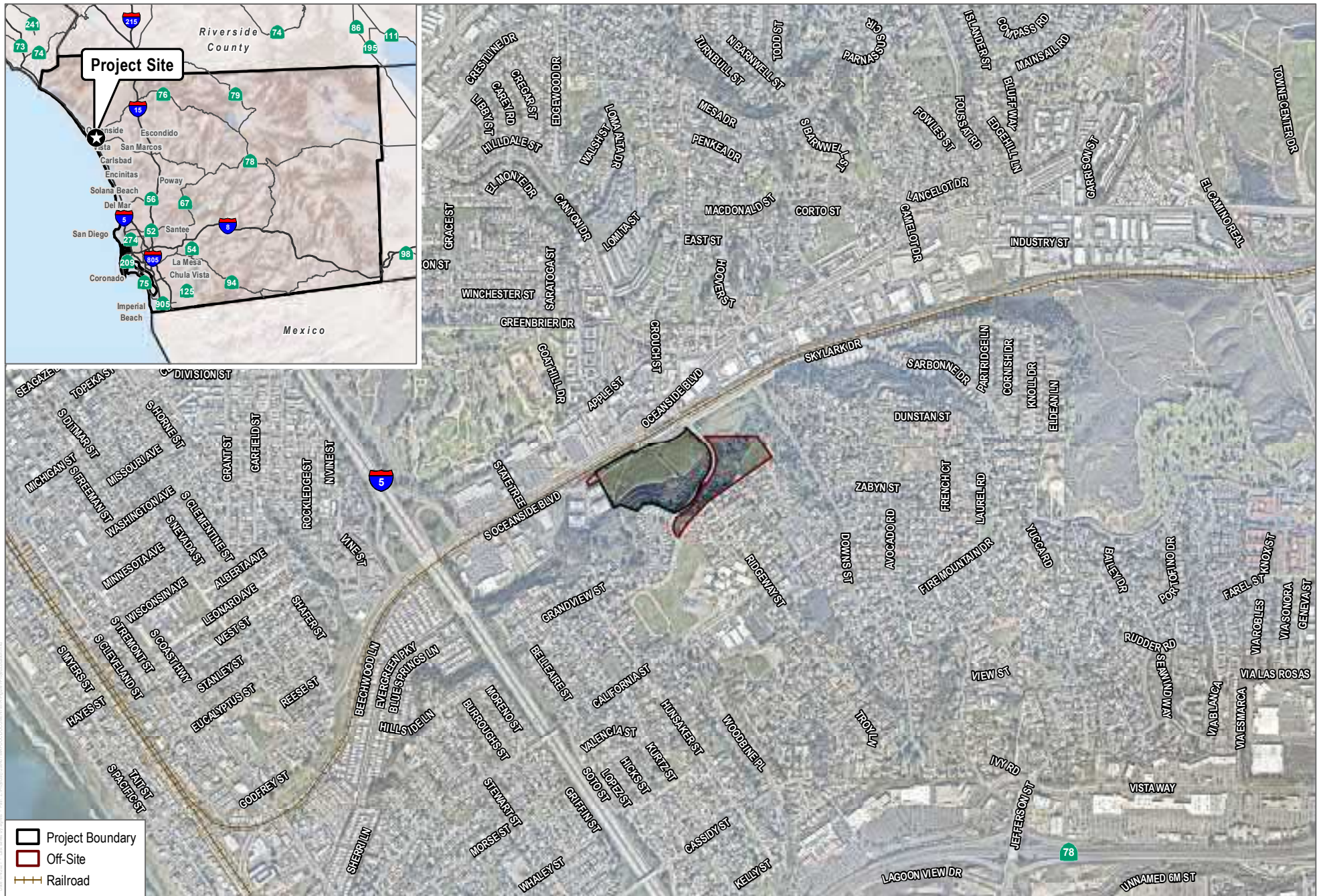
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SOURCE: SANGIS 2020, 2021

DUDEK



FIGURE 1
Project Location
Ocean Creek, LLC

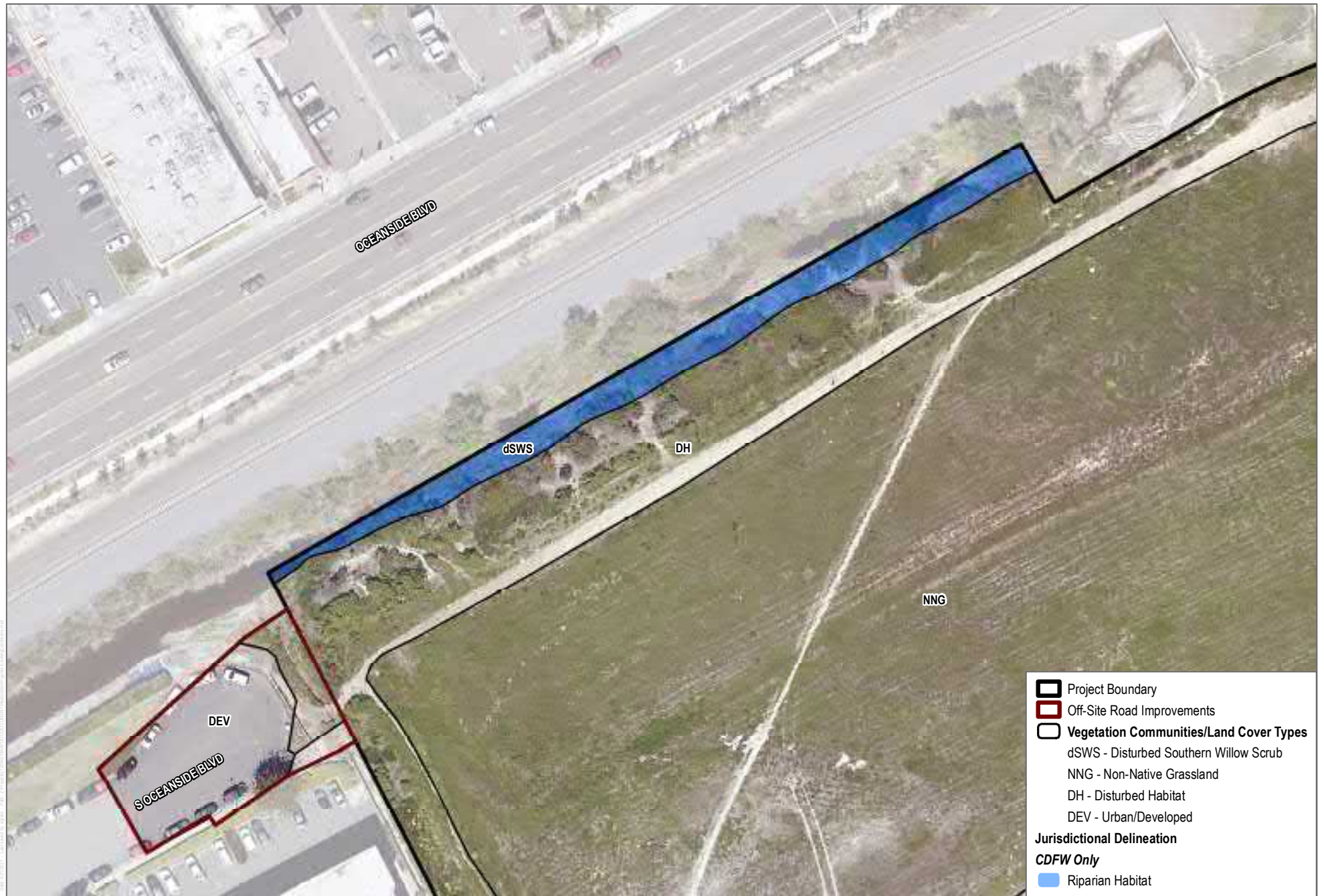
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SOURCE: Fuscoe 2021; SANGIS 2020, 2022

FIGURE 2
Proposed Project
 Ocean Creek, LLC

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SOURCE: Fuscoe 2021; City Oceanside 2018; SANGIS 2017, 2020

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SOURCE: Fuscoe 2021; City Oceanside 2018; SANGIS 2017, 2020

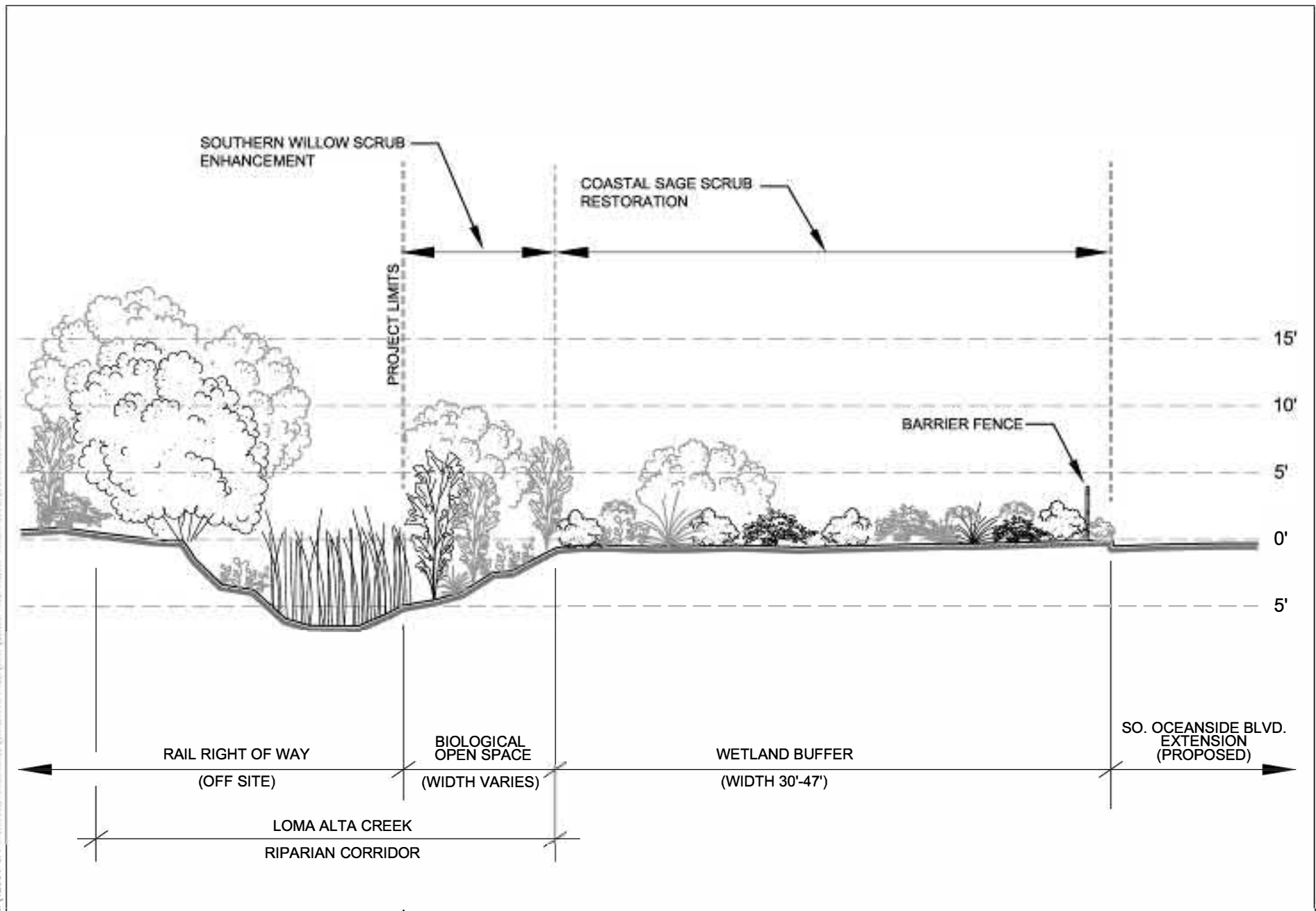
FIGURE 4

Proposed Restoration and Enhancement Areas

Ocean Creek Project - Biological Open Space and Wetland Buffer Restoration Plan

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DUDEK NOT TO SCALE

FIGURE 5
Restoration Plan Cross-Section
Ocean Creek Project – Biological Open Space and Wetland Buffer Restoration Plan

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Appendix B

Plant Species List

Eudicots
Vascular Species

ADOXACEAE—MUSKROOT FAMILY

Sambucus nigra ssp. *caerulea*—blue elderberry

AIZOACEAE—FIG-MARIGOLD FAMILY

* *Carpobrotus edulis*—hottentot fig

AMARANTHACEAE—AMARANTH FAMILY

* *Amaranthus albus*—prostrate pigweed

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Rhus integrifolia—lemonade berry

* *Schinus molle*—Peruvian peppertree

* *Schinus terebinthifolius*—Brazilian peppertree

APIACEAE—CARROT FAMILY

* *Anthriscus caucalis*—bur chervil

* *Apium graveolens*—wild celery

* *Conium maculatum*—poison hemlock

Daucus pusillus—American wild carrot

* *Foeniculum vulgare*—fennel

APOCYNACEAE—DOGBANE FAMILY

* *Nerium oleander*—oleander

* *Vinca major*—bigleaf periwinkle

ARALIACEAE—GINSENG FAMILY

* *Hedera helix*—English ivy

ASTERACEAE—SUNFLOWER FAMILY

Ambrosia psilostachya—western ragweed

* *Anthemis arvensis*—corn chamomile

Artemisia californica—California sagebrush

Baccharis pilularis ssp. *consanguinea*—coyotebrush

Baccharis salicifolia ssp. *salicifolia*—mulefat

Baccharis sarothroides—desertbroom

Bidens laevis—smooth beggartick

* *Carduus pycnocephalus* ssp. *pycnocephalus*—Italian plumeless thistle

APPENDIX B
PLANT SPECIES LIST

- * *Centaurea melitensis*—Maltese star-thistle
- Corethrogyne filaginifolia*—sand-aster
- Deinandra fasciculata*—clustered tarweed
- * *Delairea odorata*—Cape-ivy
- * *Dittrichia graveolens*—stinkwort
- Encelia californica*—California brittle bush
- * *Erigeron bonariensis*—asthmaweed
- Erigeron canadensis*—Canadian horseweed
- * *Glebionis coronaria*—crowndaisy
- Hazardia squarrosa* var. *grindelioides*—sawtooth bristleweed
- * *Hedypnois rhagadioloides*—Crete weed
- * *Helminthotheca echioides*—bristly oxtongue
- Heterotheca grandiflora*—telegraphweed
- * *Hypochaeris glabra*—smooth cat's ear
- Isocoma menziesii* var. *menziesii*—Menzies' goldenbush
- Isocoma menziesii* var. *vernonioides*—Menzies' goldenbush
- Jaumea carnosa*—marsh jaumea
- * *Lactuca serriola*—prickly lettuce
- Logfia filaginoides*—California cottonrose
- * *Logfia gallica*—narrowleaf cottonrose
- Osmadenia tenella*—false rosinweed
- Pluchea odorata* var. *odorata*—sweetscent
- Pseudognaphalium beneolens*—Wright's cudweed
- Pseudognaphalium biolettii*—two-color rabbit-tobacco
- Pseudognaphalium californicum*—ladies' tobacco
- * *Pseudognaphalium luteoalbum*—Jersey cudweed
- Pseudognaphalium stramineum*—cottonbatting plant
- * *Pulicaria paludosa*—Spanish false fleabane
- * *Silybum marianum*—blessed milkthistle
- * *Sonchus asper* ssp. *asper*—spiny sowthistle
- * *Sonchus oleraceus*—common sowthistle
- Uropappus lindleyi*—Lindley's silverpuffs
- Xanthium strumarium*—cocklebur

BORAGINACEAE—BORAGE FAMILY

- Amsinckia menziesii*—Menzies' fiddleneck
- Heliotropium curassavicum* var. *oculatum*—seaside heliotrope
- * *Myosotis latifolia*—broadleaf forget-me-not

BRASSICACEAE—MUSTARD FAMILY

- * *Brassica nigra*—black mustard
- * *Hirschfeldia incana*—shortpod mustard
- * *Lepidium didymum*—lesser swinecress
Nasturtium officinale—watercress
- * *Raphanus sativus*—cultivated radish
- * *Sisymbrium altissimum*—tall tumbled mustard

CACTACEAE—CACTUS FAMILY

- * *Opuntia ficus-indica*—Barbary fig
Opuntia littoralis—coast prickly pear

CAMPANULACEAE—BELLFLOWER FAMILY

Triodanis biflora—small Venus' looking-glass

CARYOPHYLLACEAE—PINK FAMILY

- * *Polycarpon tetraphyllum* var. *tetraphyllum*—fourleaf manyseed
- * *Silene gallica*—common catchfly
- * *Spergularia bocconi*—Boccone's sandspurry
Spergularia marina—saltmarsh sand-spurrey

CHENOPODIACEAE—GOOSEFOOT FAMILY

- * *Atriplex semibaccata*—Australian saltbush
Chenopodium californicum—California goosefoot
- * *Chenopodium murale*—nettleleaf goosefoot
Salicornia pacifica—Pacific swampfire
- * *Salsola tragus*—prickly Russian thistle

CONVOLVULACEAE—MORNING-GLORY FAMILY

- Calystegia macrostegia*—island false bindweed
- * *Convolvulus arvensis*—field bindweed

CRASSULACEAE—STONECROP FAMILY

- * *Aeonium haworthii*—Haworth's aeonium
Crassula connata—sand pygmyweed
- * *Crassula ovata*—jade plant

CUCURBITACEAE—GOURD FAMILY

Cucurbita foetidissima—Missouri gourd
Marah macrocarpa—Cucamonga manroot

ERICACEAE—HEATH FAMILY

- * *Arbutus unedo*—strawberry tree

EUPHORBIACEAE—SPURGE FAMILY

- Croton setiger*—dove weed
- * *Euphorbia lathyris*—moleplant
- * *Euphorbia maculata*—spotted sandmat
- * *Euphorbia peplus*—petty spurge
- * *Ricinus communis*—castorbean

FABACEAE—LEGUME FAMILY

- * *Acacia cultriformis*—knife-leaved wattle
- * *Acacia cyclops*—coastal wattle
- Acmispon glaber* var. *glaber*—common deerweed
- Acmispon heermannii* var. *heermannii*—Heermann’s bird’s-foot trefoil
- * *Caesalpinia gilliesii*—bird-of-paradise shrub
- Lupinus bicolor*—miniature lupine
- * *Medicago polymorpha*—burclover
- * *Melilotus albus*—yellow sweetclover
- * *Melilotus indicus*—annual yellow sweetclover
- * *Senna didymobotrya*—African senna

FRANKENIACEAE—FRANKENIA FAMILY

- Frankenia salina*—alkali heath

GERANIACEAE—GERANIUM FAMILY

- * *Erodium botrys*—longbeak stork’s bill
- * *Erodium cicutarium*—redstem stork’s bill
- * *Erodium moschatum*—musky stork’s bill

LAMIACEAE—MINT FAMILY

- * *Marrubium vulgare*—horehound
- Salvia apiana*—white sage
- Stachys rigida*—rough hedgenettle

LYTHRACEAE—LOOSESTRIFE FAMILY

- * *Lythrum hyssopifolia*—hyssop loosestrife

MALVACEAE—MALLOW FAMILY

- * *Malva parviflora*—cheeseweed mallow
- Malvella leprosa*—alkali mallow

MONTIACEAE—MONTIA FAMILY

Claytonia perfoliata—miner's lettuce

MYRSINACEAE—MYRSINE FAMILY

* *Lysimachia arvensis*—scarlet pimpernel

MYRTACEAE—MYRTLE FAMILY

- * *Eucalyptus camaldulensis*—river redgum
- * *Eucalyptus globulus*—Tasmanian bluegum
- * *Eucalyptus sideroxylon*—red ironbark

NYCTAGINACEAE—FOUR O'CLOCK FAMILY

Mirabilis laevis var. *crassifolia*—California four o'clock

ONAGRACEAE—EVENING PRIMROSE FAMILY

Oenothera elata ssp. *hookeri*—Hooker's evening primrose

OXALIDACEAE—OXALIS FAMILY

* *Oxalis pes-caprae*—Bermuda buttercup

PHRYMACEAE—LOPSEED FAMILY

Diplacus puniceus—red bush monkeyflower

PLANTAGINACEAE—PLANTAIN FAMILY

* *Plantago coronopus*—buckhorn plantain

PLATANACEAE—PLANE TREE, SYCAMORE FAMILY

* *Platanus ×hispanica*—London planetree

PLUMBAGINACEAE—LEADWORT FAMILY

- * *Limonium perezii*—Perez's sea lavender
- * *Plumbago auriculata*—Cape leadwort

POLEMONIACEAE—PHLOX FAMILY

Gilia angelensis—chaparral gilia

POLYGONACEAE—BUCKWHEAT FAMILY

- Eriogonum fasciculatum*—California buckwheat
- * *Polygonum aviculare*—prostrate knotweed
- Pterostegia drymarioides*—woodland pterostegia
- * *Rumex crispus*—curly dock

PORTULACACEAE—PURSLANE FAMILY

- * *Portulaca oleracea*—little hogweed

ROSACEAE—ROSE FAMILY

- * *Eriobotrya japonica*—loquat
- Heteromeles arbutifolia*—toyon
- Prunus ilicifolia*—holly leaf cherry

RUBIACEAE—MADDER FAMILY

- Galium angustifolium* ssp. *angustifolium*—narrowleaf bedstraw
- Galium aparine*—stickywilly

SALICACEAE—WILLOW FAMILY

- Salix exigua*—sandbar willow
- Salix lasiolepis*—arroyo willow

SCROPHULARIACEAE—FIGWORT FAMILY

- * *Myoporum laetum*—myoporum

SOLANACEAE—NIGHTSHADE FAMILY

- Datura wrightii*—sacred thorn-apple
- * *Nicotiana glauca*—tree tobacco
- Solanum americanum*—American black nightshade
- Solanum douglasii*—greenspot nightshade
- * *Solanum nigrum*—black nightshade

TAMARICACEAE—TAMARISK FAMILY

- * *Tamarix chinensis*—five-stamen tamarisk

TROPAEOLACEAE—NASTURTIUM FAMILY

- * *Tropaeolum majus*—nasturtium

URTICACEAE—NETTLE FAMILY

- Urtica dioica* ssp. *holosericea*—stinging nettle

Ferns and Fern Allies

Vascular Species

PTERIDACEAE—BRAKE FAMILY

- Pentagramma triangularis* ssp. *triangularis*—goldback fern

Monocots
Vascular Species

AGAVACEAE—AGAVE FAMILY

Hesperoyucca whipplei—chaparral yucca

AMARYLLIDACEAE—AMARYLLIS FAMILY

* *Amaryllis belladonna*—belladonna lily

ARECACEAE—PALM FAMILY

* *Washingtonia robusta*—Washington fan palm

ASPARAGACEAE—ASPARAGUS FAMILY

* *Asparagus asparagoides*—African asparagus fern

CYPERACEAE—SEDGE FAMILY

Cyperus eragrostis—tall flatsedge

Schoenoplectus californicus—California bulrush

POACEAE—GRASS FAMILY

* *Avena barbata*—slender oat

* *Avena fatua*—wild oat

* *Brachypodium distachyon*—purple false brome

* *Bromus diandrus*—ripgut brome

* *Bromus hordeaceus*—soft brome

* *Bromus madritensis* ssp. *rubens*—red brome

* *Cortaderia jubata*—purple pampas grass

* *Cortaderia selloana*—Uruguayan pampas grass

Distichlis spicata—salt grass

* *Ehrharta erecta*—panic veldtgrass

* *Festuca myuros*—rat-tail fescue

* *Festuca perennis*—perennial rye grass

* *Gastridium phleoides*—nit grass

* *Hordeum murinum*—mouse barley

* *Lamarckia aurea*—goldentop grass

Melica imperfecta—smallflower melicgrass

* *Pennisetum setaceum*—fountain grass

* *Phalaris minor*—littleseed canarygrass

* *Poa annua*—annual bluegrass

* *Polypogon monspeliensis*—annual rabbitsfoot grass

* *Polypogon viridis*—beardless rabbitsfoot grass

APPENDIX B
PLANT SPECIES LIST

- * *Schismus barbatus*—common Mediterranean grass
- Stipa lepida*—foothill needlegrass
- * *Stipa miliacea* var. *miliacea*—smilgrass
- Stipa pulchra*—purple needlegrass

TYPHACEAE—CATTAIL FAMILY

Typha domingensis—southern cattail

* signifies introduced (non-native) species.

Appendix C

Wildlife Species List

BIRD

BLACKBIRDS, ORIOLES, AND ALLIES

ICTERIDAE—BLACKBIRDS

Icterus cucullatus—hooded oriole

BUSHTITS

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

Psaltiriparus minimus—bushtit

CARDINALS, GROSBEAKS, AND ALLIES

CARDINALIDAE—CARDINALS AND ALLIES

Pheucticus melanocephalus—black-headed grosbeak

FALCONS

FALCONIDAE—CARACARAS AND FALCONS

Falco sparverius—American kestrel

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus—house finch

Spinus psaltria—lesser goldfinch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Sayornis nigricans—black phoebe

Tyrannus verticalis—western kingbird

Tyrannus vociferans—Cassin's kingbird

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

Accipiter cooperii—Cooper's hawk

Buteo jamaicensis—red-tailed hawk

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna’s hummingbird

Selasphorus sp.—Allen’s/rufous hummingbird

JAYS, MAGPIES, AND CROWS

CORVIDAE—CROWS AND JAYS

Corvus corax—common raven

LARKS

ALAUDIDAE—LARKS

Eremophila alpestris—horned lark

MOCKINGBIRDS AND THRASHERS

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Toxostoma redivivum—California thrasher

OLD WORLD SPARROWS

PASSERIDAE—OLD WORLD SPARROWS

* *Passer domesticus*—house sparrow

OLD WORLD WARBLERS AND GNATCATCHERS

SYLVIIDAE—SYLVIID WARBLERS

Poliophtila californica californica—coastal California gnatcatcher

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

* *Columba livia*—rock pigeon (rock dove)

ROADRUNNERS AND CUCKOOS

CUCULIDAE—CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus—greater roadrunner

WOOD WARBLERS AND ALLIES

PARULIDAE—WOOD-WARBLERS

Setophaga coronata—yellow-rumped warbler

WRENS

TROGLODYTIDAE—WRENS

Thryomanes bewickii—Bewick's wren

WRENTITS

TIMALIIDAE—BABBLERS

Chamaea fasciata—wrentit

NEW WORLD SPARROWS

PASSERELLIDAE—NEW WORLD SPARROWS

Melospiza melodia—song sparrow

Melospiza crissalis—California towhee

Pipilo maculatus—spotted towhee

INVERTEBRATE

BUTTERFLIES

LYCAENIDAE—BLUES, HAIRSTREAKS, AND COPPERS

Leptotes marina—marine blue

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Nymphalis antiopa—mourning cloak

Vanessa cardui—painted lady

PIERIDAE—WHITES AND SULFURS

Pieris rapae—cabbage white

ANTS

FORMICIDAE—ANTS

* *Linepithema humile*—Argentine ant

MAMMAL

HARES AND RABBITS

LEPORIDAE—HARES AND RABBITS

Sylvilagus audubonii—desert cottontail

SQUIRRELS

SCIURIDAE—SQUIRRELS

Spermophilus (Otospermophilus) beecheyi—California ground squirrel

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard

* Signifies introduced (non-native) species.

Appendix D

Special-Status Plant Species Not Expected to Occur
within the Biological Study Area

Scientific Name	Common Name	Status (Federal/State/CRPR/ Oceanside Subarea Plan)	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range (feet amsl)	Potential to Occur
<i>Abronia maritima</i>	red sand-verbena	None/None/4.2/None	Coastal dunes/perennial herb/Feb–Nov/0–330	Not expected to occur. No suitable vegetation present. The closest known occurrence is less than 1.0 miles north of the project site in Oceanside, California (CCH 2020).
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand-verbena	None/None/1B.1/None	Chaparral, coastal scrub, desert dunes; sandy/annual herb/(Jan)Mar–Sep/245–5,250	Not expected to occur as chaparral sand-verbena is more likely to be found in sandy washes and sandy floodplains, which are not present within the study area. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Acanthomintha ilicifolia</i>	San Diego thorn-mint	FT/SE/1B.1/Covered	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay, openings/annual herb/Apr–June/30–3,150	Not expected to occur. San Diego thorn-mint does not tolerate high levels of soil disturbance. Even though many of the native shrubs are high quality, annuals like thorn-mint do not do well with heavy foot traffic, garbage, and non-native annual grasses. San Diego thorn-mint also requires unique cracked or broken clay soils that are not present within the study area. The closest known CNDDDB occurrence is approximately 3.7 miles southeast of the project site along a foot trail in Calavera Hills Village in Carlsbad, California (CDFW 2020; USFWS 2020).
<i>Acmispon prostratus</i>	Nuttall’s acmispon	None/None/1B.1/Covered	Coastal dunes, coastal scrub (sandy)/annual herb/Mar–June(July)/0–35	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known CNDDDB occurrence is approximately 1.8 miles northwest of the project site at the mouth of San Luis Rey River (CDFW 2020).
<i>Adolphia californica</i>	California adolphia	None/None/2B.1/None	Chaparral, coastal scrub, valley and foothill grassland; clay/perennial deciduous shrub/Dec–May/30–2,430	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there is no clay soil on site. The closest known CNDDDB occurrence is approximately 3.0 miles southeast of the project site in open space in Carlsbad, California (CDFW 2020).
<i>Agave shawii</i> var. <i>shawii</i>	Shaw’s agave	None/None/2B.1/None	Coastal bluff scrub, coastal scrub; maritime succulent scrub/perennial leaf succulent/Sep–May/5–395	Not expected to occur. Shaw’s agave has a limited distribution near the U.S./Mexico border and up to Torrey Pines along the bluffs. Shaw’s agave is more likely to be found in maritime succulent scrub or coastal bluff scrub, which are not present within the study area. In addition, Shaw’s agave would have been observed during initial site visits as it is a large perennial leaf succulent that is observed year-round. The closest known CNDDDB occurrence is 4.8 miles south of the project site along South Carlsbad State Beach (CDFW 2020).
<i>Ambrosia pumila</i>	San Diego ambrosia	FE/None/1B.1/Covered	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; sandy loam or clay, often in disturbed areas, sometimes alkaline/perennial rhizomatous herb/Apr–Oct/65–1,360	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known CNDDDB occurrence is approximately 1.8 miles northwest of the project site along the San Luis Rey River (CDFW 2020).
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	Del Mar manzanita	FE/None/1B.1/None	Chaparral (maritime, sandy)/perennial evergreen shrub/Dec–June/0–1,200	Not expected to occur. No suitable vegetation present. The closest known CNDDDB occurrence is approximately 4.5 miles southeast of the project site at Evans Point in Carlsbad, California (CDFW 2020).
<i>Arctostaphylos rainbowensis</i>	Rainbow manzanita	None/None/1B.1/None	Chaparral/perennial evergreen shrub/Dec–Mar/670–2,200	Not expected to occur. The site is outside of the species’ known elevation range, and there is no suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Artemisia palmeri</i>	San Diego sagewort	None/None/4.2/None	Chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland; sandy, mesic/perennial deciduous shrub/(Feb)May–Sep/45–3,000	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known occurrence is approximately 4.3 miles southeast of the project site within Agua Hedionda Ecological Reserve (CCH 2020).
<i>Asplenium vespertinum</i>	western spleenwort	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub; rocky/perennial rhizomatous herb/Feb–June/590–3,280	Not expected to occur. The site is outside of the species’ known elevation range. There are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Astragalus tener</i> var. <i>titi</i>	coastal dunes milk-vetch	FE/SE/1B.1/None	Coastal bluff scrub (sandy), coastal dunes, coastal prairie (mesic); often vernaly mesic areas/annual herb/Mar–May/0–165	Not expected to occur. No suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).

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<i>Atriplex coulteri</i>	Coulter's saltbush	None/None/1B.2/None	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay/perennial herb/Mar–Oct/5–1,510	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there is no coastal bluff scrub and alkaline or clay soil on site. The closest known CNDDDB occurrence is 1.3 miles northwest of the project site in Lawrence Canyon (CDFW 2020).
<i>Atriplex pacifica</i>	south coast saltscale	None/None/1B.2/None	Coastal bluff scrub, coastal dunes, coastal scrub, playas/annual herb/Mar–Oct/0–460	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there is no coastal bluff scrub on site. The closest known CNDDDB occurrence is approximately 2.0 miles northeast of the project site in San Luis Rey; however, the only source of information for this occurrence is from 1881 (CDFW 2020).
<i>Atriplex parishii</i>	Parish's brittlescale	None/None/1B.1/None	Chenopod scrub, playas, vernal pools; alkaline/annual herb/June–Oct/80–6,235	Not expected to occur. No suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Baccharis vanessae</i>	Encinitas baccharis	FT/SE/1B.1/None	Chaparral (maritime), cismontane woodland; sandstone/perennial deciduous shrub/Aug, Oct, Nov/195–2,360	Not expected to occur. No suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Bloomeria clevelandii</i>	San Diego goldenstar	None/None/1B.1/None	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/perennial bulbiferous herb/Apr–May/160–1,525	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there are no clay soils and there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT/SE/1B.1/Covered	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools; often clay/perennial bulbiferous herb/Mar–June/80–3,675	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there is no clay soil on site. The closest known CNDDDB occurrence is approximately 1.0 miles northeast of the project site along Loma Alta Creek (CDFW 2020; USFWS 2020).
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	None/None/1B.1/None	Closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools; mesic, clay/perennial bulbiferous herb/May–July/95–5,550	Not expected to occur. This species was not detected during focused plant surveys. There is suitable woodland habitat present. However, there is no clay soil and there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Camissoniopsis lewisii</i>	Lewis' evening-primrose	None/None/3/None	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy or clay/annual herb/Mar–May(June)/0–985	Not expected to occur. This species was not detected during focused plant surveys. There is suitable woodland habitat present. The closest known occurrence is approximately 2.3 miles south of the project site in Carlsbad, California (CCH 2020).
<i>Caulanthus simulans</i>	Payson's jewelflower	None/None/4.2/None	Chaparral, coastal scrub; sandy, granitic/annual herb/(Feb)Mar–May(June)/295–7,220	Not expected to occur. The site is outside the species' known elevation range. There are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Ceanothus verrucosus</i>	wart-stemmed ceanothus	None/None/2B.2/None	Chaparral/perennial evergreen shrub/Dec–May/0–1,245	Not expected to occur. This species was not detected during focused plant surveys. The closest known CNDDDB occurrence is approximately 3.2 miles south of the project site north of Agua Hedionda Lagoon (CDFW 2020).
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant	None/None/1B.1/None	Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools/annual herb/May–Nov/0–1,575	Not expected to occur. Southern tarplant is more likely to be found in foothill grassland that is vernally mesic. Areas with the potential for grassland habitat are disturbed. Non-native annual grasses are abundant within the study area. In addition, southern tarplant would have been observed during the initial site visits. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	None/None/1B.1/None	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline/annual herb/Apr–Sep/0–2,100	Not expected to occur. Smooth tarplant occurs in alkaline foothill grasslands. In addition, smooth tarplant would have been observed during the initial site visits. The closest known CNDDDB occurrence is less than 1.0 miles west of the project site in Oceanside from 1996 (CDFW 2020).
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	None/None/1B.1/None	Coastal bluff scrub (sandy), coastal dunes/annual herb/Jan–Aug/0–330	Not expected to occur. No suitable vegetation present. The closest known CNDDDB occurrence is approximately 1.2 miles west of the project site along sea bluffs in Oceanside (CDFW 2020).

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<i>Chamaebatia australis</i>	southern mountain misery	None/None/4.2/None	Chaparral (gabbroic or metavolcanic)/perennial evergreen shrub/Nov–May/980–3,345	Not expected to occur. The site is outside the species’ known elevation range, and there is no suitable vegetation present. There are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Chorizanthe orcuttiana</i>	Orcutt’s spineflower	FE/SE/1B.1/None	Closed-cone coniferous forest, chaparral (maritime), coastal scrub; sandy openings/annual herb/Mar–May/5–410	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	None/None/1B.2/None	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools; often clay/annual herb/Apr–July/95–5,020	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Cistanthe maritima</i>	seaside cistanthe	None/None/4.2/None	Coastal bluff scrub, coastal scrub, valley and foothill grassland; sandy/annual herb/(Feb)Mar–June(Aug)/15–985	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known occurrence is approximately 2.4 miles north of the project site within Marine Corps Base Camp Pendleton (CCH 2020).
<i>Clarkia delicata</i>	delicate clarkia	None/None/1B.2/None	Chaparral, cismontane woodland; often gabbroic/annual herb/Apr–June/770–3,280	Not expected to occur. The site is outside the species’ known elevation range, and there is no suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	summer holly	None/None/1B.2/None	Chaparral, cismontane woodland/perennial evergreen shrub/Apr–June/95–2,590	Not expected to occur. No suitable vegetation is present. The closest known CNDDDB occurrence is approximately 3.9 miles southeast of the project site within Lake Calavera Preserve (CDFW 2020).
<i>Convolvulus simulans</i>	small-flowered morning-glory	None/None/4.2/None	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar–July/95–2,430	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there is no clay soil on site. The closest known occurrence is approximately 2.6 miles north of the project site within Marine Corps Base Camp Pendleton (CCH 2020).
<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	San Diego sand aster	None/None/1B.1/None	Coastal bluff scrub, chaparral, coastal scrub/perennial herb/June–Sep/5–375	Not expected to occur. San Diego sand aster and Del Mar Mesa sand aster have been lumped back taxonomically to <i>Corethrogyne filaginifolia</i> . However, these rare varieties recognized by the California Native Plant Society occur near Del Mar and within Torrey Pines State Preserve. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	Del Mar Mesa sand aster	None/None/1B.1/None	Coastal bluff scrub, chaparral (maritime, openings), coastal scrub; sandy/perennial herb/May, July, Aug, Sep/45–490	Not expected to occur. San Diego sand aster and Del Mar Mesa sand aster have been lumped back taxonomically to <i>Corethrogyne filaginifolia</i> . However, these rare varieties recognized by the California Native Plant Society occur near Del Mar and within Torrey Pines State Preserve. The closest known CNDDDB occurrence is approximately 3.8 miles south of the project site at the northeast end of Agua Hedionda Lagoon (CDFW 2020).
<i>Cryptantha wigginsii</i>	Wiggins’ cryptantha	None/None/1B.2/None	Coastal scrub; often clay/annual herb/Feb–June/65–900	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there is no clay soil on site. The closest known CNDDDB occurrence is approximately 2.3 miles southeast of the project site within Hidden Canyon Park (CDFW 2020).
<i>Deinandra paniculata</i>	paniculate tarplant	None/None/4.2/None	Coastal scrub, valley and foothill grassland, vernal pools; usually vernal mesic, sometimes sandy/annual herb/(Mar)Apr–Nov(Dec)/80–3,085	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Dichondra occidentalis</i>	western dichondra	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/perennial rhizomatous herb/(Jan)Mar–July/160–1,640	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known occurrence is approximately 2.7 miles north of the project site within Marine Corps Base Camp Pendleton (CCH 2020).
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Blochman’s dudleya	None/None/1B.1/Covered	Coastal bluff scrub, chaparral, coastal scrub, valley and foothill grassland; rocky, often clay or serpentinite/perennial herb/Apr–June/15–1,475	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there is no clay soil on site. The closest known CNDDDB occurrence is less than 1.0 miles northeast of the project site south of Oceanside–Carlsbad Country Club (CDFW 2020).

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<i>Dudleya multicaulis</i>	many-stemmed dudleya	None/None/1B.2/None	Chaparral, coastal scrub, valley and foothill grassland; often clay/perennial herb/Apr–July/45–2,590	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there is no clay soil on site and there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Dudleya variegata</i>	variegated dudleya	None/None/1B.2/None	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/perennial herb/Apr–June/5–1,905	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there is no clay soil on site. The closest known CNDDDB occurrence is approximately 1.9 miles northwest of the project site along San Luis Rey River Trail (CDFW 2020).
<i>Dudleya viscida</i>	sticky dudleya	None/None/1B.2/Covered	Coastal bluff scrub, chaparral, cismontane woodland, coastal scrub; rocky/perennial herb/May–June/30–1,805	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub and woodland habitat present. The closest known CNDDDB occurrence is approximately 1.3 miles north of the project site along slopes above the San Luis Rey River (CDFW 2020).
<i>Ericameria palmeri</i> var. <i>palmeri</i>	Palmer’s goldenbush	None/None/1B.1/None	Chaparral, coastal scrub; mesic/perennial evergreen shrub/(July)Sep–Nov/95–1,970	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	FE/SE/1B.1/None	Coastal scrub, valley and foothill grassland, vernal pools; mesic/annual/perennial herb/Apr–June/65–2,035	Not expected to occur. San Diego button-celery occurs in areas of with native grasslands and many times mesic meadows or vernal pools. Typical habitat is the coastal grassland areas of Marine Corps Base Camp Pendleton. The study area does not consist of native grasslands. The study area consists of disturbed soils and non-native annual grasses. The closest known CNDDDB occurrence is less than 1.0 miles west of the project site along the coast in Oceanside (CDFW 2020).
<i>Eryngium pendletonense</i>	Pendleton button-celery	None/None/1B.1/None	Coastal bluff scrub, valley and foothill grassland, vernal pools; clay, vernal mesic/perennial herb/Apr–June(July)/45–360	Not expected to occur. Pendleton button-celery is known to occur only on Marine Corps Base Camp Pendleton. Pendleton button-celery occurs in vernal mesic native grasslands. The study area does not consist of native grasslands. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Erysimum ammophilum</i>	sand-loving wallflower	None/None/1B.2/None	Chaparral (maritime), coastal dunes, coastal scrub; sandy, openings/perennial herb/Feb–June/0–195	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known CNDDDB occurrence is approximately 2.8 miles north of the project site within the vicinity of Wire Mountain (CDFW 2020).
<i>Erythranthe diffusa</i>	Palomar monkeyflower	None/None/4.3/None	Chaparral, lower montane coniferous forest; sandy or gravelly/annual herb/Apr–June/4,000–6,005	Not expected to occur. The site is outside the species’ known elevation range, and there is no suitable vegetation present. There are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Euphorbia misera</i>	cliff spurge	None/None/2B.2/None	Coastal bluff scrub, coastal scrub, Mojavean desert scrub; rocky/perennial shrub/Dec–Aug(Oct)/30–1,640	Not expected to occur. Cliff spurge would have been observed during the initial site survey. The closest known CNDDDB occurrence overlaps the project site; however, the exact location is unknown (CDFW 2020).
<i>Ferocactus viridescens</i>	San Diego barrel cactus	None/None/2B.1/Covered	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/perennial stem succulent/May–June/5–1,475	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known CNDDDB occurrence is approximately 1.8 miles northwest of the project site along the San Luis Rey River (CDFW 2020).
<i>Harpagonella palmeri</i>	Palmer’s grapplinghook	None/None/4.2/None	Chaparral, coastal scrub, valley and foothill grassland; clay; open grassy areas within shrubland/annual herb/Mar–May/65–3,135	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there is no clay soil on site. The closest known CNDDDB occurrence is approximately 4.8 miles south of the project site at Evans Point (CDFW 2020).
<i>Hazardia orcuttii</i>	Orcutt’s hazardia	None/ST/1B.1/Covered	Chaparral (maritime), coastal scrub; often clay/perennial evergreen shrub/Aug–Oct/260–280	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there is no clay soil on site. The closest known CNDDDB occurrence is approximately 4.3 miles south of the project site northwest of Evans Point (CDFW 2020).
<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>	beach goldenaster	None/None/1B.1/None	Chaparral (coastal), coastal dunes, coastal scrub/perennial herb/Mar–Dec/0–4,020	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).

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<i>Holocarpha virgata</i> ssp. <i>elongata</i>	graceful tarplant	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/annual herb/May–Nov/195–3,610	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Hordeum intercedens</i>	vernal barley	None/None/3.2/None	Coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), vernal pools/annual herb/Mar–June/15–3,280	Not expected to occur. No habitat exists within the study area for this species. Vernal barley is found in vernal pools, vernal depressions, and less disturbed vernal grasslands. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Horkelia truncata</i>	Ramona horkelia	None/None/1B.3/None	Chaparral, cismontane woodland; clay, gabbroic/perennial herb/May–June/1,310–4,265	Not expected to occur. The site is outside the species’ known elevation range, and there is no suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	None/None/1B.2/None	Chaparral, coastal scrub (sandy, often in disturbed areas)/perennial shrub/Apr–Nov/30–445	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known CNDDDB occurrence is approximately 1.6 miles northwest of the project site along the San Luis Rey River (CDFW 2020).
<i>Iva hayesiana</i>	San Diego marsh-elder	None/None/2B.2/Covered	Marshes and swamps, playas/perennial herb/Apr–Oct/30–1,640	Not expected to occur. No suitable vegetation present. The closest known CNDDDB occurrence is approximately 1.9 miles northwest of the project site along San Luis Rey River (CDFW 2020).
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	southwestern spiny rush	None/None/4.2/None	Coastal dunes (mesic), meadows and seeps (alkaline seeps), marshes and swamps (coastal salt)/perennial rhizomatous herb/(Mar)May–June/5–2,955	Not expected to occur. No suitable vegetation is present. The closest known occurrence is approximately 4.0 miles north of the project site within Marine Corps Base Camp Pendleton (CCH 2020).
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter’s goldfields	None/None/1B.1/None	Marshes and swamps (coastal salt), playas, vernal pools/annual herb/Feb–June/0–4,005	Not expected to occur. No suitable vegetation is present. The closest known CNDDDB occurrence is approximately 3.0 miles northwest of the project site within Santa Margarita River Marsh (CDFW 2020).
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson’s pepper-grass	None/None/4.3/None	Chaparral, coastal scrub/annual herb/Jan–July/0–2,905	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known CNDDDB occurrence is approximately 2.0 miles northeast of the project site within the San Luis Rey Valley (CDFW 2020).
<i>Leptosyne maritima</i>	sea dahlia	None/None/2B.2/None	Coastal bluff scrub, coastal scrub/perennial herb/Mar–May/15–490	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known CNDDDB occurrence is approximately 1.6 miles northwest of the project site along the west side of Lawrence Canyon (CDFW 2020).
<i>Lycium californicum</i>	California box-thorn	None/None/4.2/None	Coastal bluff scrub, coastal scrub/perennial shrub/(Dec)Mar, June, July, Aug/15–490	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known occurrence is 1.3 miles west of the project site along the bluff in Oceanside, California (CCH 2020).
<i>Microseris douglasii</i> ssp. <i>platycarpha</i>	small-flowered microseris	None/None/4.2/None	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/annual herb/Mar–May/45–3,510	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there is no clay soil on site. The closest known occurrence is approximately 3.0 miles northeast of the project site within San Luis Rey (CCH 2020).
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	felt-leaved monardella	None/None/1B.2/None	Chaparral, cismontane woodland/perennial rhizomatous herb/June–Aug/980–5,165	Not expected to occur. The site is outside the species’ known elevation range, and there is no suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mousetail	None/None/3.1/None	Valley and foothill grassland, vernal pools (alkaline)/annual herb/Mar–June/65–2,100	Not expected to occur. Little mousetail occurs within vernal grasslands and vernal pools. The study area does not consist of quality habitat for little mousetail. The closest known CNDDDB occurrence is approximately 3.9 miles north of the project site within Marine Corps Base Camp Pendleton (CDFW 2020).
<i>Nama stenocarpa</i>	mud nama	None/None/2B.2/None	Marshes and swamps (lake margins, riverbanks)/annual/perennial herb/Jan–July/15–1,640	Not expected to occur. No suitable vegetation present. The closest known CNDDDB occurrence is approximately 2.0 miles northeast of the project site near San Luis Rey (CDFW 2020).

Scientific Name	Common Name	Status (Federal/State/CRPR/ Oceanside Subarea Plan)	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range (feet amsl)	Potential to Occur
<i>Navarretia fossalis</i>	spreading navarretia	FT/None/1B.1/None	Chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, vernal pools/annual herb/Apr–June/95–2,150	Not expected to occur. No suitable vegetation is present. The closest known CNDDB occurrence is approximately 2.1 miles northwest of the project site within Tuley Canyon (CDFW 2020).
<i>Nemacaulis denudata</i> var. <i>denudata</i>	coast woolly-heads	None/None/1B.2/None	Coastal dunes/annual herb/Apr–Sep/0–330	Not expected to occur. No suitable vegetation is present. The closest known CNDDB occurrence is approximately 1.8 miles northwest of the project site along San Luis Rey River (CDFW 2020).
<i>Nemacaulis denudata</i> var. <i>gracilis</i>	slender cottonheads	None/None/2B.2/None	Coastal dunes, desert dunes, Sonoran desert scrub/annual herb/(Mar)Apr–May/-160–1,310	Not expected to occur. No suitable vegetation is present. The closest known CNDDB occurrence is less than 1.0 miles west of the project site within sand dunes in Oceanside, California (CDFW 2020).
<i>Nolina cismontana</i>	chaparral nolina	None/None/1B.2/None	Chaparral, coastal scrub; sandstone or gabbro/perennial evergreen shrub/(Mar)May–July/455–4,185	Not expected to occur. The site is outside the species’ known elevation range. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Orcuttia californica</i>	California Orcutt grass	FE/SE/1B.1/None	Vernal pools/annual herb/Apr–Aug/45–2,165	Not expected to occur. No suitable vegetation is present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Orobanche parishii</i> ssp. <i>brachyloba</i>	short-lobed broomrape	None/None/4.2/None	Coastal bluff scrub, coastal dunes, coastal scrub; sandy/perennial herb (parasitic)/Apr–Oct/5–1,000	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Pentachaeta aurea</i> ssp. <i>aurea</i>	golden-rayed pentachaeta	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, valley and foothill grassland/annual herb/Mar–July/260–6,070	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub and woodland habitat present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Phacelia ramosissima</i> var. <i>austrolitoralis</i>	south coast branching phacelia	None/None/3.2/None	Chaparral, coastal dunes, coastal scrub, marshes and swamps (coastal salt); sandy, sometimes rocky/perennial herb/Mar–Aug/15–985	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there are no coastal salt swamps on site, and there are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Phacelia stellaris</i>	Brand’s star phacelia	None/None/1B.1/None	Coastal dunes, coastal scrub/annual herb/Mar–June/0–1,310	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known CNDDB occurrence is approximately 4.5 miles northwest of the project site within dunes north of the mouth of the Santa Margarita River (CDFW 2020).
<i>Pinus torreyana</i> ssp. <i>torreyana</i>	Torrey pine	None/None/1B.2/None	Closed-cone coniferous forest, chaparral; sandstone/perennial evergreen tree/N.A./95–525	Not expected to occur. No suitable vegetation is present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Pogogyne abramsii</i>	San Diego mesa mint	FE/SE/1B.1/None	Vernal pools/annual herb/Mar–July/295–655	Not expected to occur. The site is outside the species’ known elevation range, and there is no suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish’s milkwort	None/None/4.3/None	Chaparral, cismontane woodland, riparian woodland/perennial deciduous shrub/May–Aug/325–3,280	Not expected to occur. The site is outside the species’ known elevation range, and there is no suitable vegetation present. There are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Pseudognaphalium leucocephalum</i>	white rabbit-tobacco	None/None/2B.2/None	Chaparral, cismontane woodland, coastal scrub, riparian woodland; sandy, gravelly/perennial herb/(July)Aug–Nov(Dec)/0–6,890	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub and woodland habitat present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Psilocarphus brevissimus</i> var. <i>multiflorus</i>	Delta woolly-marbles	None/None/4.2/None	Vernal pools/annual herb/May–June/30–1,640	Not expected to occur. No suitable vegetation is present. There are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Quercus dumosa</i>	Nuttall’s scrub oak	None/None/1B.1/Covered	Closed-cone coniferous forest, chaparral, coastal scrub; sandy, clay loam/perennial evergreen shrub/Feb–Apr(May–Aug)/45–1,310	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there is no clay soil on site. The closest known CNDDB occurrence is approximately 2.4 miles north of the project site along Wire Mountain at Marine Corps Base Camp Pendleton (CDFW 2020).
<i>Quercus engelmannii</i>	Engelmann oak	None/None/4.2/None	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/perennial deciduous tree/Mar–June/160–4,265	Absent. Engelmann oak would have been observed during the initial site visit. There are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).

Scientific Name	Common Name	Status (Federal/State/CRPR/ Oceanside Subarea Plan)	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range (feet amsl)	Potential to Occur
<i>Salvia munzii</i>	Munz's sage	None/None/2B.2/None	Chaparral, Coastal scrub/perennial evergreen shrub/Feb–Apr/375–3,495	Not expected to occur. The site is outside the species' known elevation range. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Selaginella cinerascens</i>	ashy spike-moss	None/None/4.1/None	Chaparral, coastal scrub/perennial rhizomatous herb/N.A./65–2,100	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. The closest known occurrence is 2.5 miles north of the project site within Marine Corps Base Camp Pendleton (CCH 2020).
<i>Senecio aphanactis</i>	chaparral ragwort	None/None/2B.2/None	Chaparral, cismontane woodland, coastal scrub; sometimes alkaline/annual herb/Jan–Apr(May)/45–2,625	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub and woodland present. The closest known CNDDDB occurrence is approximately 3.0 miles northwest of the project site near the mouth of the Santa Margarita River (CDFW 2020).
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	None/None/2B.2/None	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas; alkaline, mesic/perennial herb/Mar–June/45–5,020	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present; however, there are no alkaline soils on site. The closest known CNDDDB occurrence is less than 1.0 mile west of the project site in Oceanside, California (CDFW 2020).
<i>Stemodia durantifolia</i>	purple stemodia	None/None/2B.1/None	Sonoran desert scrub (often mesic, sandy)/perennial herb/(Jan)Apr, June, Aug–Oct, Dec/590–985	Not expected to occur. The site is outside the species' known elevation range, and there is no suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Stipa diegoensis</i>	San Diego County needle grass	None/None/4.2/None	Chaparral, coastal scrub; rocky, often mesic/perennial herb/Feb–June/30–2,625	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020; CCH 2020).
<i>Suaeda esteroa</i>	estuary seablite	None/None/1B.2/None	Marshes and swamps (coastal salt)/perennial herb/(May)July–Oct(Jan)/0–15	Not expected to occur. No suitable vegetation is present. The closest known CNDDDB occurrence is approximately 3.1 miles south of the project site near Agua Hedionda Lagoon (CDFW 2020).
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	None/None/1B.2/None	Chaparral, coastal scrub/perennial deciduous shrub/Apr–May/540–3,280	Not expected to occur. The site is outside the species' known elevation range. The closest known CNDDDB occurrence is approximately 4.9 miles northeast of the project site along slopes in San Luis Rey (CDFW 2020).
<i>Viguiera laciniata</i>	San Diego County viguiera	None/None/4.3/None	Chaparral, coastal scrub/perennial shrub/Feb–June(Aug)/195–2,460	Not expected to occur. This species was not detected during focused plant surveys. There is suitable coastal scrub present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).

Status Legend
Federal
FE: Federally listed as endangered
FT: Federally listed as threatened
State
SE: State listed as endangered
ST: State listed as threatened
CRPR: California Rare Plant Rank
1B: Plants rare, threatened, or endangered in California and elsewhere
2B: Plants rare, threatened, or endangered in California, but more common elsewhere
3: Plants about which more information is needed – a review list
4: Plants of limited distribution – a watch list
Threat Rank
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)
Oceanside Subarea Plan
Covered: Species covered under the Subarea Plan
Notes: CRPR = California Rare Plant Rank; amsl = above mean sea level; CNDDDB: California Natural Diversity Database; N.A. = not applicable.

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Appendix E

2019 Focused Coastal California Gnatcatcher Survey Report for the Proposed Ocean Creek Project

November 26, 2019

12064

U.S. Fish and Wildlife Service
Attention: Recovery Permit Coordinator
2177 Salk Avenue, No. 250
Carlsbad, California 92008

Subject: *2019 Focused Coastal California Gnatcatcher Survey Report for the Proposed Ocean Creek Project, County of San Diego, California*

Dear Recovery Permit Coordinator:

This letter report documents the results of three protocol-level focused surveys for the coastal California gnatcatcher (*Polioptila californica californica*) (CAGN) that were conducted for the proposed Ocean Creek Street Project (project), which is located on an approximately 27-acre area, by Dudek biologist Erin Bergman between July 31, 2019 and November 22, 2019. The surveys were conducted in areas of suitable coastal California gnatcatcher habitat. Due to the small size of the project area, the entire project area was surveyed.

The coastal California gnatcatcher is a federally listed threatened species and a California Department of Fish and Wildlife species of special concern. It is closely associated with coastal sage scrub habitat and, therefore, threatened primarily by loss, degradation, and fragmentation of this habitat. Coastal California gnatcatcher typically occurs below 820 feet above mean sea level within 22 miles of the coast. Studies have suggested that coastal California gnatcatcher avoid nesting on very steep slopes (greater than 40%) (Bontrager 1991). Coastal California gnatcatcher is also impacted by brown-headed cowbird (*Molothrus ater*) nest parasitism (Braden et al. 1997).

Project Location and Existing Conditions

The approximately 27-acre project site is located south of the intersection of Crouch Street and Skylark Drive in the City of Oceanside, California (City). The proposed project area is bounded by Loma Alta Creek, the Crouch Street light rail station, and undeveloped disturbed land to the north; private residences off Grandview Street to the east; Grandview Street and private residences off Rue de la Montagne to the south; and commercial properties off Union Plaza Court to the west. The project site is located approximately 0.6 miles northeast of Interstate 5, 1 mile northwest of Highway 78, and 1.5 miles southeast of Highway 76 (Figure 1).

The site is located on the U.S. Geological Service (USGS) 7.5-minute San Luis Rey quadrangle map on Section 25; in Township 11 South; Range 5 West of the San Bernardino Base and Meridian. (Figure 1). The project area includes assessor's parcel numbers 151-270-50-00, 151-270-52-00, 151-270-53-00, and 151-270-56-00 within the City.

Elevations on site range from approximately 30 feet above mean sea level (amsl) to 190 feet amsl. Topography generally slopes from the northeast to the southwest. Some sections of the site are steep. Soil on site is classified as Las Flores loamy fine sand, made land, Carlsbad-Urban land complex, and Carlsbad gravely loamy sand (USDA 2019).

Vegetation Communities

Dudek mapped four vegetation communities and two land covers within the project site: Diegan coastal sage scrub, non-native grassland, eucalyptus woodland, non-native woodland, disturbed habitat, and urban/developed (Table 1).

The southern portion of the site generally consists of Diegan coastal sage scrub. The northern portion of the site generally consists of non-native grassland.

One plant community was identified within the project site as highly suitable coastal California gnatcatcher habitat: Diegan coastal sage scrub. However, all sections of the project area were surveyed. Other vegetation communities were not excluded from surveys because patches of the habitat either appeared to be used by the species or were so small that a coastal California gnatcatcher could be seen or heard while walking through the suitable habitat. Approximately 9.95 acres of coastal California gnatcatcher-suitable habitat was mapped on site in accordance with Holland (1986) and updated Oberbauer et al. (2008) as described in Table 1.

The remaining plant communities and land cover types identified on site that are not typically considered suitable coastal California gnatcatcher habitat and include non-native grassland, disturbed habitat, urban developed, non-native woodland and Eucalyptus woodland. The spatial distribution of plant communities and land covers on the site, as well as the route used to survey, are shown on Figures 2 and 3.

Table 1. Vegetation Communities and Land Covers

Vegetation/Land Cover Type	Acreage
Diegan coastal sage scrub	9.95
Non-native grassland	9.59
Disturbed habitat	6.63
Urban/developed	0.57
Non-native woodland	0.21
Eucalyptus woodland	0.11
Total	27.06

Diegan Coastal Sage Scrub

The location of Diegan coastal sage scrub is shown on Figure 3 and discussed herein. Approximately 9.95 acres of Diegan coastal sage scrub habitat occurs within the survey area. Diegan coastal sage scrub is a native plant community composed of a variety of soft, low, aromatic shrubs characteristically dominated by drought-deciduous species, such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*). It typically develops on south-facing slopes and other xeric locations (Holland 1986).

Coastal sage scrub is recognized as a sensitive plant community by local, state, and federal wildlife agencies. It supports a rich diversity of sensitive plants and animals, and it is estimated that it has been reduced by 75% to 80% of its historical coverage throughout Southern California. It is the focus of the current California Natural Community Conservation Planning program in Southern California.

Methods

Nine focused surveys for coastal California gnatcatcher were performed within suitable habitat between July 31, 2019, and November 22, 2019, by coastal California gnatcatcher-permitted biologist Erin Bergman (TE-53771B-0) according to the schedule in Table 2. The surveys were conducted following the currently accepted protocol of the U.S. Fish and Wildlife Service, *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Protocol* (USFWS 1997). Coastal California gnatcatchers were documented using a variety of features that helped distinguish individuals from one another in order to assist with determining the number of pairs/individuals. Some distinguishing features include male cap color (variation in the darkness of the black cap) and male cap thickness, width, and length. Coastal California gnatcatcher color patterns, unique markings, behaviors, pitch of call, and song variation were used to separate each observation.

Table 2. Survey Details and Conditions

Date	Time	Survey Effort (acres/hour)	Survey Conditions
7/31/2019	6:00 a.m.–11:59	3	64°F–83°F; 0%–80% cloud cover, 0–4 mile per hour winds
8/14/2019	6:00 a.m.–9:51	5	65°F–70°F; 0%–100% cloud cover; 0–6 mile per hour winds
8/28/2019	6:11 a.m.–10:53	4	61°F–85°F; 0%–80% cloud cover; 0–5 mile per hour winds
9/11/2019	6:04 a.m.–10:18	5	60°F–87°F; 0%–100% cloud cover; 0–5 mile per hour winds
9/25/2019	6:04 a.m.–11:06	5	59°F–73°F; 0%–100% cloud cover; 0–4 mile per hour winds
10/11/2019	6:30 a.m.–10:50	5	52°F–77°F; 0%–100% cloud cover; 0–4 mile per hour winds
10/25/2019	8:11 a.m.–11:16	5	58°F–76°F, 0%–100% cloud cover, 0–5 mile per hour winds
11/8/2019	8:10 a.m.–11:25	5	66°F–68°F, 0%–100% cloud cover, 0–5 mile per hour winds
11/22/2019	7:28 a.m.–11:40	5	49°F–70°F, 0%–100% cloud cover, 0–4 mile per hour winds

Non-coastal California gnatcatcher-permitted biologists Kathleen Dayton and Shana Carey accompanied the coastal California gnatcatcher-permitted biologist as passive observers, which included sitting quietly with little or no movement for prolonged periods while studying coastal California gnatcatcher movements with binoculars and carefully listening to vocalizations. Only the coastal California gnatcatcher-permitted biologist used audio-playback techniques to encourage coastal California gnatcatcher responses.

Survey routes for site visits completely covered the areas of suitable coastal California gnatcatcher habitat on site, as shown on Figure 2. Appropriate birding binoculars (8 x 42) were used to aid in detecting and identifying bird species. A recording of coastal California gnatcatcher vocalizations was used to elicit a response from the species. The recording was played approximately every 50 to 100 feet, and when a coastal California gnatcatcher was detected, the playing of the recording ceased to avoid harassment. A 100-scale (1 inch = 100 feet) aerial photograph of the study area overlaid with the vegetation and site boundaries was used to map any coastal California gnatcatcher detected. Weather conditions, time of day, and season were within protocol limits and appropriate for the detection of gnatcatchers, as shown in Table 2.

Results

During the survey efforts, two separate pairs of coastal California gnatcatcher were detected and distinctly identified during the breeding season (i.e., February 15–August 30). Coastal California gnatcatcher observations included one distinct pair and one distinct pair with two juveniles. The following discussion provides the description of the location and method of detection for each direct observation. The observations were assigned numbers, and they are described below as a pair, or pair with juveniles (Figure 3). Since it was still breeding season for the first part of the survey, the males of each pair had different enough plumage to be identified easily and mapped separately with confidence.

Pair 1 with Juveniles

Near the western section of the project area, a pair of coastal California gnatcatchers were found during all 9 of the surveys. Pair 1 was found both visually and/or acoustically on all 9 surveys. On July 31, 2019, the male of this pair had a very distinctive narrow dark black cap. Two juveniles were seen really close to pair 1 on the July 31, 2019, August 14, 2019 and August 28, 2019 survey. However, on later surveys they had moved away from pair 1. Pair 1 coastal California gnatcatchers were heard on surveys after October and at least 1 bird was observed each time. Therefore, pair 1 likely has an established territory in this western section of the project area.

Pair 2

In the southeastern section of the project area, a pair of coastal California gnatcatchers were found during all 9 of the surveys. Pair 2 was found visually and/or acoustically on all 9 of the surveys. On July 31, 2019, August 14, 2019 and August 28, 2019, the male of this pair had a distinctly light black cap that was particularly light in color and faded as the season finalized. No nests or juveniles were found with pair 2 at any time during the survey dates. Pair 2 stayed close to this location and was easily observed every survey without playing the “mew” call. Pair 2 likely has an established territory in this southeastern section of the project area.

Locations of Pair 1 and Pair 2 are shown in figure 3.

In total, 38 wildlife species were recorded during the survey efforts and are included in Appendix A.

Dudek certifies that the information in this survey report and attached exhibits fully and accurately represents the work conducted by the coastal California gnatcatcher-permitted biologist who conducted this focused survey. Please feel free to contact Erin Bergman at ebergman@dudek.com if you have any questions regarding the contents of this report.

Sincerely,


Erin Bergman

Atts: Figure 1: Regional/Vicinity
Figure 2: Survey Routes
Figure 3: California Gnatcatcher Locations
Appendix A: Wildlife Species Observed During the 2019 Proposed Ocean Creek Coastal California Gnatcatcher Surveys

cc: Erin Bergman, Dudek

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Appendix A

Wildlife Species Observed During the
2019 Ocean Creek Coastal California Gnatcatcher Surveys

BIRD

BLACKBIRDS, ORIOLES & ALLIES

ICTERIDAE—BLACKBIRDS

Icterus cucullatus—hooded oriole

BUSHTITS

AEGITHALIDAE—LONG-TAILED TITS & BUSHTITS

Psaltirparus minimus—bushtit

CARDINALS, GROSBEAKS & ALLIES

CARDINALIDAE—CARDINALS & ALLIES

Pheucticus melanocephalus—black-headed grosbeak

FALCONS

FALCONIDAE—CARACARAS & FALCONS

Falco sparverius—American kestrel

FINCHES

FRINGILLIDAE—FRINGILLINE & CARDUELINE FINCHES & ALLIES

Haemorhous mexicanus—house finch

Spinus psaltria—lesser goldfinch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Sayornis nigricans—black phoebe

Sayornis saya—Say's phoebe

Tyrannus verticalis—western kingbird

Tyrannus vociferans—Cassin's kingbird

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, & ALLIES

Accipiter cooperii—Cooper's hawk

Buteo jamaicensis—red-tailed hawk

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird

Selasphorus sp.—Allen's/rufous hummingbird

JAYS, MAGPIES & CROWS

CORVIDAE—CROWS & JAYS

Corvus brachyrhynchos—American crow

Corvus corax—common raven

MOCKINGBIRDS & THRASHERS

MIMIDAE—MOCKINGBIRDS & THRASHERS

Toxostoma redivivum—California thrasher

OLD WORLD SPARROWS

PASSERIDAE—OLD WORLD SPARROWS

Passer domesticus—house sparrow*

OLD WORLD WARBLERS & GNATCATCHERS

SYLVIIDAE—SYLVIID WARBLERS

Polioptila californica californica—coastal California gnatcatcher

PIGEONS & DOVES

COLUMBIDAE—PIGEONS & DOVES

Zenaida macroura—mourning dove

Columba livia—rock pigeon (rock dove)*

ROADRUNNERS & CUCKOOS

CUCULIDAE—CUCKOOS, ROADRUNNERS, & ANIS

Geococcyx californianus—greater roadrunner

WOOD WARBLERS & ALLIES

PARULIDAE—WOOD-WARBLERS

Oreothlypis celata—orange-crowned warbler

Setophaga coronata—yellow-rumped warbler

WRENS

TROGLODYTIDAE—WRENS

Thryomanes bewickii—Bewick's wren

WRENTITS

TIMALIIDAE—BABBLERS

Chamaea fasciata—wrentit

NEW WORLD SPARROWS

PASSERELLIDAE—NEW WORLD SPARROWS

Melospiza melodia—song sparrow

Melospiza crissalis—California towhee

Pipilo maculatus—spotted towhee

INVERTEBRATE

BUTTERFLIES

LYCAENIDAE—BLUES, HAIRSTREAKS, & COPPERS

Leptotes marina—marine blue

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Nymphalis antiopa—mourning cloak

Vanessa cardui—painted lady

PIERIDAE—WHITES & SULFURS

Phoebis sennae—cloudless sulphur

Pieris rapae—cabbage white

ANTS

FORMICIDAE—ANTS

Linepithema humile—Argentine ant*

MAMMAL

HARES & RABBITS

LEPORIDAE—HARES & RABBITS

Sylvilagus audubonii—desert cottontail

SQUIRRELS

SCIURIDAE—SQUIRRELS

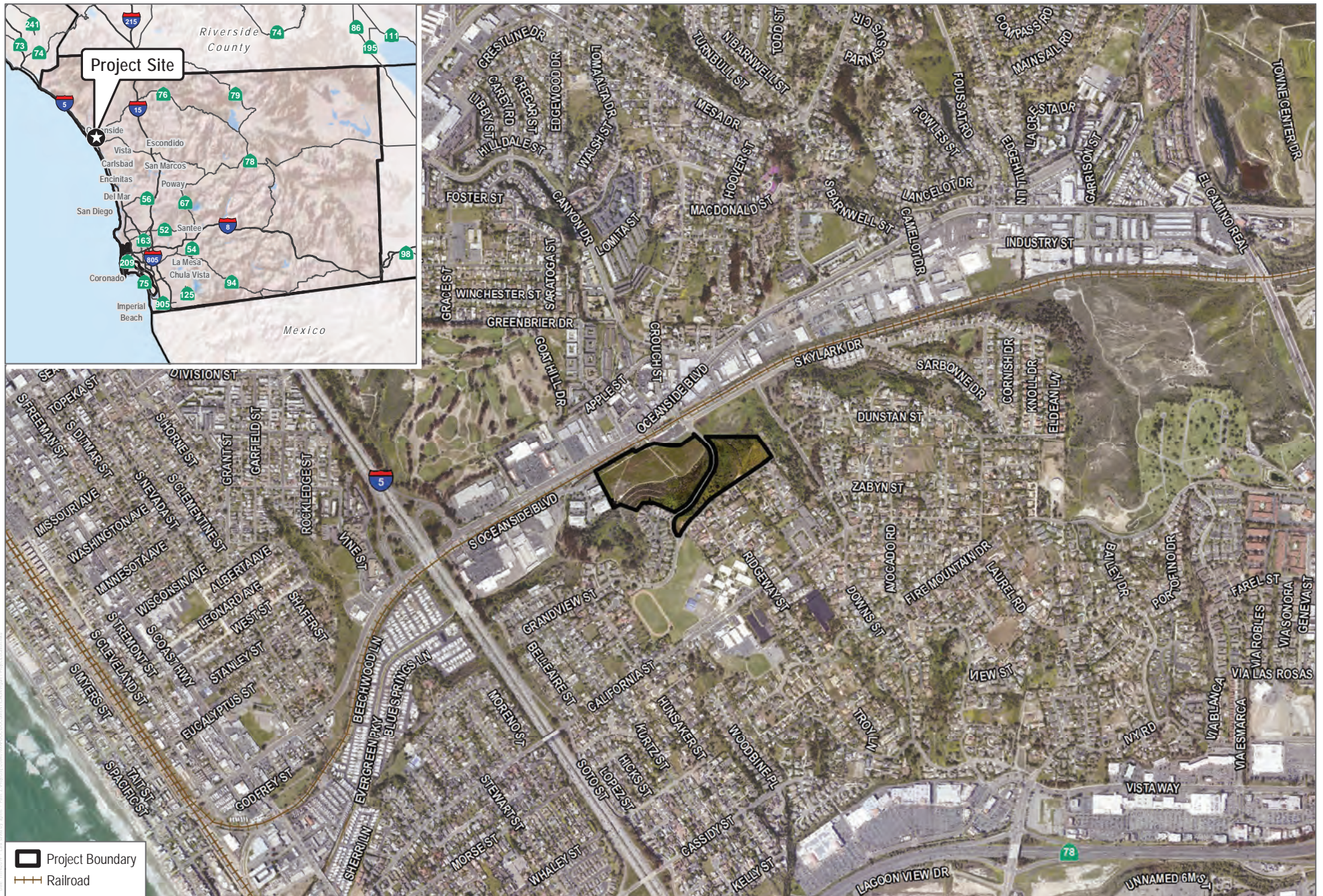
Spermophilus (Otospermophilus) beecheyi—California ground squirrel

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard



SOURCE: SANGIS 2017, 2019

FIGURE 1

Project Location

California Gnatcatcher Report for the Ocean Creek Town Center Project in Oceanside, California



SOURCE: SANGIS 2017, 2019



SOURCE: SANGIS 2017, 2019

DUDEK



0 100 200 Feet

FIGURE 3

California Gnatcatcher Locations

California Gnatcatcher Report for the Ocean Creek Town Center Project in Oceanside, California

Appendix F

2020 Least Bell's Vireo Focused Survey Report

September 9, 2020

12064

U.S. Fish and Wildlife Service
Attn: Stacey Love, Recovery Permit Coordinator
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

Subject: *Focused Least Bell's Vireo Survey Report for the Jefferson Oceanside Project, City of Oceanside, San Diego County, California*

Dear Recovery Permit Coordinator:

This report documents the results of eight protocol-level presence/absence surveys for the state- and federally listed endangered least Bell's vireo (*Vireo bellii pusillus*), conducted for the Jefferson Oceanside Project (project). The focused surveys included 0.18 acres of potentially suitable least Bell's vireo habitat within the approximately 28-acre project site.

The least Bell's vireo are closely associated with riparian habitats, especially densely vegetated willow scrub and riparian forest vegetation. These species are threatened primarily by loss, degradation, and fragmentation of riparian habitats. They also are impacted by brown-headed cowbird (*Molothrus ater*) nest parasitism.

1 Location and Existing Conditions

The project site is located south of the intersection of Crouch Street and Skylark Drive in the City of Oceanside (City) on Assessor's Parcel Numbers 151-270-50-00, 151-270-52-00, 151-270-53-00, and 151-270-56-00.

The project site is bounded by Loma Alta Creek, the Crouch Street light rail station, and undeveloped disturbed land to the north; private residences off Grandview Street to the east; Grandview Street and private residences off Rue de la Montagne to the south; and commercial properties off Union Plaza Court to the west. The project site is located approximately 0.6 miles northeast of Interstate 5, 1 mile northwest of Highway 78, and 1.5 miles southeast of Highway 76 (Figure 1). The site is located on the U.S. Geological Service 7.5-minute San Luis Rey quadrangle map on Section 25; in Township 11 South; Range 5 West of the San Bernardino Base and Meridian. The approximate center of the project site is at 33.193545, -117.353033 (decimal degrees).

2 Vegetation Communities

Vegetation communities and land covers were mapped using the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) as modified by the County and noted in *Vegetation Communities of San Diego County* (Oberbauer et al. 2008). Based on species composition and general physiognomy, one vegetation community, disturbed southern willow scrub, totaling approximately 0.18 acres, was identified within the project area as potentially suitable habitat for the least Bell's vireo (Figure 2).

Southern Willow Scrub (Disturbed)

The southern slope of Loma Alta Creek is located within the project site. It is comprised of scattered arroyo willow (*Salix lasiolepis*), mulefat (*Baccharis salicifolia* ssp. *salicifolia*), coyotebrush (*Baccharis pilularis* ssp. *consanguinea*), and Canadian horsetail (*Erigeron canadensis*); however, hottentot fig (*Carpobrotus edulis*) and scattered castorbean (*Ricinus communis*) make up more than 25% absolute cover on this slope. It is mapped as a "disturbed" form of southern willow scrub based on the high percent cover of non-native species combined with the low percent cover of native riparian species.

On site, this vegetation community is located along the northern boundary of the western side of the project site (Figure 2).

3 Methods

Suitable habitat areas within the project area were surveyed eight times for vireo. Dudek wildlife biologists Anita Hayworth, Patricia Schuyler, Stuart Fraser, Shana Carey, and Jeremy Sison conducted vireo surveys (Table 1). Focused surveys for these species were initiated on April 30, 2020, and were completed on July 25, 2020.

Table 1. Least Bell's Vireo Survey Schedule and Conditions

Survey Pass #	Date	Biologist	Hours	Conditions (temperature, cloud cover, wind speed)
1-LBVI	04/30/2020	Anita Hayworth	6:55 a.m.–8:05 a.m.	64 °F; 100% cc; 0-1 mph wind
2-LBVI	05/11/2020	Patricia Schuyler	6:49 a.m.–7:30 a.m.	61 °F–64 °F; 20%–90% cc; 0–1 mph wind
3-LBVI	05/21/2020	Anita Hayworth Stuart Fraser	7:29 a.m.– 8:34 a.m.	56 °F–61 °F; 20% cc; 1–3 mph wind
4-LBVI	06/01/2020	Shana Carey Jeremy Sison	7:00 a.m.–8:00 a.m.	58 °F–61 °F; 20%–50% cc; 1–3 mph wind
5-LBVI	06/12/2020	Patricia Schuyler Shana Carey	6:00 a.m.–6:45 a.m.	61 °F; 90-100% cc; 0–2 mph wind
6-LBVI	06/27/2020	Shana Carey	6:50 a.m.–7:30 a.m.	67 °F; 100% cc; 0–2 mph wind
7-LBVI	07/11/2020	Shana Carey	7:30 a.m.–8:30 a.m.	74 °F–76 °F; 0%–10% cc; 2–5 mph wind
8-LBVI	07/25/2020	Shana Carey	7:15 a.m.– 8:15 a.m.	66 °F–67 °F; 100% cc; 2–10 mph wind

Notes: LBVI = least Bell's vireo; cc = cloud cover; mph = miles per hour; °F = degrees Fahrenheit.

The route was arranged to cover all suitable habitat on site (as depicted on Figure 2). A vegetation map (1:2,400 scale; 1 inch=200 feet) of the project area was available to record any detected vireo. Binoculars (10×50) were used to aid in detecting and identifying wildlife species.

A Section 10(a)(1)(A) permit is not required to perform presence/absence surveys for vireo. The eight surveys for vireo followed the currently accepted *Least Bell's Vireo Survey Guidelines* (USFWS 2001), which states that a minimum of eight survey visits should be made to all riparian areas and any other potential vireo habitats

between April 10 and July 31. The site visits are required to be conducted at least 10 days apart to maximize the detection of early and late arrivals, females, non-vocal birds, and nesting pairs. Taped playback of vireo vocalizations were not used during the surveys. Surveys were conducted between dawn and noon and were not conducted during periods of excessive or abnormal cold, heat, wind, rain, or other inclement weather.

Weather conditions, time of day, and season were appropriate for the detection of vireo (Table 1).

4 Results

No least Bell's vireos were detected within the project area during the 2020 survey effort. A total of 53 wildlife species including 44 bird species were detected in the project area during focused surveys of the site and are included in Attachment A. Common bird species observed include Anna's hummingbird (*Calypte anna*), house finches (*Carpodacus mexicanus*), lesser goldfinches (*Spinus psaltria*), song sparrows (*Melospiza melodia*), and common yellowthroats (*Geothlypis trichas*). No brown-headed cowbirds, were observed on site. Representative photos of the habitat surveyed on site are included in Figure 3.

Please contact me at 760.420.3336 if there are any questions regarding this survey report.

I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

Sincerely,



Dudek

Callie Amoaku

Senior Wildlife Biologist

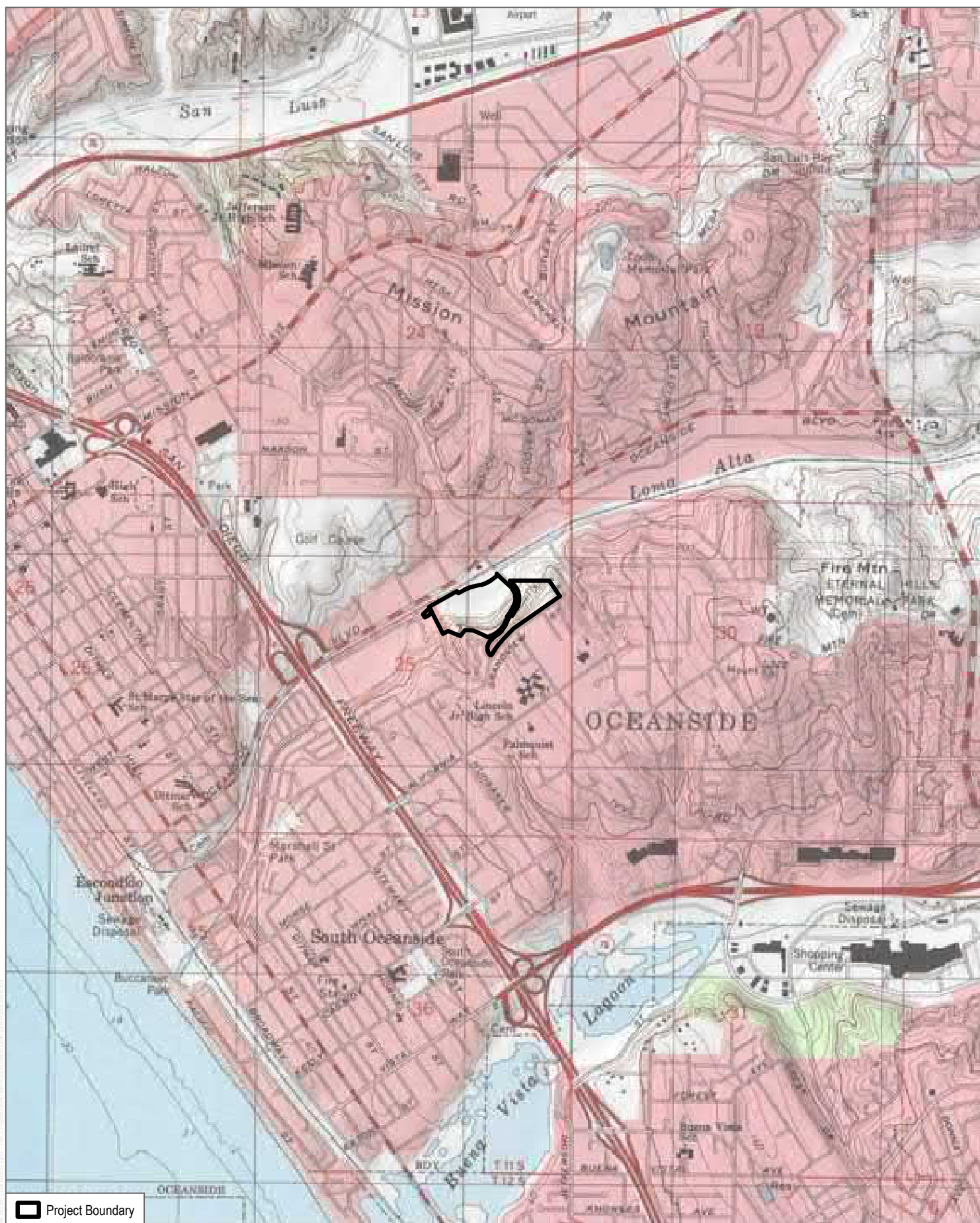
Att.: Figure 1, Project Location
Figure 2, Survey Route
Figure 3, Overview Photos of Habitat Surveyed
Attachment A, Wildlife Species Observed

References

Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game. October 1986.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County*. Based on *Preliminary Descriptions of the Terrestrial Natural Communities of California*, by R.F. Holland, October 1986. March 2008.

USFWS (U.S. Fish and Wildlife Service). 2001. *Least Bell's Vireo Survey Guidelines*. January 19, 2001.



SOURCE: USGS 7.5-Minute Series San Luis Rey Quadrangle

FIGURE 1

Project Location



SOURCE: SANGIS 2017, 2020

FIGURE 2
Survey Area



Photo 1: Representative photo of riparian habitat within project site. Facing NE.



Photo 2: Representative photo of riparian habitat within project site. Facing NW.



Photo 3: Representative photo of riparian habitat within project site. Facing NW.



Photo 4: Representative photo of riparian habitat within project site. Facing NE.

FIGURE 3

Overview Photos of Habitat Surveyed

Focused Least Bell's Vireo Survey Report for the Jefferson Oceanside Project



Attachment A

Wildlife Species Observed

BIRDS

BLACKBIRDS, ORIOLES AND ALLIES

ICTERIDAE—BLACKBIRDS

Icterus cucullatus—hooded oriole

BUSHTITS

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

Psaltiriparus minimus—bushtit

CARDINALS, GROSBEAKS AND ALLIES

CARDINALIDAE—CARDINALS AND ALLIES

Pheucticus melanocephalus—black-headed grosbeak

FALCONS

FALCONIDAE—CARACARAS AND FALCONS

Falco sparverius—American kestrel

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus—house finch

Spinus psaltria—lesser goldfinch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Sayornis nigricans—black phoebe

Sayornis saya—Say's phoebe

Tyrannus verticalis—western kingbird

Tyrannus vociferans—Cassin's kingbird

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

Accipiter cooperii—Cooper's hawk

Buteo jamaicensis—red-tailed hawk

HERONS AND BITTERNS

ARDEIDAE—HERONS, BITTERNS, AND ALLIES

Ardea herodias—great blue heron

Butorides virescens—green heron

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird

Selasphorus sasin—Allen's hummingbird

Selasphorus sp.—Allen's/rufous hummingbird

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Corvus brachyrhynchos—American crow

Corvus corax—common raven

MOCKINGBIRDS AND THRASHERS

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Toxostoma redivivum—California thrasher

OLD WORLD SPARROWS

PASSERIDAE—OLD WORLD SPARROWS

* *Passer domesticus*—house sparrow

OLD WORLD WARBLERS AND GNATCATCHERS

POLIOPTILIDAE—GNATCATCHERS

Poliioptila californica californica—coastal California gnatcatcher

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

Columba livia—rock pigeon (rock dove)*

ROADRUNNERS AND CUCKOOS

CUCULIDAE—CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus—greater roadrunner

STARLINGS AND ALLIES

STURNIDAE—STARLINGS

Sturnus vulgaris—European starling*

SWALLOWS

HIRUNDINIDAE—SWALLOWS

Petrochelidon pyrrhonota—cliff swallow

Stelgidopteryx serripennis—northern rough-winged swallow

SWIFTS

APODIDAE—SWIFTS

Aeronautes saxatalis—white-throated swift

TERNS AND GULLS

LARIDAE—GULLS, TERNS, AND SKIMMERS

Larus heermanni—Heermann's gull

Larus occidentalis—western gull

WATERFOWL

ANATIDAE—DUCKS, GEESE, AND SWANS

Anas platyrhynchos—mallard

WOOD WARBLERS AND ALLIES

PARULIDAE—WOOD-WARBLERS

Geothlypis trichas—common yellowthroat

Setophaga coronata—yellow-rumped warbler

Setophaga petechia—yellow warbler

Leiothlypis celata—orange-crowned warbler

WOODPECKERS

PICIDAE—WOODPECKERS AND ALLIES

Dryobates nuttallii—Nuttall's woodpecker

WRENS

TROGLODYTIDAE—WRENS

Troglodytes aedon—house wren

Thryomanes bewickii—Bewick's wren

WAXBILLS

ESTRILDIDAE—WAXBILLS

* *Lonchura punctulata*—scaly-breasted munia

NEW WORLD SPARROWS

PASSERELLIDAE—NEW WORLD SPARROWS

Melospiza melodia—song sparrow

Melospiza crissalis—California towhee

Pipilo maculatus—spotted towhee

TYPICAL WARBLERS, PARROTBILLS, WRENTIT

SYLVIIDAE—SYLVIID WARBLERS

Chamaea fasciata—wrentit

INVERTEBRATES

BUTTERFLIES

LYCAENIDAE—BLUES, HAIRSTREAKS, AND COPPERS

Leptotes marina—marine blue

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Nymphalis antiopa—mourning cloak

Vanessa cardui—painted lady

PIERIDAE—WHITES AND SULFURS

Phoebis sennae—cloudless sulphur

Pieris rapae—cabbage white

ANTS

FORMICIDAE—ANTS

- * *Linepithema humile*—Argentine ant

MAMMALS

HARES AND RABBITS

LEPORIDAE—HARES AND RABBITS

- Sylvilagus audubonii*—desert cottontail

SQUIRRELS

SCIURIDAE—SQUIRRELS

- Spermophilus (Otospermophilus) beecheyi*—California ground squirrel

REPTILES

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

- Sceloporus occidentalis*—western fence lizard

- * Signifies introduced (non-native) species

Appendix G1

Special-Status Wildlife Species Detected or
Potentially Occurring within the Biological Study Area

Scientific Name	Common Name	Status (Federal/State/Oceanside Subarea Plan)	Habitat	Potential to Occur
<i>Reptiles</i>				
<i>Anniella stebbinsi</i>	Southern California legless lizard	None/SSC/None	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils.	High potential to occur. There is suitable scrub and woodland habitat present. The closest known CNDDDB occurrence is approximately 1.4 miles south of the project site within the Buena Vista Lagoon Ecological Reserve (CDFW 2020).
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	None/WL/Covered	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood.	High potential to occur. There is suitable coastal scrub habitat present. The closest known CNDDDB occurrence is approximately 4.2 miles north of the project site along a ridge bordering Marine Corps Base Camp Pendleton (CDFW 2020).
<i>Aspidoscelis tigris stejnegeri</i>	San Diegan tiger whiptail	None/SSC/None	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	High potential to occur in coastal scrub. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Salvadora hexalepis virgultea</i>	coast patch-nosed snake	None/SSC/None	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites.	Moderate potential to occur. There is suitable shrubby vegetation present. However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Birds</i>				
<i>Accipiter cooperii</i> (nesting)	Cooper’s hawk	None/WL/Covered	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water.	Moderate potential to nest in the non-native woodland in the eastern portion of the site. Potential to forage over the entire site. There are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow	None/WL/Covered	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches.	High potential to occur. There is suitable coastal scrub habitat present. The closest known CNDDDB occurrence is approximately 1.2 miles northwest of the project site within the vicinity of Lawrence Canyon (CDFW 2020).
<i>Artemisiospiza belli belli</i>	Bell’s sage sparrow	BCC/WL/Covered	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in denser patches but uses more open habitat in winter.	Moderate potential to forage. There is suitable coastal scrub habitat present; however, the site is disturbed and fragmented. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Polioptila californica californica</i>	coastal California gnatcatcher	FT/SSC/Covered	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level.	Present within the study area in 2019. Two pairs of coastal California gnatcatcher were observed during the breeding season (i.e., February 15–August 30).

Scientific Name	Common Name	Status (Federal/State/Oceanside Subarea Plan)	Habitat	Potential to Occur
<i>Mammals</i>				
<i>Antrozous pallidus</i>	pallid bat	None/SSC/None	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees.	Moderate potential to roost on site in the non-native woodland on the eastern side of the project site. The closest known CNDDDB occurrence is approximately 3.0 miles northeast of the project site at the Mission San Luis Rey (CDFW 2020).
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	None/SSC/None	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level.	Moderate potential to occur in the coastal sage scrub and grassland edge. This species is more commonly found in chaparral, which does not occur on site. There are two occurrences in the San Diego Mammal Atlas east of the project site (Tremor et al. 2017). However, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/SSC/Covered	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland.	Moderate potential to occur along the non-native grassland/coastal sage scrub ecotone. The site lacks rocky areas preferred by this species, particularly in the scrub habitat west of Crouch Street. The closest known CNDDDB occurrence is less than 1 mile east of the project site within Eternal Hills Memorial Park (CDFW 2020) and near the Buena Vista Lagoon approximately 1.5 miles southwest of the site (Tremor et al. 2017).
<i>Lasiurus cinereus</i>	hoary bat	None/None/None	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes.	Moderate potential to roost on site in the non-native woodland on the eastern side of the project site. There are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/SSC/None	Coastal scrub, desert scrub, chaparral, cacti, rocky areas.	Moderate potential to occur in the coastal sage scrub. The closest known CNDDDB occurrence is approximately 4.9 miles south of the project site near Palomar Airport (CDFW 2020).

Status Legend
Federal
FT: Federally threatened
BCC: U.S. Fish and Wildlife Service birds of conservation concern
State
SSC: California species of special concern
WL: California Department of Fish and Wildlife watch list species
Oceanside Subarea Plan
Covered: Species covered under the Subarea Plan.
Notes: CNDDDB = California Natural Diversity Database.

References

CDFW (California Department of Fish and Wildlife). 2020. California Natural Diversity Database (CNDDDB). RareFind, Version 5. (Commercial Subscription). Sacramento: CDFW, Biogeographic Data Branch. Accessed January 2020.
<https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>.

Tremor, S., D. Stokes, W. Spencer, J. Diffendorfer, H. Thomas, S. Chivers, and P. Unitt. 2017. *San Diego County Mammal Atlas*. San Diego Natural History Museum. December 2017.

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Appendix G2

Special-Status Wildlife Species with Low Potential and
Not Expected to Occur within the Biological Study Area

Scientific Name	Common Name	Status (Federal/State/Oceanside Subarea Plan)	Habitat	Potential to Occur
Amphibians				
<i>Anaxyrus californicus</i>	arroyo toad	FE/SSC/Covered	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral, and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering.	Not expected to occur. The site is outside the species’ known geographic range, and there is no suitable vegetation present. The closest known CNDDB and USFWS occurrence is 4.6 miles north of the project site along the north side of Ysidora Basin (CDFW 2020; USFWS 2020).
<i>Spea hammondi</i>	western spadefoot	None/SSC/Covered	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture.	Low potential to occur. Breeding sites include vernal pools and other temporary rain pools, cattle tanks, and occasionally in pools of intermittent streams. Loma Alta Creek adjacent to the site is mapped as intermittent (USGS 2020) but based on aerial review appears to have water year-round. Since it is a confined channel that does not overflow into the adjacent grassland or provide breeding pools, it is unlikely to provide breeding habitat for western spadefoot. The closest known CNDDB occurrence is approximately 2.1 miles north of the project site near Wire Mountain at Marine Corps Base Camp Pendleton (CDFW 2020).
Reptiles				
<i>Actinemys pallida</i>	southwestern pond turtle	None/None/Covered	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter.	Not expected to occur. The site is outside the species’ known geographic range, and there is no suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Arizona elegans occidentalis</i>	California glossy snake	None/SSC/None	Commonly occurs in desert regions throughout Southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas.	Low potential to occur. The study area is surrounded by urban development on all sides. The closest known CNDDB occurrence overlaps the project site; however, it was collected in the 1890s, and based on the level of urbanization, it likely no longer exists. Additionally, the occurrence is mapped to a general location between Carlsbad and Oceanside and the exact location is unknown (CDFW 2020).
<i>Crotalus ruber</i>	red diamond rattlesnake	None/SSC/None	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats.	Low potential to occur. The study area is disturbed with foot traffic and itinerant encampments, which can often lead to people removing rattlesnakes from the area. The closest known CNDDB occurrence is approximately 1.2 miles northwest of the project site within Lawrence Canyon (CDFW 2020).
<i>Phrynosoma blainvillii</i>	Blainville’s horned lizard	None/SSC/None	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Low potential to occur. While there is coastal scrub habitat present, the site is likely too surrounded by urbanization and disconnected from populations for Blainville’s horned lizard to occur. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Thamnophis hammondi</i>	two-striped gartersnake	None/SSC/None	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools.	Not expected to occur. No suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Thamnophis sirtalis</i> ssp. (Southern California coastal plain from Ventura County to San Diego County, and from sea level to about 850 meters above mean sea level)	south coast garter snake	None/SSC/None	Marsh and upland habitats near permanent water and riparian vegetation.	Not expected to occur. The site is outside the species’ known geographic range, and there is no suitable vegetation present. The closest known CNDDB occurrence is approximately 2.1 miles north of the project site along San Luis Rey River (CDFW 2020).
Birds				
<i>Agelaius tricolor</i> (nesting colony)	tricolored blackbird	BCC/SSC, ST/None	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry (<i>Rubus armeniacus</i>); forages in grasslands, woodland, and agriculture.	Not expected to occur. No suitable nesting vegetation is present. The closest known CNDDB occurrence is approximately 2.0 miles north of the project site along the San Luis Rey River in the vicinity of Whelan Lake (CDFW 2020).
<i>Aquila chrysaetos</i> (nesting and wintering)	golden eagle	BCC/FP, WL/Covered	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open	Not expected to occur. No suitable vegetation is present. The project site is too urbanized for this species. The closest known CNDDB occurrence is

Scientific Name	Common Name	Status (Federal/State/ Oceanside Subarea Plan)	Habitat	Potential to Occur
			desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats.	approximately 3.9 miles north of the project site along the Ysidora cliffs west of the Santa Margarita River (CDFW 2020).
<i>Buteo swainsoni</i> (nesting)	Swainson’s hawk	BCC/ST/None	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture.	Not expected to occur. No suitable vegetation is present. The closest known CNDDDB occurrence is approximately 2.0 miles northeast of the project site in San Luis Rey (CDFW 2020).
<i>Campylorhynchus brunneicapillus sandiegensis</i> (San Diego and Orange Counties only)	coastal cactus wren	BCC/SSC/None	Southern cactus scrub patches.	Not expected to occur. No cactus or succulent plant species occur in enough cover to form cactus scrub communities on site. The closest known CNDDDB occurrence is approximately 3.1 miles north of the project site on Wire Mountain within Marine Corps Base Camp Pendleton (CDFW 2020).
<i>Charadrius alexandrinus nivosus</i> (nesting)	western snowy plover	FT, BCC/SSC/Covered	On coasts, nests on sandy marine and estuarine shores; in the interior, nests on sandy, barren, or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds.	Not expected to occur. No suitable habitat is present. The closest known occurrence is a CNDDDB record approximately 0.9 miles south of the project site within Buena Vista Lagoon (CDFW 2020; USFWS 2020).
<i>Circus hudsonius</i> (nesting)	northern harrier	None/SSC/None	Nests in open wetlands (marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes); also in drier habitats (grassland and grain fields); forages in grassland, scrubs, rangelands, emergent wetlands, and other open habitats.	Not expected to nest on site due to the proximity to urban areas. Potential to forage on site. The closest known CNDDDB occurrence approximately is 3.4 miles north of the project site within Ysidora flats in Marine Corps Base Camp Pendleton (CDFW 2020).
<i>Coccyzus americanus occidentalis</i> (nesting)	western yellow-billed cuckoo	FT, BCC/SE/None	Nests in dense, wide riparian woodlands and forest with well-developed understories.	Not expected to occur. No suitable vegetation is present. The closest known USFWS occurrence is 3.5 miles northeast of the project site along San Luis Rey River (USFWS 2020).
<i>Elanus leucurus</i> (nesting)	white-tailed kite	None/FP/None	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands.	Low potential to nest on site due to lack of dense woodland habitat. There are some non-native trees along the western portion of the site, and scattered trees along Loma Alta Creek off site. No white-tailed kites were observed during the 2019 surveys, and the site is likely too urbanized for this species. The closest known CNDDDB occurrence is approximately 2.7 miles north of the project site within Tuley Canyon (CDFW 2020).
<i>Empidonax traillii extimus</i> (nesting)	southwestern willow flycatcher	FE/SE/Covered	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration.	Not expected to occur. No suitable vegetation is present. The closest known occurrence is a CNDDDB record approximately 1.3 miles southeast of the project site along Buena Vista Creek (CDFW 2020; USFWS 2020). While Loma Alta Creek has some scattered riparian trees, it does not provide the dense riparian habitat required by this species.
<i>Falco peregrinus anatum</i> (nesting)	American peregrine falcon	FD, BCC/FP, SD/Covered	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present.	Not expected to nest on site due to lack of suitable nesting habitat. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Icteria virens</i> (nesting)	yellow-breasted chat	None/SSC/Covered	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush.	Not expected to occur on site. There are no dense riparian woodlands on site. Potential to occur in the adjacent riparian habitat in Loma Alta Creek. The closest known CNDDDB occurrence is approximately 1.3 miles northeast of the project site along Garrison Creek (CDFW 2020).
<i>Ixobrychus exilis</i> (nesting)	least bittern	BCC/SSC/None	Nests in freshwater and brackish marshes with dense, tall growth of aquatic and semi-aquatic vegetation.	Not expected to occur. No suitable vegetation is present. Additionally, there are no known occurrences within 5 miles of the project site (CDFW 2020).
<i>Laterallus jamaicensis coturniculus</i>	California black rail	BCC/FP, ST/None	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations.	Not expected to occur. The site is outside the species’ known geographic range, and there is no suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Pandion haliaetus</i> (nesting)	osprey	None/WL/Covered	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast.	Not expected to nest on site due to lack of suitable nesting habitat. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Passerculus sandwichensis beldingi</i>	Belding’s savannah sparrow	None/SE/Covered	Nests and forages in coastal saltmarsh dominated by pickleweed (<i>Salicornia</i> spp.).	Not expected to occur. No suitable coastal saltmarsh vegetation is present. The closest known CNDDDB occurrence is approximately 0.9 miles south of the project site within Buena Vista Lagoon (CDFW 2020).

Scientific Name	Common Name	Status (Federal/State/ Oceanside Subarea Plan)	Habitat	Potential to Occur
<i>Passerculus sandwichensis rostratus</i> (wintering)	large-billed savannah sparrow	None/SSC/Covered	Nests and forages in open, low saltmarsh vegetation, including low halophytic scrub.	Not expected to occur. No suitable vegetation is present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Pelecanus occidentalis californicus</i> (nesting colonies and communal roosts)	California brown pelican	FD/FP, SD/Covered	Forages in warm coastal marine and estuarine environments; in California, nests on dry, rocky offshore islands.	Not expected to occur. No suitable vegetation is present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Plegadis chihi</i> (nesting colony)	white-faced ibis	None/WL/Covered	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields, and estuaries.	Not expected to occur. No suitable vegetation is present. The closest known CNDDDB occurrence is approximately 0.9 miles south of the project site near Buena Vista Lagoon (CDFW 2020).
<i>Rallus obsoletus levipes</i>	Ridgway’s rail	FE/SE, FP/Covered	Coastal wetlands, brackish areas, coastal saline emergent wetlands.	Not expected to occur. No suitable vegetation is present. The closest known occurrence is a CNDDDB record approximately 0.9 miles south of the project site within Buena Vista Lagoon (CDFW 2020; USFWS 2020).
<i>Riparia riparia</i> (nesting)	bank swallow	None/ST/None	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration.	Not expected to nest on site due to lack of suitable nesting habitat. The closest known CNDDDB occurrence is less than 1 mile west of the project site along the coast in Oceanside, California (CDFW 2020).
<i>Setophaga petechia</i> (nesting)	yellow warbler	BCC/SSC/None	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats.	Not expected to occur on site. There are no riparian woodlands on site. Potential to occur in the adjacent riparian habitat in Loma Alta Creek. The closest known CNDDDB occurrence is approximately 1.2 miles northeast of the project site along Garrison Creek (CDFW 2020).
<i>Sternula antillarum browni</i> (nesting colony)	California least tern	FE/FP, SE/Covered	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats.	Not expected to occur. No suitable vegetation is present. The closest known occurrence is a CNDDDB record approximately 0.9 miles south of the project site near Buena Vista Lagoon (CDFW 2020; USFWS 2020).
<i>Thalasseus elegans</i> (nesting colony)	elegant tern	None/WL/Covered	Inshore coastal waters, bays, estuaries, and harbors; forages over open water.	Not expected to occur. No suitable vegetation is present. Additionally, there are no known occurrences within 5 miles of the project site (CDFW 2020).
<i>Vireo bellii pusillus</i> (nesting)	least Bell’s vireo	FE/SE/Covered	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season.	Not expected to occur on site. There are no dense riparian woodlands on site. Moderate potential to occur adjacent to the site in Loma Alta Creek. The closest known occurrence is a CNDDDB record less than 1.0 miles east of the project site along Loma Alta Creek (CDFW 2020; USFWS 2020).
<i>Fishes</i>				
<i>Eucyclogobius newberryi</i>	tidewater goby	FE/SSC/None	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River.	Not expected to occur. No suitable vegetation is present. The closest known occurrence is a CNDDDB record approximately 0.9 miles south of the project site within Buena Vista Lagoon (CDFW 2020; USFWS 2020).
<i>Gila orcuttii</i>	arroyo chub	None/SSC/None	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud.	Not expected to occur. The site is outside the species’ known geographic range, and there is no suitable vegetation present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Mammals</i>				
<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	None/SSC/None	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon–juniper woodland; roosts in caves, mines, and buildings.	Not expected to occur. No suitable roosting habitat is present on site. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Corynorhinus townsendii</i>	Townsend’s big-eared bat	None/SSC/None	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels.	Not expected to roost on site due to lack of habitat. This species is presumed absent from coastal San Diego (Tremor et al. 2017). Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Dipodomys stephensi</i>	Stephens’ kangaroo rat	FE/ST/Covered	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas.	Not expected to occur. The flat open portion of the site, which would normally provide the most suitable area for the species, has clearly been periodically disturbed for many years, including likely disking and mowing that would have extirpated any populations on the site; in addition, the

Scientific Name	Common Name	Status (Federal/State/ Oceanside Subarea Plan)	Habitat	Potential to Occur
				coastal sage scrub is too steep and dense for this species. Additionally, most of the records in Oceanside are from along the San Luis Rey River well north of the site. Stephens' kangaroo rat in the region is now limited to Marine Corps Base Camp Pendleton and some areas of Fallbrook associated with the Naval Weapons Station adjacent to Camp Pendleton (Tremor et al. 2017). The project site is completely isolated from known populations of the species on Camp Pendleton, so there is no chance of immigration to the site, even if suitable habitat was present. The closest known occurrence is a CNDDB record 2.6 miles northeast of the project site southeast of Mission San Luis Rey (CDFW 2020; USFWS 2020).
<i>Eumops perotis californicus</i>	western mastiff bat	None/SSC/None	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels.	Not expected to roost on site due to lack of habitat. Tremor et al. 2017 describes the species as rarely roosting in palm trees, which do not occur on site. The closest known CNDDB occurrence is approximately 3.9 miles northwest of the project site within Marine Corps Base Camp Pendleton (CDFW 2020).
<i>Lasiurus xanthinus</i>	western yellow bat	None/SSC/None	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms.	Not expected to occur. This species primarily roosts in fan palms (Tremor et al. 2017), which do not occur on site. The closest known CNDDB occurrence is approximately 1.0 miles south of the project site in Carlsbad, California (CDFW 2020).
<i>Leptonycteris yerbabuenae</i>	lesser long-nosed bat	FD/SSC/None	Sonoran desert scrub, semi-desert grasslands, lower oak woodlands.	Not expected to occur on site. The single occurrence of this species in San Diego County is from Oceanside in 1996; it likely occurs only as a rare visitor to the area (Tremor et al. 2017). The closest known CNDDB occurrence is less than 1.0 miles from the project site in Oceanside, California (CDFW 2020).
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/SSC/Covered	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands.	Not expected to occur due to the urbanized environment. This conspicuous species was not observed during any 2019 surveys. The closest known CNDDB occurrence is less than 1.0 miles west of the project site north of Oceanside Boulevard (CDFW 2020).
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	None/SSC/None	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings.	Not expected to occur due to lack of roosting habitat. The closest known CNDDB occurrence is approximately 1.0 miles south of the project site in Carlsbad, California (CDFW 2020).
<i>Perognathus longimembris pacificus</i>	Pacific pocket mouse	FE/SSC/None	Fine-grained sandy substrates in open coastal strand, coastal dunes, and river alluvium.	Not expected to occur. The site is outside the species' known extant geographic range, and there is no suitable vegetation present. The flat open portion of the site, which would normally provide the most suitable area for the species, has clearly been periodically disturbed for many years, including likely disking and mowing that would have extirpated any populations on the site; in addition, the coastal sage scrub is too steep and dense for this species. There appears to be only one historical confirmed record for Pacific pocket mouse in Oceanside near the mouth of the San Luis Rey River, and the only two known extant populations in San Diego County are on Marine Corps Base Camp Pendleton, well to the north of the project site. The project site is completely isolated from known populations of the species on Camp Pendleton, so there is no chance of immigration to the site, even if suitable habitat was present. The closest known occurrence is a CNDDB record approximately 3.0 miles northwest of the project site near the Santa Margarita River mouth (CDFW 2020; USFWS 2020).

Scientific Name	Common Name	Status (Federal/State/ Oceanside Subarea Plan)	Habitat	Potential to Occur
<i>Taxidea taxus</i>	American badger	None/SSC/None	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils.	Low potential to occur due to high levels of human activity in the area. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).
<i>Invertebrates</i>				
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT/None/None	Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats.	Low potential to occur. The site lacks clay soils that would support vernal pools, and the closest records for fairy shrimp are approximately 2.0 miles north of the project site (CDFW 2020; USFWS 2020).
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	FE/None/None	Vernal pools, non-vegetated ephemeral pools.	Low potential to occur. The site lacks clay soils that would support vernal pools, and the closest records for fairy shrimp are approximately 2.0 miles north of the project site (CDFW 2020; USFWS 2020).
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE/None/None	Vernal pools, non-vegetated ephemeral pools.	Low potential to occur. The site lacks clay soils that would support vernal pools, and the closest records for fairy shrimp are approximately 2.0 miles north of the project site (CDFW 2020; USFWS 2020).
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly	FE/None/None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include <i>Plantago erecta</i> , <i>Antirrhinum coulterianum</i> , and <i>Plantago patagonica</i> (Silverado Occurrence Complex).	Unlikely to occur. The site is outside the USFWS study area and outside critical habitat. The closest known USFWS occurrence is 3.6 miles east of the project site in Vista, California (USFWS 2020).
<i>Panoquina errans</i>	wandering skipper	None/None/Covered	Saltmarsh.	Not expected to occur. No suitable vegetation is present. Additionally, there are no known occurrences within 5.0 miles of the project site (CDFW 2020).

Status Legend
Federal
BCC: U.S. Fish and Wildlife Service birds of conservation concern
FD: Federally delisted; monitored for 5 years
FE: Federally listed as endangered
FT: Federally listed as threatened
State
FP: California Department of Fish and Wildlife fully protected species
SD: State delisted
SE: State listed as endangered
ST: State listed as threatened
SSC: California species of special concern
WL: California Department of Fish and Wildlife watch list species
Oceanside Subarea Plan
Covered: Species covered under the Subarea Plan
Notes: CNDDB; California Natural Diversity Database; USFWS: U.S. Fish and Wildlife Service.

References

CDFW (California Department of Fish and Wildlife). 2020. California Natural Diversity Database (CNDDB). RareFind, Version 5. (Commercial Subscription). Sacramento: CDFW, Biogeographic Data Branch. Accessed January 2020. <https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data>.

Tremor, S., ed. 2017. *San Diego County Mammal Atlas*. Illustrated by J. Zee. San Diego, California: San Diego Natural History Museum.

USFWS (U.S. Fish and Wildlife Service). 2020. “Critical Habitat and Occurrence Data” [map]. USFWS Geospatial Services. Accessed January 2020. <http://www.fws.gov/data>.

USGS (U.S. Geological Survey). 2020. “Flow lines, water points, watershed boundaries” [digital GIS data]. National Hydrography Dataset website. <http://nhd.usgs.gov/>.

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Appendix H

OHWM Datasheet Forms

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

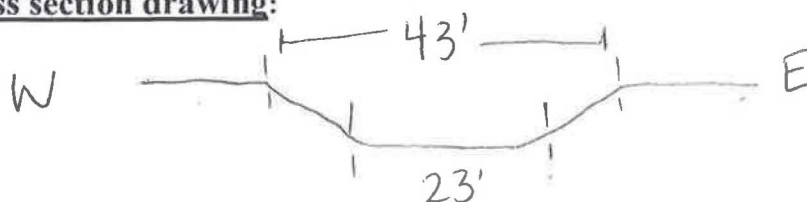
T 1

Project: <i>Crouch Street</i> Project Number: <i>12064</i> Stream: <i>N/A</i> Investigator(s):		Date: <i>8/5/19</i> Town: <i>Oceanside</i> Photo begin file#:		Time: State: <i>CA</i> Photo end file#:	
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Do normal circumstances exist on the site?		Location Details:			
Y <input checked="" type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?		Projection:		Datum:	
Coordinates:		Potential anthropogenic influences on the channel system: <i>Manmade swale. Regular mowing.</i>			
Brief site description: <i>Site previously graded/disked. Disturbed</i>					
Checklist of resources (if available):					
<input checked="" type="checkbox"/> Aerial photography Dates:		<input type="checkbox"/> Stream gage data Gage number:			
<input checked="" type="checkbox"/> Topographic maps		Period of record:			
<input checked="" type="checkbox"/> Geologic maps		<input type="checkbox"/> History of recent effective discharges			
<input checked="" type="checkbox"/> Vegetation maps		<input type="checkbox"/> Results of flood frequency analysis			
<input checked="" type="checkbox"/> Soils maps		<input type="checkbox"/> Most recent shift-adjusted rating			
<input type="checkbox"/> Rainfall/precipitation maps		<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
<input type="checkbox"/> Existing delineation(s) for site					
<input checked="" type="checkbox"/> Global positioning system (GPS)					
<input type="checkbox"/> Other studies					
Hydrogeomorphic Floodplain Units					
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:					
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.					
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.					
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.					
a) Record the floodplain unit and GPS position.					
b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.					
c) Identify any indicators present at the location.					
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.					
5. Identify the OHWM and record the indicators. Record the OHWM position via:					
<input type="checkbox"/> Mapping on aerial photograph		<input type="checkbox"/> GPS			
<input checked="" type="checkbox"/> Digitized on computer		<input type="checkbox"/> Other:			

Project ID: 12064 Cross section ID: T1

Date: 8/5/19

Time:

Cross section drawing:OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
☐ Change in vegetation species
☐ Change in vegetation cover

- ☐ Break in bank slope
☐ Other: _____
☐ Other: _____

Comments:

no OHWM - manmade swale. ~~OHWM~~

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:Average sediment texture: loamTotal veg cover: 80 % Tree: 0 % Shrub: 5 % Herb: 75 %

Community successional stage:

- ☐ NA
☒ Early (herbaceous & seedlings)

- ☐ Mid (herbaceous, shrubs, saplings)
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
☐ Ripples
☐ Drift and/or debris
☐ Presence of bed and bank
☐ Benches

- ☐ Soil development
☐ Surface relief
☐ Other: _____
☐ Other: _____
☐ Other: _____

Comments:

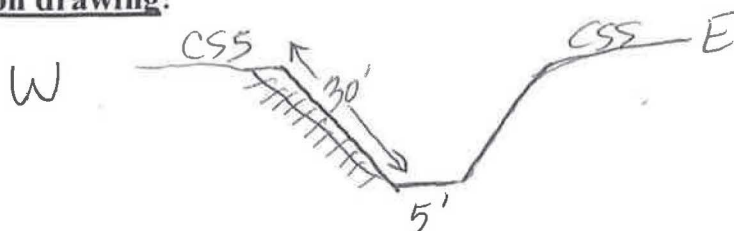
none. no hydrology indicators. no evidence of surface flow. swale covered in non-native grasses, Carex. concrete culvert @ north end where water ~~is~~ is conveyed beneath land into creek.

Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Project: <i>Crouch St.</i> Project Number: <i>12064</i> Stream: <i>N/A</i> Investigator(s): <i>CJA, CS</i>	Date: Town: Photo begin file#: Time: State: Photo end file#:
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	Location Details: Projection: Datum: Coordinates:
Potential anthropogenic influences on the channel system: <i>Residential development, roads, and mowing.</i>	
Brief site description: <i>upland, steep slopes. Area between Grandview and Skylark.</i>	
Checklist of resources (if available): <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography Dates: <input checked="" type="checkbox"/> Topographic maps <input checked="" type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>	
Hydrogeomorphic Floodplain Units 	
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M: <ol style="list-style-type: none"> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <input type="checkbox"/> Mapping on aerial photograph <input type="checkbox"/> Digitized on computer </div> <div> <input checked="" type="checkbox"/> GPS <i>collector</i> <input type="checkbox"/> Other: </div> </div> 	

Project ID: 12064 Cross section ID: T2 Date: 8/5/19 Time:

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
☐ Change in vegetation species
☒ Change in vegetation cover

- ☒ Break in bank slope
☐ Other: _____
☐ Other: _____

Comments:

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: sand

Total veg cover: 0 % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☒ NA
☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

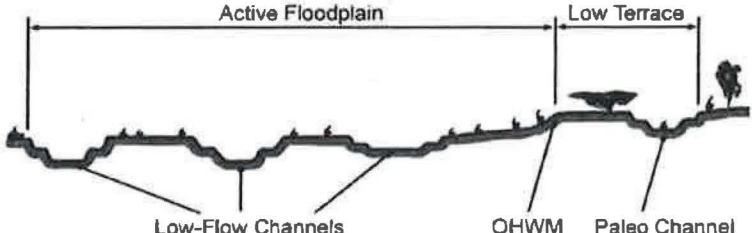
- ☐ Mudcracks
☐ Ripples
☒ Drift and/or debris
☒ Presence of bed and bank
☐ Benches

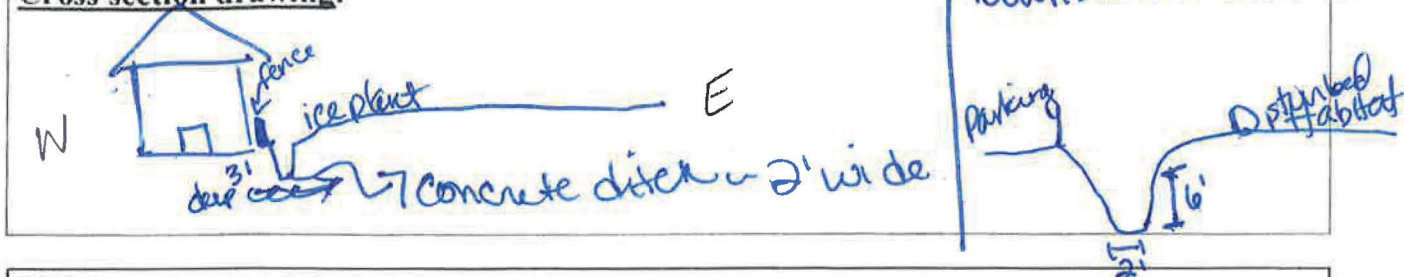
- ☐ Soil development
☐ Surface relief
☐ Other: _____
☐ Other: _____
☐ Other: _____

Comments:

Lots of debris. Hard to access due to very steep slopes and thick veg cover from CSS surrounding erosional drainage.

Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Project: Crouch Street Project Number: Stream: Washburn Ditch-1 Investigator(s): PCS	Date: 2.25.20 Time: 945 Town: oceanside State: CA Photo begin file#: Photo end file#: See collector for photos				
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	Location Details: Projection: Datum: Coordinates:				
Potential anthropogenic influences on the channel system: concrete browditch collecting runoff from housing/dev @ top of hill.					
Brief site description: site is a graded pad w/ native reveg along slope. concrete browditch is collecting water from dev. & outletting to BVC					
Checklist of resources (if available): <table style="width: 100%;"> <tr> <td style="vertical-align: top;"> <input checked="" type="checkbox"/> Aerial photography Dates: <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies </td> <td style="vertical-align: top;"> <input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </td> </tr> </table>		<input checked="" type="checkbox"/> Aerial photography Dates: <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event		
<input checked="" type="checkbox"/> Aerial photography Dates: <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event				
Hydrogeomorphic Floodplain Units 					
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M: <ol style="list-style-type: none"> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: <table style="width: 100%;"> <tr> <td><input checked="" type="checkbox"/> Mapping on aerial photograph</td> <td><input checked="" type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other:</td> </tr> </table> 		<input checked="" type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS				
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:				

Project ID: Cross section ID: ditch-1 Date: 2-25-20 Time:Cross section drawing:OHWMGPS point: See collectorIndicators:

- ☒ Change in average sediment texture
☒ Change in vegetation species
☒ Change in vegetation cover

- ☐ Break in bank slope
☐ Other: _____
☐ Other: _____

Comments:

Feature is a concrete broadditch w/ some sediment collected in areas. OHWM feature are artificial.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

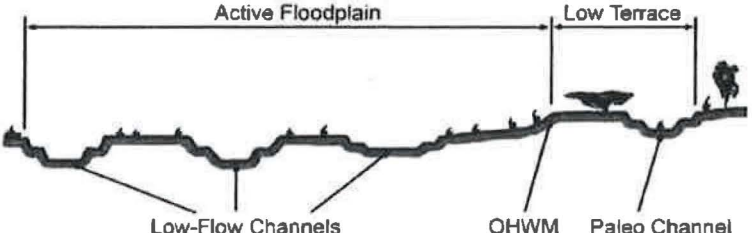
- ☐ NA ☐ Mid (herbaceous, shrubs, saplings)
☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks ☐ Soil development
☐ Ripples ☐ Surface relief
☐ Drift and/or debris ☐ Other: _____
☐ Presence of bed and bank ☐ Other: _____
☐ Benches ☐ Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHW M Datasheet

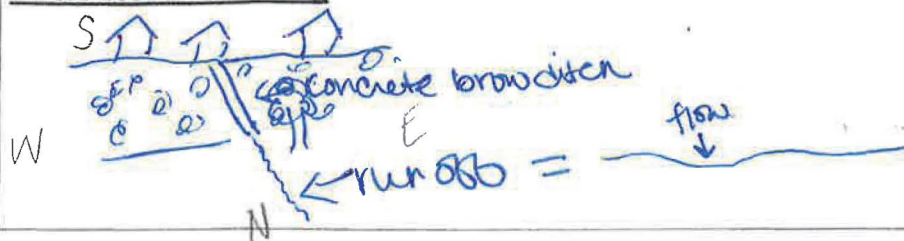
Project: <u>Crouch Street</u> Project Number: Stream: <u>Ditch 2</u> Investigator(s):		Date: <u>0.25.20</u> Town: <u>Oceanside</u> Photo begin file#: <u>See collector</u> Time: <u>1015</u> State: <u>CA</u> Photo end file#:	
Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?		Location Details: Projection: Datum: Coordinates:	
Potential anthropogenic influences on the channel system: <u>Development & concrete brood ditch.</u>			
Brief site description: <u>brood ditch collects water from hillside & development. water sheet flows from ditch overland to ditch-1</u>			
Checklist of resources (if available): <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Aerial photography Dates: <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input checked="" type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies </div> <div style="width: 45%;"> <input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </div> </div>			
Hydrogeomorphic Floodplain Units 			
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM: <ol style="list-style-type: none"> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input checked="" type="checkbox"/> Mapping on aerial photograph <input checked="" type="checkbox"/> GPS </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input type="checkbox"/> Digitized on computer <input type="checkbox"/> Other: </div> 			

Project ID:

Cross section ID: Ditch 2

Date:

Time:

Cross section drawing:OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
☐ Change in vegetation species
☐ Change in vegetation cover

- ☐ Break in bank slope
☐ Other: _____
☐ Other: _____

Comments:

no OHWM indicators. some sediment flow
veg cover, etc same as adjacent areas

Floodplain unit:☐ Low-Flow Channel☐ Active Floodplain☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
☐ Early (herbaceous & seedlings)
☐ Mid (herbaceous, shrubs, saplings)
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
☐ Ripples
☐ Drift and/or debris
☐ Presence of bed and bank
☐ Benches

- ☐ Soil development
☐ Surface relief
☐ Other: _____
☐ Other: _____
☐ Other: _____

Comments:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ocean Creek Town Center City/County: Oceanside/San Diego Sampling Date: 2/13/2020
 Applicant/Owner: JPI State: CA Sampling Point: 1
 Investigator(s): Callie Amoaku, Cody Schaaf Section, Township, Range: Section 25, Township 11 S, Range 5 W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): C - Mediterranean California Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Made land NWI classification: None

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 ☐ 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: The entire lowlands have been graded and filled with compacted fill between 1964 and 1989. Therefore, the topsoils soils are not comprised of native soil material.					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. <i>None</i>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)			
2.				Total Number of Dominant Species Across All Strata: <u>2</u> (B)			
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0 %</u> (A/B)			
4.							
Total Cover: <u> </u> %							
Sapling/Shrub Stratum				Prevalence Index worksheet:			
1. <i>Isocoma menziesii</i>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____			
2. <i>Baccharis pilularis</i>	<u>2</u>	<u>No</u>	<u>Not Listed</u>	OBL species <u> </u> x 1 = <u>0</u>			
3.				FACW species <u> </u> x 2 = <u>0</u>			
4.				FAC species <u>15</u> x 3 = <u>45</u>			
5.				FACU species <u> </u> x 4 = <u>0</u>			
Total Cover: <u>7</u> %				UPL species <u>77</u> x 5 = <u>385</u>			
				Column Totals: <u>92</u> (A) <u>430</u> (B)			
				Prevalence Index = B/A = <u>4.67</u>			
Herb Stratum				Hydrophytic Vegetation Indicators:			
1. <i>Bromus madritensis</i>	<u>65</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%			
2. <i>Stipa miliacea var. miliacea</i>	<u>10</u>	<u>No</u>	<u>Not Listed</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹			
3. <i>Rumex crispus</i>	<u>10</u>	<u>No</u>	<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
4.				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)			
5.							
6.							
7.							
8.							
Total Cover: <u>85</u> %							
Woody Vine Stratum				¹ Indicators of hydric soil and wetland hydrology must be present.			
1.							
2.				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			
Total Cover: <u> </u> %							
% Bare Ground in Herb Stratum <u> </u> %		% Cover of Biotic Crust <u> </u> %					

Remarks:

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-14	10YR 4/2	88	7.5YR 5/6	<1	C	M	Loam	
0-14	10YR 2/1	10					Clay	
0-14	10YR 8/1	2					Sandy loam	Comprised of white sandy rock

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:⁴

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: No pore lining/oxidized roots observed. Some of the grasses have reddish roots. Soil is fill material (see Remarks on pg. 1)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: While surface soil cracks are present in an approximate 4 square foot area near this sample point, these are not considered a sign of hydrology because the overall swale lacks soil cracks (as well as any signs of hydrology, hydrophytic vegetation, and hydric soils). Soil cracks can appear in any area that temporarily ponds or puddles, such as a swale, and according to the Arid West Regional Supplement, these situations are easily distinguished by the absence of hydrophytic vegetation and/or hydric soils.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ocean Creek Town Center City/County: Oceanside/San Diego Sampling Date: 2/13/2020
 Applicant/Owner: JPI State: CA Sampling Point: 2
 Investigator(s): Callie Amoaku, Cody Schaaf Section, Township, Range: Section 25, Township 11 S, Range 5 W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): C - Mediterranean California Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Made land NWI classification: None

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 ☐ 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: The entire lowlands have been graded and filled with compacted fill between 1964 and 1989. Therefore, the topsoils soils are not comprised of native soil material.					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <i>None</i>				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2.				Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>33.3 %</u> (A/B)
4.					
Total Cover:	<u> </u> %				
<u>Sapling/Shrub Stratum</u>				Prevalence Index worksheet:	
1. <i>Isocoma menziesii</i>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	Total % Cover of:	Multiply by:
2.				OBL species	x 1 = <u>0</u>
3.				FACW species	x 2 = <u>0</u>
4.				FAC species	<u>5</u> x 3 = <u>15</u>
5.				FACU species	x 4 = <u>0</u>
Total Cover:	<u>5</u> %			UPL species	<u>60</u> x 5 = <u>300</u>
<u>Herb Stratum</u>				Column Totals:	<u>65</u> (A) <u>315</u> (B)
1. <i>Bromus madritensis</i>	<u>30</u>	<u>Yes</u>	<u>UPL</u>	Prevalence Index = B/A = <u>4.85</u>	
2. <i>Carpobrotus edulis</i>	<u>20</u>	<u>Yes</u>	<u>Not Listed</u>	Hydrophytic Vegetation Indicators:	
3. <i>Stipa miliacea</i> var. <i>miliacea</i>	<u>10</u>	<u>No</u>	<u>Not Listed</u>	<input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
4.				¹ Indicators of hydric soil and wetland hydrology must be present.	
5.				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
6.					
7.					
8.					
Total Cover:	<u>60</u> %				
<u>Woody Vine Stratum</u>					
1.					
2.					
Total Cover:	<u> </u> %				
% Bare Ground in Herb Stratum	<u>35 %</u>	% Cover of Biotic Crust	<u> </u> %		

Remarks:

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-3	10YR 4/3	100					Clay loam	
3-16	10YR 5/2	99					Loam	
3-16	10YR 7/1	1					Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:⁴

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: Soil is fill material (see Remarks on pg. 1)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ocean Creek Town Center City/County: Oceanside/San Diego Sampling Date: 2/13/2020
 Applicant/Owner: JPI State: CA Sampling Point: 3
 Investigator(s): Callie Amoaku, Cody Schaaf Section, Township, Range: Section 25, Township 11 S, Range 5 W
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): C - Mediterranean California Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Las Flores loamy find sand, 15-30% slopes, eroded NWI classification: None

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 ☐ 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: The entire lowlands have been graded and filled with compacted fill between 1964 and 1989. Therefore, the topsoils soils are not comprised of native soil material.					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. <i>None</i>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)			
2.				Total Number of Dominant Species Across All Strata: <u>2</u> (B)			
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0 %</u> (A/B)			
4.							
Total Cover: <u> </u> %							
<u>Sapling/Shrub Stratum</u>				Prevalence Index worksheet:			
1. <i>Baccharis salicifolia</i>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Total % Cover of:		Multiply by:	
2. <i>Baccharis pilularis</i>	<u>5</u>	<u>No</u>	<u>Not Listed</u>	OBL species <u> </u>		x 1 = <u>0</u>	
3.				FACW species <u> </u>		x 2 = <u>0</u>	
4.				FAC species <u>10</u>		x 3 = <u>30</u>	
5.				FACU species <u>5</u>		x 4 = <u>20</u>	
Total Cover: <u>15 %</u>				UPL species <u>92</u>		x 5 = <u>460</u>	
<u>Herb Stratum</u>				Column Totals: <u>107</u> (A)		<u>510</u> (B)	
1. <i>Bromus madritensis</i>	<u>80</u>	<u>Yes</u>	<u>UPL</u>	Prevalence Index = B/A = <u>4.77</u>			
2. <i>Marrubium vulgare</i>	<u>5</u>	<u>No</u>	<u>FACU</u>				
3. <i>Hirschfeldia incana</i>	<u>5</u>	<u>No</u>	<u>Not Listed</u>				
4. <i>Carpobrotus edulis</i>	<u>2</u>	<u>No</u>	<u>Not Listed</u>				
5.							
6.							
7.							
8.							
Total Cover: <u>92 %</u>							
<u>Woody Vine Stratum</u>				Hydrophytic Vegetation Indicators:			
1.				<input checked="" type="checkbox"/> Dominance Test is >50%			
2.				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹			
				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)			
				¹ Indicators of hydric soil and wetland hydrology must be present.			
				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			
Total Cover: <u> </u> %							
% Bare Ground in Herb Stratum <u>5 %</u>		% Cover of Biotic Crust <u> </u> %					

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		Redox Features			Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-7	10YR 3/2	99	10YR 4/6	1	C	M	Clay loam	
7-15	10YR 2/2	100					Sandy clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils:⁴

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**Type: ConcreteDepth (inches): 15+**Hydric Soil Present?** Yes ☐ No ☒Remarks: No pore lining/oxidized roots observed. Some of the grasses have reddish roots. Soil is fill material (see Remarks on pg. 1).
Some concrete below ground surface.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

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)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)**Wetland Hydrology Present?** Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ocean Creek Town Center City/County: Oceanside/San Diego Sampling Date: 2/13/2020
 Applicant/Owner: JPI State: CA Sampling Point: 4
 Investigator(s): Callie Amoaku, Cody Schaaf Section, Township, Range: Section 25, Township 11 S, Range 5 W
 Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR): C - Mediterranean California Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Las Flores loamy find sand, 15-30% slopes, eroded NWI classification: None

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 ☐ 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: The entire lowlands have been graded and filled with compacted fill between 1964 and 1989. Therefore, the topsoils soils are not comprised of native soil material.					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. <i>None</i>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)			
2.				Total Number of Dominant Species Across All Strata: <u>2</u> (B)			
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0 %</u> (A/B)			
4.							
Total Cover: <u> </u> %							
<u>Sapling/Shrub Stratum</u>				Prevalence Index worksheet:			
1. <i>Isocoma menziesii</i>	<u>7</u>	<u>Yes</u>	<u>FAC</u>	Total % Cover of:		Multiply by:	
2. <i>Glebionis coronaria</i>	<u>3</u>	<u>No</u>	<u>Not Listed</u>	OBL species <u> </u> x 1 = <u>0</u>			
3.				FACW species <u> </u> x 2 = <u>0</u>			
4.				FAC species <u>7</u> x 3 = <u>21</u>			
5.				FACU species <u> </u> x 4 = <u>0</u>			
Total Cover: <u>10 %</u>				UPL species <u>73</u> x 5 = <u>365</u>			
				Column Totals: <u>80</u> (A)		<u>386</u> (B)	
				Prevalence Index = B/A = <u>4.83</u>			
<u>Herb Stratum</u>				Hydrophytic Vegetation Indicators:			
1. <i>Bromus madritensis</i>	<u>60</u>	<u>Yes</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%			
2. <i>Hirschfeldia incana</i>	<u>10</u>	<u>No</u>	<u>Not Listed</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹			
3.				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
4.				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)			
5.							
6.							
7.							
8.							
Total Cover: <u>70 %</u>							
<u>Woody Vine Stratum</u>				¹ Indicators of hydric soil and wetland hydrology must be present.			
1.				Hydrophytic Vegetation Present?			
2.				Yes <input type="radio"/> No <input checked="" type="radio"/>			
Total Cover: <u> </u> %							
% Bare Ground in Herb Stratum <u>20 %</u>		% Cover of Biotic Crust <u> </u> %					

Remarks:

SOIL

Sampling Point: 4**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features			Loc ²	Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-2	10YR 4/3	100					Sandy clay loam	
2-16	10YR 5/2	98					Sandy clay loam	
2-16	10YR 7/1	2					Sandy loam	See remarks

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils:⁴

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: Soil is fill material (see Remarks on pg. 1)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

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)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)**Wetland Hydrology Present?** Yes ☐ No ☒

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ocean Creek Town Center City/County: Oceanside/San Diego Sampling Date: 2/13/2020
 Applicant/Owner: JPI State: CA Sampling Point: 5
 Investigator(s): Callie Amoaku, Cody Schaaf Section, Township, Range: Section 25, Township 11 S, Range 5 W
 Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR): C - Mediterranean California Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Las Flores loamy find sand, 15-30% slopes, eroded NWI classification: None

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 ☐ 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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: The entire lowlands have been graded and filled with compacted fill between 1964 and 1989. Therefore, the topsoils soils are not comprised of native soil material.					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <i>None</i>				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2.				Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50.0 %</u> (A/B)
4.					
Total Cover:	<u> </u> %				
<u>Sapling/Shrub Stratum</u>				Prevalence Index worksheet:	
1. <i>Isocoma menziesii</i>	<u>7</u>	Yes	FAC	Total % Cover of:	Multiply by:
2.				OBL species	x 1 = <u>0</u>
3.				FACW species	x 2 = <u>0</u>
4.				FAC species	x 3 = <u>27</u>
5.				FACU species	x 4 = <u>8</u>
Total Cover:	<u>7</u> %			UPL species	x 5 = <u>325</u>
				Column Totals:	<u>76</u> (A) <u>360</u> (B)
				Prevalence Index = B/A = <u>4.74</u>	
<u>Herb Stratum</u>				Hydrophytic Vegetation Indicators:	
1. <i>Bromus madritensis</i>	<u>60</u>	Yes	UPL	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <i>Hirschfeldia incana</i>	<u>5</u>	No	Not Listed	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3. <i>Medicago polymorpha</i>	<u>2</u>	No	FACU	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. <i>Crassula connata</i>	<u>2</u>	No	FAC	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5.					
6.					
7.					
8.					
Total Cover:	<u>69</u> %				
<u>Woody Vine Stratum</u>				¹ Indicators of hydric soil and wetland hydrology must be present.	
1.				Hydrophytic Vegetation Present?	
2.				Yes <input type="radio"/> No <input checked="" type="radio"/>	
Total Cover:	<u> </u> %				
% Bare Ground in Herb Stratum	<u>20</u> %	% Cover of Biotic Crust	<u> </u> %		

Remarks:

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 5/2	100					Sandy loam	
4-8	10YR 7/2	100					Sandy loam	See remarks

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:⁴

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

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: Soil is fill material (see Remarks on pg. 1)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Soil/bare ground patches appear to be compacted fill/spoil piles.