

# Sunrise Assisted Living Project

## Full Biological Resources Report

*prepared for*

**Sophia Mitchell & Associates**
P.O. Box 1700
Gualala, California 95445
Contact: Sophia Mitchell

*prepared by*

**Rincon Consultants, Inc.**
6790 Embarcadero Ln, Suite 100
Carlsbad, California 92011

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RINCON CONSULTANTS

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# Acronyms and Abbreviations

| | |
|---|---|
| AMEC | AMEC Earth & Environmental, Inc. |
| BCLA | Biological Core and Linkage Area |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CFGC | California Fish and Game Code |
| CNDDB | California Natural Diversity Database |
| CNPS | California Native Plant Society |
| CRPR | California Rare Plant Rank |
| Draft Subarea Plan | City of San Marcos Draft Subarea Habitat Conservation Plan/ Natural Communities Conservation Plan |
| ESA | federal Endangered Species Act |
| FPA | Focused Planning Area |
| HDP | Hillside Development Permit |
| HMP | Habitat Management Plan |
| MM | mitigation measure |
| MBTA | Migratory Bird Treaty Act |
| MHCP | Multiple Habitat Conservation Program |
| NHD | National Hydrography Dataset |
| NWI | National Wetlands Inventory |
| OHWM | ordinary high-water mark |
| Project | Sunrise Assisted Living Project |
| Rincon | Rincon Consultants, Inc. |
| RWQCB | Regional Water Quality Control Board |
| SANDAG | San Diego Association of Governments |
| SDP | Site Development Plan |
| USACE | United States Army Corps of Engineers |
| USDA NRCS | United States Department of Agriculture Natural Resources Conservation Service |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |
| WEAP | Worker Environmental Awareness Program |

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# Executive Summary

This Full Biological Resources Report documents the findings of biological and aquatics literature review and surveys conducted by Rincon Consultants, Inc. and evaluates potential impacts from the implementation of the Sunrise Assisted Living Project (project), located in the City of San Marcos and City of Carlsbad, California. The 2.52-acre project site is located on the northeast corner of San Elijo Road and Paseo Plomo.

The project proposes development of an assisted living and memory care facility with access from San Elijo Road and Paseo Plomo. The majority of the project is located within San Marcos and a small portion of the site is included in Carlsbad. The project applicant is requesting approval of a Site Development Plan (SDP23-0002) to construct a two-story, 93,375 square foot (s.f.) assisted living and memory care facility consisting of 92 units above 25,100 s.f. of below grade parking. However, the Mitigated Negative Declaration for California Environmental Quality Act compliance is analyzing 97 units and up to 129 beds to provide flexibility for the project applicant to respond to changing market conditions.

The project includes physical improvements including driveways, grading and landscaping within a small portion of a lot located in the City of Carlsbad. The project would include a single phase of construction. Grading includes approximately 410 cubic yards (cy) of cut (all within the San Marcos portion) and 24,700 cy of fill (22,200 cy in San Marcos and 2,480 cy in Carlsbad), for a net import of 24,290 cy. A Minor Hillside Development Permit (HDP 2024-0006) and Minor Habitat Management Plan Permit (HMP 2024-0008) would be required to create access via Paseo Plomo.

The project also includes implementation of fuel modification zones (i.e., Zones 0, 1, and 2) extending up to 150 feet from the proposed building footprint, as limited by property boundaries. Where full implementation is constrained, off-site fuel modification zone equivalents would be utilized, such as through a maintenance agreement with an adjacent property owner.

The study area totals 6.59 acres (project site boundary plus a 100-foot buffer) and is comprised of three vegetation communities and one land cover type, including Disturbed Diegan Coastal Sage Scrub, Eucalyptus Woodland, Disturbed Habitat, and Urban/Developed areas. The project impact area is defined as the boundaries of the project site as well as the fuel modification zones within the study area. The project site shows a history of anthropogenic disturbances with disturbed habitat, debris, and trash observed. The project site and study area include ornamental shrubs and trees along the western, eastern, and southern boundaries.

The study area is within the San Diego Association of Governments' Final Multiple Habitat Conservation Program area. The portion of the study area within the City of Carlsbad is also within the Habitat Management Plan area. The project site is not within a Focused Planning Area, a Biological Core and Linkage Area, identified wildlife corridor, or designated open space. The project site contains Disturbed Diegan Coastal Sage Scrub, a sensitive vegetation community.

One City of Carlsbad Habitat Management Plan-covered species, coastal California gnatcatcher (*Polioptila californica californica),* has a low potential to occur on the project site as transient dispersing individuals but is not expected to breed on the project site. The coastal California gnatcatcher, a federally threatened and state listed Species of Special Concern, has not been documented within the project site and study area. The project site is not within California gnatcatcher designated critical habitat. The project site contains suitable habitat for common protected, nesting birds.

Crotch's bumble bee (*Bombus crotchii*), a Candidate for the California Endangered Species Act, and monarch butterfly (*Danaus plexippus*), a Candidate for listing under the federal Endangered Species Act, have moderate potential to occur. Crotch's bumble bee may occur as nesting, overwintering, or transient individuals. Monarch butterflies may occur as foraging or transient individuals; suitable breeding and overwintering habitat is not present in the project site.

No potential wetlands were identified within the project site. Two concrete stormwater conveyance v-ditches occur in the western and northern portions of the project site. Upland vegetation has grown over portions of the ditches and they do not show sign of recent flows. These ditches do not contain riparian vegetation and do not support critical habitat functions for aquatic life and stream-dependent terrestrial wildlife.

Implementation of mitigation measures described in this report would reduce potential impacts to sensitive biological resources to a less-than-significant level.

# 1 Introduction

This Full Biological Resources Report (report) provides information pertaining to the existing biological and aquatic resources evaluated by Rincon Consultants, Inc. (Rincon) for the Sunrise Assisted Living Project (project) located in the City of San Marcos and City of Carlsbad in north San Diego County (Figure 1). The purpose of this report is to document the existing conditions of the project site and to evaluate the potential for impacts to biological and aquatic resources, facilitating the City of San Marcos and City of Carlsbad's environmental review of the project.

## 1.1 Purpose of the Report

The purpose of this report is to provide a biological and aquatic resources assessment of the existing conditions of the project site and an evaluation of the potential for impacts from the project to biological and aquatic resources in support of California Environmental Quality Act (CEQA) documentation for the project. This report includes findings from a literature and database resource review, field reconnaissance survey, aquatic resources delineation survey, assessment of potential impacts, and associated mitigation recommendations. This report has been prepared in accordance with the City of San Marcos' *Biological Resources Report Format and Content Recommendations* (2022). This report aligns with the report guidelines of both the City of San Marcos and the City of Carlsbad. A summary of the regulatory context, structure, and applicable statutes at the federal, state, and local levels can be found in Appendix A.

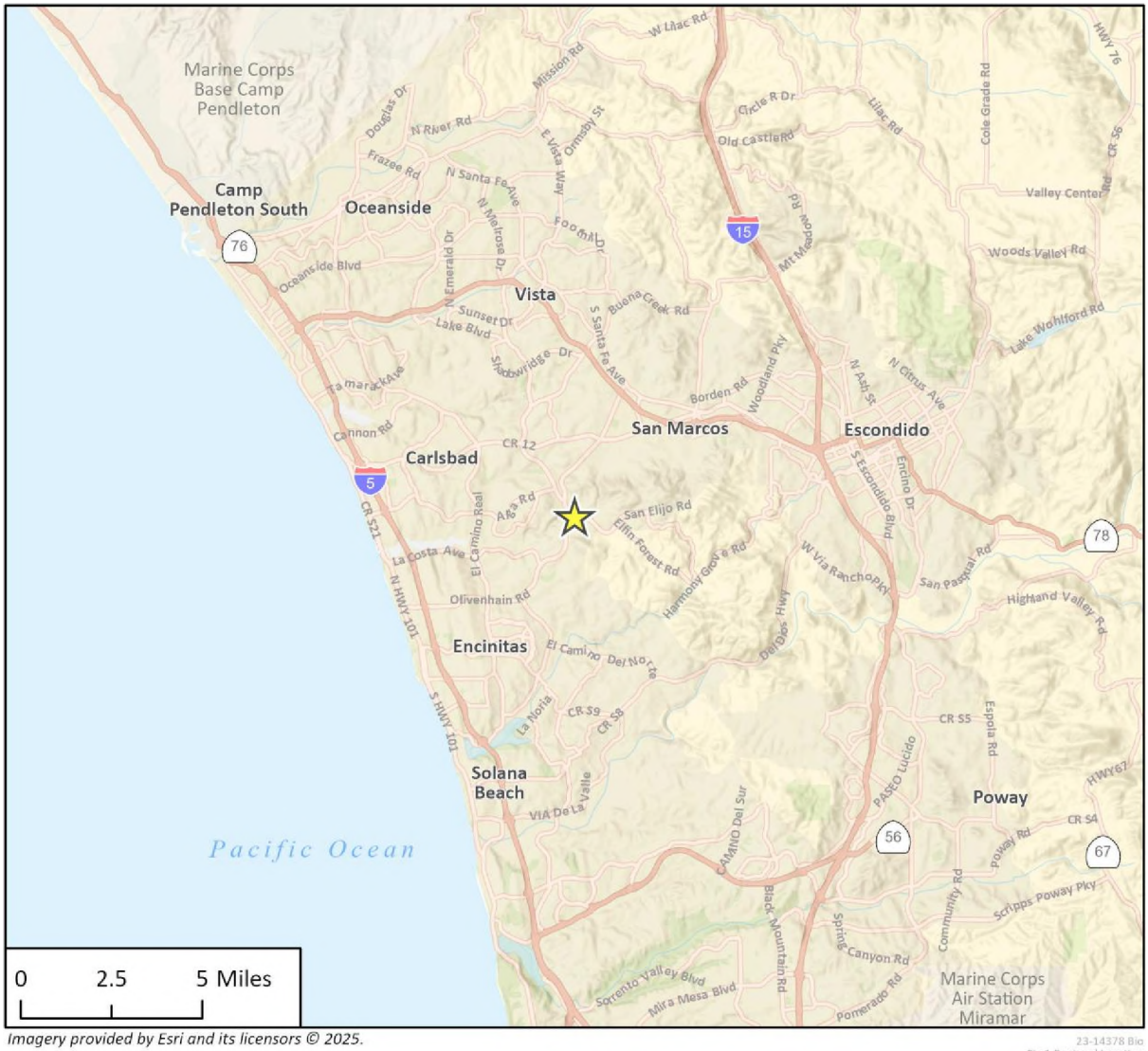
The Planning Departments of the Cities of San Marcos and Carlsbad reviewed the proposed project and provided comment letters in 2025, 2024 and 2023, respectively. This report incorporates, where appropriate, these comments, as well as the recent request in 2026 to incorporate a zoned fire fuels management plan. No consultation with resource agencies has occurred for the proposed project.

## 1.2 Project Location and Description

The project proposes development of an assisted living and memory care facility with access from San Elijo Road and Paseo Plomo. Most of the project is located within San Marcos and a small portion of the site is included in Carlsbad. The project applicant is requesting approval of a Site Development Plan (SDP23-0002; SDP) to construct a two-story, 93,375-square-foot assisted living and memory care facility consisting of 92 units above 25,100 square feet of below-grade parking. However, the Mitigated Negative Declaration for CEQA compliance is analyzing 97 units and up to 129 beds to provide flexibility for the project applicant to respond to changing market conditions.

Additionally, the project includes physical improvements including driveway, grading, and landscaping within a small portion of a lot located in the City of Carlsbad. The project would include a single phase of construction. Grading includes approximately 410 cubic yards (cy) of cut (all within the San Marcos portion) and 24,700 cy of fill (22,200 cy in San Marcos and 2,480 cy in Carlsbad), for a net import of 24,290 cy. A Minor Hillside Development Permit (HDP 2024-0006) and Minor Habitat Management Plan Permit (HMP 2024-0008) would be required to create access via Paseo Plomo.

## Figure 1 Regional Project Location



The project site is located in Section 29 of the *Rancho Santa Fe, California* United States Geological Survey (USGS) topographic quadrangle map (Figure 2). The Public Land Survey System depicts the project site within Township 12 South, Range 3 West, San Bernardino Meridian. The project site, located on the northeast corner of San Elijo Road and Paseo Plomo (Figure 3), is approximately 2.52 acres and is currently vacant and undeveloped.

Most of the project site (2.18 acres) is in the City of San Marcos (Figure 3) on Assessor's Parcel Number 223-651-01. The General Plan Land Use Designation of this parcel is University Commons (Old Creek Ranch) Specific Plan Area. It is located in Planning Area 4 of the Specific Plan Area and zoned as Senior Residential. The proposed use is permitted within the Senior Residential Zone by Directors permit and requires an SDP review. The project applicant is requesting approval of an SDP Modification to SDP18-0001[1].

The western portion of the project site is located within the City of Carlsbad (Figure 3). The project proposes physical improvements in the City of Carlsbad, including re-grading the existing slope to accommodate two driveways that would provide access via Paseo Plomo and landscaping. These improvements would occur on a small portion (0.34 acre) of Assessor's Parcel Number 223-812-02, which is a 4.95-acre lot currently developed with a daycare facility, vehicle storage lot, and Paseo Plomo. The parcel is zoned Planned Community in the Villages of La Costa (MP 98-01) Master Plan area. Based on information from the City of Carlsbad during their preliminary application review, the project will require a Minor Hillside Development Permit and a Minor Habitat Management Plan Permit for the improvements proposed within their jurisdiction.

The project would implement a zoned fire fuels management plan (Figure 4). Zone 0 is the ember resistant zone and extends from 0 to 5 feet from the structure. Zone 1 is between 5 and 50 feet from the proposed structure unless constrained by the property lines. Zone 2 is between 50 and 150 feet from the proposed structure, unless constrained by property lines. Due the small size of the project site, the project would also rely on offsite fuel modification zone (FMZ) equivalents. The project would achieve 150 feet of FMZ on the south and west sides of the project site through a combination of on-site and off-site equivalent FMZs in the form of existing non-combustible roadways and existing infrastructure with maintained landscape and hardscape. Further, through an off-site landscape fuel modification zone maintenance agreement with the adjacent property owner, the project would provide annual maintenance within the open space areas to the north/northeast of the project site, including the removal of eucalyptus trees and selective shrubs, mowing, thinning, and other fuel management activities necessary to maintain compliance with applicable fire protection requirements. No FMZ treatment would occur in the "offsite easement grant" located outside and east of the study area.

[1] Potential environmental impacts resulting from SDP18-0001 for a proposed assisted living and memory care facility were evaluated in an Initial Study/Mitigated Negative Declaration (Sophia Mitchell & Associates 2019). In 2019, the City of San Marcos adopted the Mitigated Negative Declaration (ND19-001; State Clearinghouse Number 2019059043) and approved Resolution No. 2019-8665 for SDP18-0001.

## Figure 2 Project Location Topographic Map

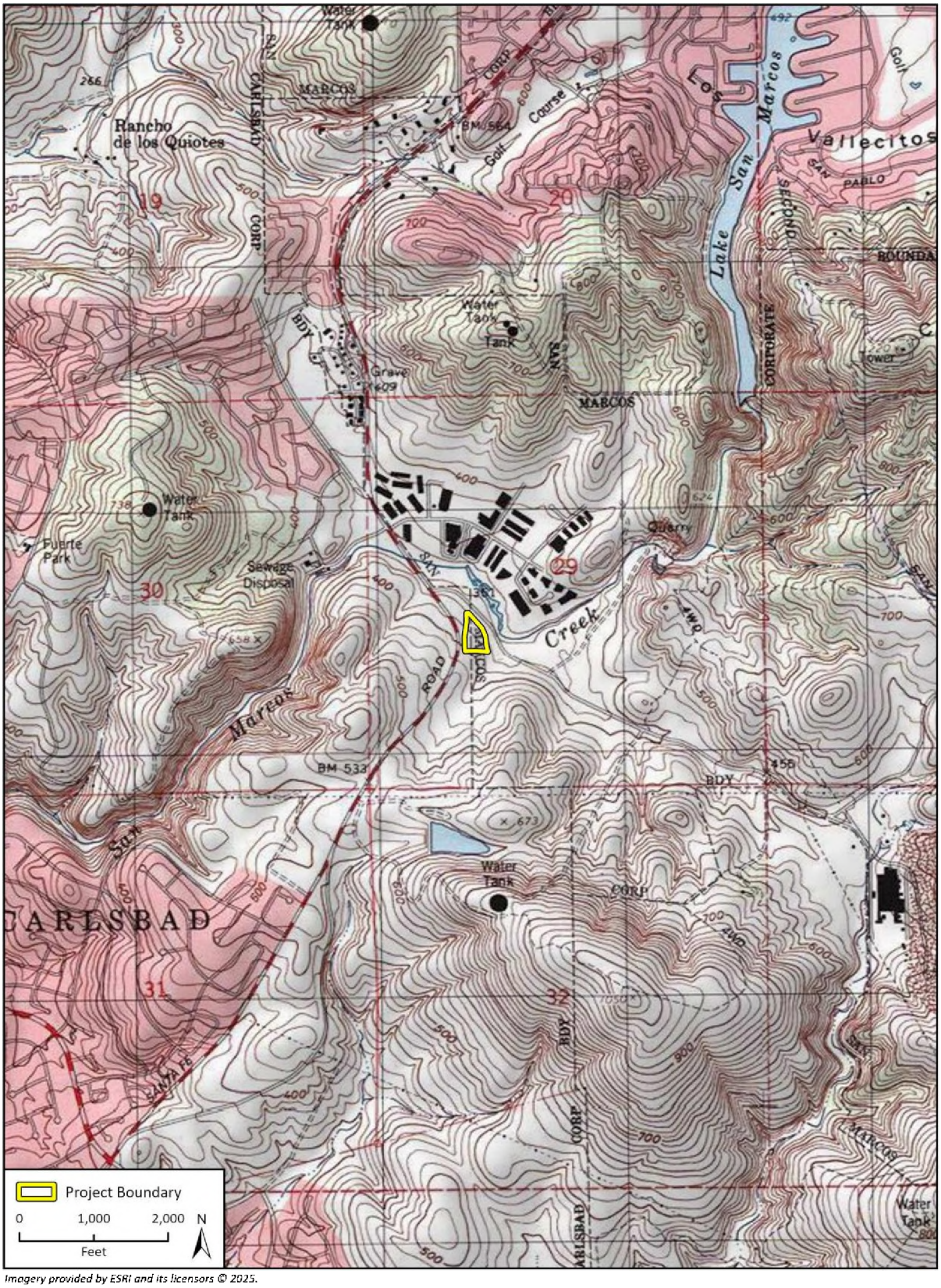
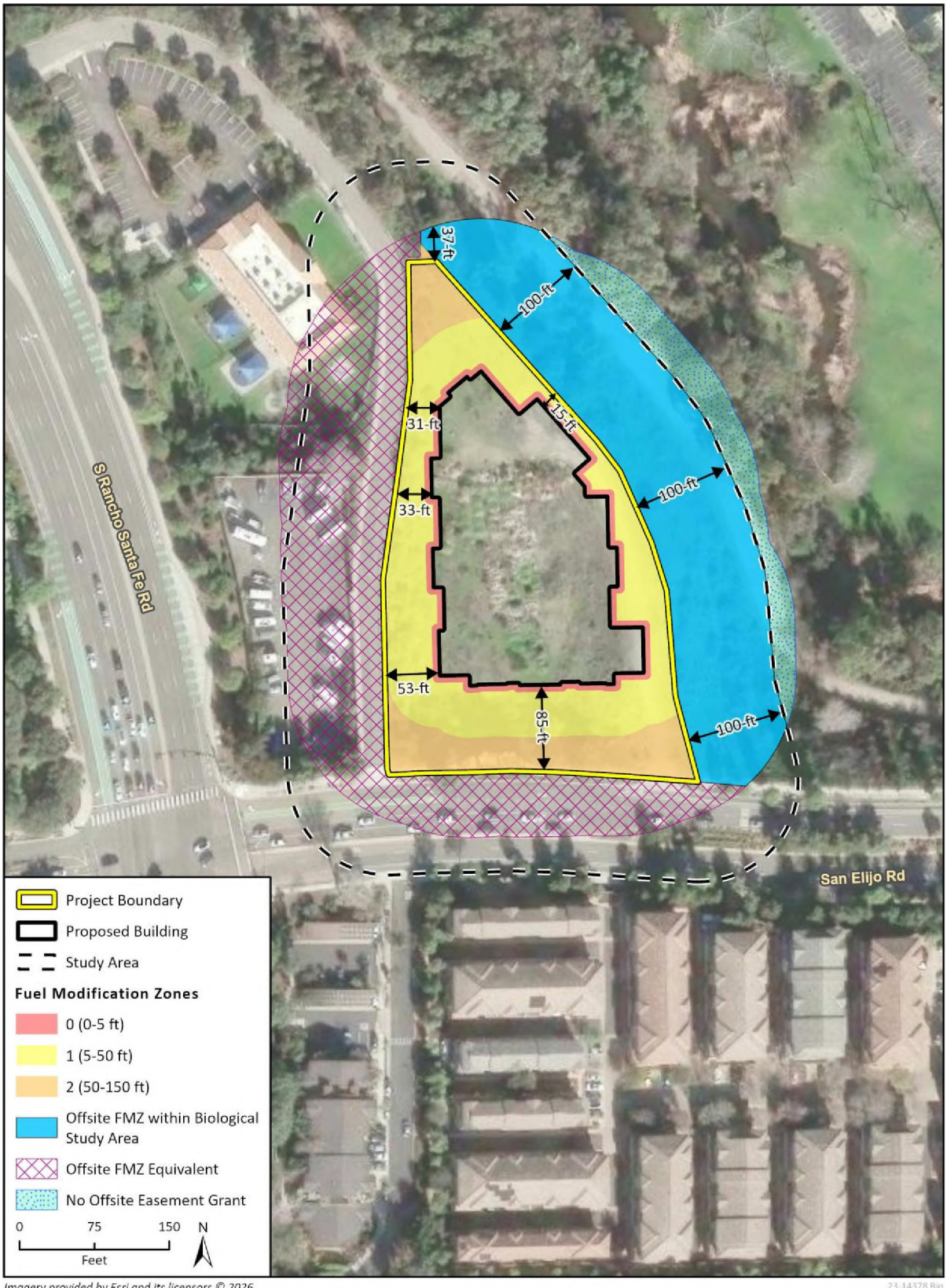


**Figure 3 Project Site Overview**



## Figure 4 Fuel Modification Zone Plan



## 1.3 Environmental Setting (Existing Conditions)

The following sections describe the conditions of the study area (project site plus a 100-foot buffer) based on the background research and observations recorded during field surveys described in Section 4 and Section 4. Representative photographs of the project site and study area can be found in Appendix B.

## 1.4 Surrounding Land Uses and Project Setting

The project site is directly north and east of San Elijo and Paseo Plomo roads, respectively. Solaire and Hunters Pointe apartments are south of the project site and San Elijo Road. The Everbrook Academy and a recreational vehicle storage lot are west of the site and Paseo Plomo. Rancho Santa Fe Road and La Costa Oaks North residential housing are west of the academy and storage lot. San Marcos Creek and the San Marcos Creek Resource Recreation Area is east and north of the project site. Light industrial development is east and north of the recreation area.

The project site has been heavily disturbed and is currently vacant. Starting in 2002, the portion of the site in the City of San Marcos was rough graded as part of the Specific Plan Area development and manufactured slopes were created on the northeastern, eastern, and southern sides of the site (Google Earth 2025). Starting in 2005, a manufactured slope was created on the western side of the project site in the City of Carlsbad during development of San Elijo, Rancho Santa Fe, and Paseo Plomo roads. Concrete stormwater drainage v-ditches were also installed at this time along the western slope adjacent to Paseo Plomo and in the northern portion of the site. Between approximately 2016 and 2021, numerous large piles of broken concrete, soil, and debris were deposited throughout the central portion of the site (Google Earth 2025). These refuse piles, remnant vehicle tracks, foot paths, and v-ditches were observed during the surveys conducted for the proposed project.

## 1.5 Hydrology

The study area is in the San Marcos Creek-Frontal Gulf of Santa Catalina Watershed (Hydrologic Unit Code 10-1807030305) in the San Marcos Creek Subwatershed (Hydrologic Unit Code 12-180703030503) and drains into the Pacific Ocean.

No natural drainages or wetlands occur in the study area and no United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS 2025a) or USGS National Hydrography Dataset (NHD) (USGS 2025a) features are mapped within the study area (Figure 5). San Marcos Creek, located east and north of the study area, is mapped by the NWI and NHD. The NWI identifies the creek as a riverine feature and it flows in a westerly direction towards Batiquitos Lagoon before reaching the Pacific Ocean. Two concrete v-ditches, that were constructed during development of San Elijo and Rancho Santa Fe roads in 2005, occur within the study area. These man-made ditches are not mapped by the NWI or NHD and no apparent connection to San Marcos Creek was found during the literature review. Based on a review of historical aerial imagery of the project area, no natural drainages existed at these locations prior to area being rough graded in 2002, as discussed above.

**Figure 5 National Wetlands Inventory and National Hydrography Dataset Resources**



# 1.6 Topography and Soils

Elevation within the project site ranges from 380 to 425 feet above mean sea level (amsl). The south side of the site contains higher elevations (419 to 425 feet amsl) that decline to the north (Figure 2). The slopes on the west, south, and east sides of the project site create topographic low points in the central and north areas of the site (380 to 395 feet amsl). The large slope east of the project site declines down to 355 to 360 feet amsl on the east/northeastern side of the study area.

Two underling soil types are described in the study area and are shown in Figure 6: Cieneba rocky coarse sandy loam, 9 to 30 percent slopes, eroded and San Miguel rocky silt loam, 9 to 30 percent slopes. The following are the official soils series descriptions for each soil series (United States Department of Agriculture [USDA] Natural Resources Conservation Service [NRCS] 2025a).

## 1.6.1 Cieneba Series

Cieneba rocky coarse sandy loam, 9 to 30 percent slopes, eroded, is a prevalent soil type across the southwestern section of the study area. It is typically found in areas with moderate slopes. This soil series consists of shallow and very shallow soils, which are somewhat excessively drained and have formed from weathered granitic rock. The soil exhibits low to moderate runoff, with moderately rapid permeability in the upper soil layers, while the underlying weathered bedrock has significantly slower permeability. Due to erosion, the soils on these slopes are less cohesive, leading to a more fragmented surface structure. Chaparral and chamise (*Adenostoma fasciculatum*) vegetation typically dominate these soils, including widely spaced foothill pine (*Pinus sabiniana*) and oak (*Quercus* spp.) trees, with areas of annual grasses and weeds. Due to the disturbed nature of the site, chaparral and chamise vegetation are not found in the project site or study area. This series is not classified as a hydric soil (USDA NRCS 2025a).

## 1.6.2 San Miguel Series

San Miguel rocky silt loam, 9 to 30 percent slopes, is found throughout most of the study area. The San Miguel Series is typically found on moderately sloping to steep hillsides and terraces. These soils are well-drained to somewhat excessively drained, with moderate to rapid runoff and slow permeability. The surface of the soil is often rocky, with exposed silt loam that can cause erosion in areas of high slope. Native vegetation in this soil series typically includes chaparral species, chamise, *Ceanothus* spp., sumac (*Rhus* spp.), yerba santa (*Eriodictyon* spp.), and bear clover (*Chamaebatia foliolosa*). Due to the disturbed nature of the site, few of these vegetation types are present in the project site or study area. This series is not classified as a hydric soil (USDA NRCS 2025a).

## Figure 6 Soils within the Project Site and Study Area



# 2 Regulatory Overview

Regulated or sensitive resources studied and analyzed herein include special-status plant and animal species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees. Regulatory authority over biological resources is shared by federal, state, and local authorities. For the purposes of this report, the evaluation of potential impacts to biological and aquatic resources was guided by the following statutes, if applicable (federal and State expanded upon in Appendix A):

## 2.1 Federal

- **Federal Endangered Species Act (ESA).** Prohibits the unauthorized take of federally listed threatened and endangered species.
- **Migratory Bird Treaty Act (MBTA).** Under the provisions of the MBTA of 1918, it is unlawful "by any means or manner to pursue, hunt, take, capture (or) kill" any migratory birds except as permitted by regulations issued by the USFWS. The term "take" is defined by the USFWS regulation to mean to "pursue, hunt, shoot, wound, kill, trap, capture or collect" any migratory bird or any part, nest, or egg of any migratory bird covered by the conventions, or to attempt those activities. It is anticipated that the project will comply with the provisions of the MBTA.
- **Clean Water Act.** Prohibits unauthorized discharges of pollutants, including fill material for construction, into jurisdictional waters of the United States and waters of the State.
- **The Bald and Golden Eagle Protection Act.** Prohibits the unauthorized take of bald or golden eagles which include feathers, eggs, or nests.

## 2.2 State

- **CEQA.** Requires environmental review prior to state or local agency approval of discretionary projects and requires significant impacts to be mitigated if feasible.
- **California Fish and Game Code (CFGC) Section 3503.** The CFGC provides similar protection to that afforded by the Federal MBTA (Sections 3503 and 3513) and extends additional protection to any birds in the orders Falconiformes and Strigiformes (raptors or birds-of-prey) (CFGC Section 3503.5). It is anticipated that the project will comply with these CFGC sections.
- **California Endangered Species Act (CESA).** Prohibits the unauthorized take of state listed threatened and endangered species.
- **CFGC Sections 1600 et seq.** These sections of the CFGC set forth the Lake/Streambed Alteration Agreement program, through which the California Department of Fish and Wildlife (CDFW) regulates activities that would divert, obstruct, or alter streambeds.
- **Porter-Cologne Water Quality Control Act.** Prohibits unauthorized discharges of pollutants, including fill material for construction, into jurisdictional waters of the State.

### 2.2.1 Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the *CEQA Guidelines* Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed project would have a significant effect on biological resources if it would:

*a) Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

*b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*

*c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

*d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.*

*e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

*f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.*

# 2.3 Local Regulations

## 2.3.1 Multiple Habitat Conservation Program

The Multiple Habitat Conservation Program (MHCP) is a comprehensive conservation planning process that addresses the needs of multiple plant and animal species in Northwestern San Diego County. The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. The MHCP goal is to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46 percent) are already in public ownership and contribute toward the habitat preserve system for the protection of rare, threatened, or endangered species (AMEC et al. 2003a, 2003b).

The MHCP Subregional Plan and Final Environmental Impact Statement/Environmental Impact Report were adopted and certified by the San Diego Association of Governments (SANDAG) Board of Directors on March 28, 2003. A Subarea Plan for the City of San Marcos has been prepared, but it must be adopted by the City and implementing agreements with the CDFW and USFWS must be signed before Incidental Take Permits can be issued.

### Focus Planning Areas

The MHCP identifies a series of Focused Planning Areas (FPA) within which some lands will be dedicated for preservation of native habitats. These areas contain both “hardline” areas, which will be preserved as open space, and “soft line” areas, which will include both development and open space to be determined through the planning process (AMEC et al. 2003a, 2003b). Several objectives were incorporated into the process of designing the MHCP FPAs:

- Conserve as much of the biologically most important habitat lands remaining in the subregion as possible, in a system that minimizes preserve fragmentation
- Maximize the inclusion of public lands within the preserve
- Maximize the inclusion of lands already conserved as open space, where appropriate
- Maintain individual property rights and economic viability for the subregion (AMEC et al. 2003a, 2003b)

### Biological Core and Linkage Areas

The MHCP identifies Biological Core and Linkage Areas (BCLA) as those areas determined biologically valuable for inclusion in the regional preserve system (AMEC et al. 2003a, 2003b). BCLAs were designed

to conserve sensitive species and corridors between areas of high-quality habitat and to provide avenues for wildlife movement between these areas.

## Covered Species

The MHCP is a framework plan with proposed covered species, but species are not actually covered unless an adopted subarea plan is in place. The City of San Marcos does not have an adopted subarea plan; therefore, impacts to proposed covered species within the City of San Marcos would require obtainment of an Incidental Take Permit directly from the USFWS and CDFW. The MHCP Covered Species include 20 plant species and 30 wildlife species.

## City of San Marcos Subarea Habitat Conservation Plan/Natural Community Conservation Plan

The City of San Marcos Draft Subarea Habitat Conservation Plan/Natural Community Conservation Plan (Draft Subarea Plan) comprehensively addresses how the City will conserve natural biotic communities and sensitive plant and wildlife species. The Draft Subarea Plan has been prepared in response to direction from the USFWS and the CDFW to meet the applicable requirements of ESA/CESA and the Natural Communities Conservation Planning Act of 1992. The City's Draft Subarea Plan is not formally approved and adopted, so all projects are required to obtain applicable permits for impacts to federally listed species as per Section 4D (for coastal sage impacts, through the I-122 process), 10(a) or Section 7 (or Section 10) of the ESA. Also, because the City does not have an approved Subarea Plan, the mitigation requirements for impacts to the biological resources are based on ratios provided by the approved MHCP (AMEC et al. 2003a, 2003b). Although the Draft Subarea Plan has not yet been approved, the plan has been used by the City as a guide for open space design and preservation.

## City of Carlsbad Subarea Habitat Conservation Plan/Habitat Management Plan for Natural Communities

The City of Carlsbad's Habitat Management Plan (HMP) for Natural Communities is part of a regional planning effort to create an interconnected system of open space lands that will function at the ecosystem level. The HMP constitutes the City's subarea (City-specific) plan within the MHCP Subregional Plan for north coastal San Diego County (City of Carlsbad 2004). The subarea plan was adopted by the Carlsbad City Council in November 2004. The HMP outlines specific conservation, management, facility siting, land use, and other measures that the City will take to preserve the diversity of habitat and protect sensitive biological resources in the city while also allowing for additional development and growth as anticipated under the City's General Plan. Formal approval and adoption of the HMP occurred through issuance of a permit by the Wildlife Agencies, namely USFWS and CDFW, as well as execution of an implementation agreement between the City and the Wildlife Agencies. The HMP preserve contains natural habitats that are necessary to sustain threatened, listed, or sensitive species, and to maintain biological value. According to the permit issued by the Wildlife Agencies, the HMP is required to establish a preserve of 6,478 acres of natural habitat (within the City's jurisdictional boundary), as well as an additional 308 acres of "core area" habitat for the coastal California gnatcatcher (*Polioptila californica californica*) outside of the City's jurisdiction.

The portion of the project site within the City of Carlsbad is within a "developable" portion of the HMP (i.e., it is not in an Existing Hardline, Proposed Hardline, or Standards Area). Mitigation for impacts to sensitive habitat outside of the coastal zone must mitigate according to ratios in HMP Table 11.

### *City of San Marcos General Plan*

The Conservation and Open Space Element of the 2012 San Marcos *General Plan* contains several policies pertaining to the protection of biological resources (City of San Marcos 2012). The following goals and policies apply to the project:

- **Goal COS-1:** Identify, protect, and enhance significant ecological and biological resources within San Marcos and its adaptive Sphere of Influence.
  - **Policy COS-1.1:** Support the protection of biological resources through the establishment, restoration, and conservation of high-quality habitat areas.
  - **Policy COS-1.2:** Ensure that new development, including Capital Improvement Projects, maintain the biotic habitat value of riparian areas, oak woodlands, habitat linkages, and other sensitive biological habitats.
- **Goal COS-2:** The City is committed to conserving, protecting, and maintaining open space, agricultural, and limited resources for future generations. By working with property owners, local organizations, and State and federal agencies, the City can limit the conversion of resource lands to urban uses.
  - **Policy COS-2.1:** Provide and protect open space areas throughout the City for its recreational, agricultural, safety, and environmental value.
  - **Policy COS-2.2:** Limit, to the extent feasible, the conversion of open space to urban uses and place a high priority on acquiring and preserving open space lands for recreation, habitat protection and enhancement, flood hazard management, water and agricultural resources protection, and overall community benefit.
  - **Policy COS-2.6:** Preserve healthy mature trees where feasible; where removal is necessary, trees shall be replaced at a ratio of 1:1.

### *City of Carlsbad General Plan*

The Carlsbad General Plan, Open Space, Conservation, and Recreation Element, addresses open space for resource conservation and recreation, as well as environmental quality topics such as air and water quality (City of Carlsbad 2015). The General Plan has the following goals and policies related to biological resources:

- **Goal 4-G.3:** Protect environmentally sensitive lands, wildlife habitats, and rare, threatened or endangered plant and animal communities.
- **Goal 4-G.4:** Promote conservation of hillsides and ridgelines.
- **Policy 4-P.9:** Maintain and implement the City's Habitat Management Plan (HMP), including the requirement that all development projects comply with the HMP and related documents. Require assessments of biological resources prior to approval of any development on sites with sensitive habitat, as depicted in Figure 4-3.
- **Policy 4-P.10:** Consider working with private foundations and organizations or designating a conservancy agency to be responsible for protection, maintenance, monitoring and liability of open space lands.
- **Policy 4-P.11:** Ensure that the improvements recommended for open space areas are appropriate for the type of open space and the use proposed. No improvements (excluding necessary infrastructure) shall be made in environmentally sensitive areas, except to enhance the environmental value of the areas.
- **Policy 4-P.12:** Continue participation in regional planning efforts to protect habitat and environmentally sensitive species.
- **Policy 4-P.13:** Support innovative site design techniques such as cluster-type housing and transfer-of-development-rights to preserve sensitive environmental resources and to allow development projects to comply with the City's Habitat Management Plan.
- **Policy 4-P.14:** Assure that development or grading on hillsides (if allowed) relates to the slope of the land in order to preserve the integrity and appearance of natural hillsides and other landforms wherever possible.

- **Policy 4-P.15:** Maintain functional wildlife corridors and habitat linkage in order to contribute to regional biodiversity and the viability of rare, unique or sensitive biological resources throughout the City.
- **Policy 4-P.16:** Coordinate the implementation and planning of the City's Habitat Management Plan with the North County Multi-Species Habitat Conservation Plan.
- **Policy 4-P.17:** Seek partnering opportunities with other governmental agencies, private land owners and non-profit organizations to acquire open space; utilize grants, bonds and other funding sources to leverage local funds and reduce cost to Carlsbad taxpayers.
- **Policy 4-P.18:** Require that, at the time of any discretionary approval, any land identified as open space for its habitat or scenic value shall have an appropriate easement and/or land use and zoning designation placed on it for resource protection.
- **Policy 4-P.19:** Require a City permit for any grading, grubbing, or clearing of vegetation in undeveloped areas, with appropriate penalties for violations.

## City of Carlsbad Municipal Code Protection of Trees Ordinance

City of Carlsbad Municipal Code Chapter 11.12.080, Protection of Trees, establishes regulations and standards to preserve trees in Carlsbad (City of Carlsbad 2025). This ordinance is designed to protect trees by restricting removal, trim, prune or cutting of any street tree, shrub or plant.

## City of Carlsbad Municipal Code Heritage Trees

City of Carlsbad Municipal Code Chapter 11.12.140, Heritage Trees, establishes protection of all designated heritage trees that are on public streets (City of Carlsbad 2025). The City may officially designate as heritage trees those trees in the community which have significant historical or arboricultural interest.

## City of Carlsbad Municipal Code Habitat Preservation and Management Requirements

City of Carlsbad Municipal Code 21.210.040, Habitat Preservation Requirements, sets forth the following for all development projects (City of Carlsbad 2025):

- A. Hardline Preserve Areas. Properties or areas of the city identified in the HMP as existing hardline preserve areas are shown on Figure 5 of the HMP. Properties or areas of the city identified in the HMP as proposed hardline preserve areas are shown on Figures 8 through 25 and 34 through 40 of the HMP. These areas shall be prohibited from development located in or encroaching into the hardline preserve area. Minor modifications to the boundaries of the proposed hardline preserve area shall only be allowed if approved as an equivalency finding pursuant to Section 21.210.090 of this chapter. Incidental take of covered species and direct impacts to habitat shall only occur outside the boundaries of the hardline preserve areas. Hardline preserve areas are to be designated as biological open space and preserved in such designation in perpetuity.
- B. Standards Areas. Properties or areas of the city identified in the HMP as standards areas (HMP Figure 26) shall comply with all the habitat preservation standards contained in Section D.3(C) of the HMP which are incorporated by reference. Incidental take of covered species and direct impacts to habitat shall not be permitted in these areas until a development project is approved which complies with the standards and provides any land to the habitat preserve areas as required by the standards.
- C. Additional Mitigation. In addition to setting-aside land for the preserve area, all impacts to habitat and covered species shall be mitigated as follows:
  - 1. All development projects which impact habitat shall provide on-site or off-site replacement habitat in accordance with the mitigation ratios contained in Table 11 in Section D.6 of the HMP. Preference shall be given for on-site mitigation unless off-site mitigation provides for improved quality or configuration of open space. Replacement habitat shall be identified as part of the approval of the development project.

- 2. Larger, connected areas of habitat that is not impacted by development or brush management and preserved on-site within the boundaries of the property where the project is located shall be credited toward the mitigation ratios.
- 3. If at least 67 percent of the habitat on the property where the development project is located is preserved, the project shall not be required to obtain off-site mitigation land in compliance with the mitigation ratios except if: 1) the project would otherwise be inconsistent with the HMP, IA, MHCP, and NCCP and 10(a)1(B) permits; 2) the proposed on-site preservation would reduce the City's ability to meet the specific habitat conservation obligations in the HMP; and/or 3) the areas to be preserved on-site would not benefit the City's preserve system (e.g., habitat exists in a small, isolated patch or patches outside of the FPA, and containing no narrow endemic species).
- 4. Mitigation of impacts through habitat restoration or habitat creation shall be allowed in limited circumstances and shall be mitigated at a higher ratio as determined by the City in consultation with the Wildlife Agencies.

- D. Additional Conditions. In addition to the requirements, standards, and conditions contained in subsections **A**, **B**, and **C** of this section, the following additional conditions of coverage shall apply to all development projects:
  - 1. Impacts to narrow endemic species shall be avoided to the maximum extent practicable in conformance with the narrow endemic species policy contained in the MHCP and incorporated herein by reference, however where impacts to a narrow endemic species population are demonstrated to be unavoidable, impacts shall be limited to five percent of the total narrow endemic species population within the boundaries of the property where the development project is located. Relocation of the narrow endemic species cannot be used to meet the five percent numeric standard.
  - 2. Grading for a development project during wildlife breeding seasons shall be prohibited, except as provided by the HMP and MHCP, unless a minor adjustment is specifically approved by the City and the Wildlife Agencies.
  - 3. All development projects shall be located and designed to minimize overall impacts to natural habitat.
  - 4. All fuel modification (brush management) zones required as a result of the development project, and as required by the Fire Marshal, shall be located outside the preserve areas, shall be considered impacted and shall be mitigated as described above.
  - 5. Impacts to wetland and riparian habitats shall be avoided to the maximum extent possible. All development projects that would affect these habitats must demonstrate that the impacts: 1) cannot be avoided by a feasible alternative; 2) have been minimized to the maximum extent practicable; 3) mitigated at a minimum 3:1 ratio; and 4) will be mitigated in ways that assure no net loss of habitat value or function.
  - 6. Impacts to vernal pools shall be avoided. In the event that no project alternative is feasible that avoids all impacts on a particular property, the impacts must be minimized and mitigated to achieve a no net loss of biological functions and values through strict adherence to the wetland avoidance and mitigation criteria (Section 3.6.1 of MHCP Volume I), standard best management practices (MHCP Appendix B), and revegetation guidelines (MHCP Appendix C).
  - 7. In the standards areas, 67 percent of coastal sage scrub and 75 percent of the gnatcatchers located in the area shall be preserved. Some areas may preserve more or less than these percentages due to parcel size, location, resources, or long-term conservation potential as approved by the City and the Wildlife Agencies.
  - 8. All development projects shall comply with the applicable standards of the MHCP (dated March 2003) and the measures to minimize impacts to covered species described in Section D.6, Table 9, and Appendix C of the HMP.

- 9. All development projects located in the coastal zone shall also be required to comply with the additional, general conservation standards contained in Section D.7, Standards 7-1 through 7-12 of the HMP and the additional, parcel-specific conservation standards contained in Section D.7, Standards 7-13 and 7-14 of the HMP as incorporated into the local coastal program.

- E. Habitat In-Lieu Mitigation Fee. Development projects which are subject to additional mitigation pursuant to subsection **C** of this section and which impact habitat types D, E, and F listed in Table 11 of the HMP shall pay a fee in an amount to be determined by City Council resolution, in lieu of providing on-site or off-site mitigation land. The fee shall be used to fund the acquisition of habitat land in the MHCP as required by the HMP and implementing agreement. The fee shall be adjusted as necessary to acquire suitable habitat on a per acre basis comparable to the land being developed.

City of Carlsbad Municipal Code 21.210.050, Habitat Management Requirements. All development projects shall be required to provide for the permanent management, maintenance, and biological monitoring in perpetuity of all on-site and off-site mitigation land and all habitat preserve areas within the boundaries of the property in which the project is located according to the provisions of this section. As described below, the project applicant will mitigate the impact to habitat within the City of Carlsbad through the payment of an HMP Mitigation Fee and does not involve preservation of any on-site or off-site mitigation land. Therefore, these provisions do not apply to the project and are not discussed further in this report.

# 3 Survey Methods

Biological conditions within the study area were evaluated by confirming applicable regulations, policies, and standards, reviewing literature, querying available databases pertinent to the project site and regional vicinity (defined as the *San Marcos, California* USGS 7.5-minute topographic quadrangle and surrounding eight quadrangles), and conducting reconnaissance-level biological, aquatic resources delineation, and coastal California gnatcatcher protocol breeding season surveys. The methods employed are described below. The findings and opinions conveyed in this report are based exclusively on the methodologies described herein and all quantitative impact assumptions are estimates.

## 3.1 Literature and Database Review

Prior to the field surveys, Rincon conducted background research to preliminarily characterize the nature and extent of biological and aquatic resources on and adjacent to the project site. Rincon reviewed project site aerial photographs and previous historical land use of the project site.

Database queries of the CDFW California Natural Diversity Database (CNDDB; CDFW 2025a) and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (2025) were conducted to obtain comprehensive information regarding state and federally listed and proposed species, as well as other special-status species considered to have potential to occur within the regional vicinity of the project site. For CNPS query purposes, species with elevation ranges exceeding that of the project site were excluded, and plant species with a California Rare Plant Rank (CRPR) of 3 and 4 were excluded as potential impacts to these species are not typically considered significant under CEQA.

The research included, but was not limited to, reviews of the following:

- Current and historical aerial photographs of the project site (Google Earth 2025)
- Current and historic topographic maps of *San Marcos, California* USGS 7.5-minute topographic quadrangle (USGS 2025b)
- USDA NRCS Web Soil Survey (USDA NRCS 2025a)
- National Hydric Soils List by State: California (USDA NRCS 2025b) was reviewed to determine if soil units mapped in the study area were classified as hydric
- NWI Mapper (USFWS 2025a)
- NHD (USGS 2025a)
- USFWS Critical Habitat Portal (USFWS 2025b)
- Biogeographic Information and Observation System (CDFW 2025c)
- USFWS's Information for Planning and Consultation online project planning tool (USFWS 2025c)
- CDFW's CNDDB was queried for special-status plant and wildlife species and communities in the project's regional vicinity (CDFW 2025a)
- CNPS's Rare Plant Inventory (online edition) was queried for special-status plant species in the project's region vicinity (CNPS 2025)
- Calflora's What Grows Here online application was queried for plant species that have been collected or observed in the project's regional vicinity (Calflora 2025)
- CDFW's Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2025d) and Special Animal List (CDFW 2025b)
- eBird: An online database of bird distribution and abundance (eBird 2025)
- iNaturalist: An online database of plant and animal species occurrences (iNaturalist 2025)

- Jepson eFlora: An online database of native and naturalized vascular plants of California (Jepson eFlora 2025)
- *Final Multiple Habitat Conservation Program for the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista.* Volume I and II (AMEC et al. 2003a, 2003b)
- *Natural Community Conservation Plan for the City of San Marcos* (City of San Marcos 2001)
- The City of San Marcos *General Plan* (City of San Marcos 2013)
- The City of Carlsbad *Habitat Management Plan for Natural Communities* (City of Carlsbad 2004)
- The City of Carlsbad *General Plan* (City of Carlsbad 2015)

## 3.2 General Biological Surveys

A field reconnaissance survey of the project site and study area was conducted by Rincon Biologist Nick Julier on February 11, 2025, from 8:30 a.m. to 12:30 p.m. The purpose of the survey was to document existing site conditions and evaluate the potential for presence of sensitive biological resources, including special-status plant and wildlife species, sensitive plant communities, potential jurisdictional waters, wildlife corridors and nursery sites, and locally protected resources. Weather conditions during the survey included temperatures between 52- and 58-degrees Fahrenheit, winds 0 to 4 miles per hour, and cloudy skies. The survey consisted of walking meandering transects throughout the study area, where accessible. The biologist visually scanned for plant and wildlife species (or sign thereof) and habitats suitable for these species. Binoculars were used to scan areas inaccessible or unsafe to traverse by foot, including within the buffer area. Site photographs can be found in Appendix B.

The habitat requirements for each regionally occurring special-status species were assessed and compared to the type and quality of the habitats observed within the study area during the site visit. Floral and fauna species observed during the field reconnaissance survey are listed in Appendix C.

The assessment of special-status species in this report is based on the results of the site visit and literature review and is intended to assess habitat suitability and potential for the proposed project to impact special-status species within the study area limits. The survey was conducted to provide an initial evaluation regarding the presence or absence of terrestrial biological resources, including plants, birds, and other wildlife; however, focused protocol surveys were not conducted.

## 3.3 Vegetation Communities

Vegetation communities observed in the study area were mapped on a site-specific aerial photograph. Vegetation was classified using the systems provided in *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008) to provide consistency with the SANDAG MHCP and modified as necessary to reflect the existing site conditions. Where applicable, vegetation communities were further classified using *A Manual of California Vegetation*, Second Edition (Sawyer et al. 2009) to better identify the species composition and provide consistency with CDFW classifications.

Sensitive vegetation community ranking is based on MHCP habitat groups (AMEC Earth & Environmental, Inc. et al. [AMEC et al.] 2003a) and HMP habitat groups (City of Carlsbad 2004). The MHCP designates six habitat group categories:

- Group A  Wetland/Riparian
- Group B  Rare Upland
- Group C  Coastal Sage Scrub
- Group D  Chaparral
- Group E  Annual Grassland
- Group F  Other lands

The HMP also designates six habitat group categories:

- Group A Marshes, Estuarine, Salt Pan/Mudflats, Riparian Forest, Woodland, and Scrub, Vernal Pools, Disturbed Wetlands, Flood Channel, Fresh Water Engelmann Oak Woodland, Coast Live Oak Woodland
- Group B Beach, Southern Coastal Bluff Scrub, Maritime Succulent Scrub, Southern Maritime Chaparral, Native Grass
- Group C Gnatcatcher – Occupied Coastal Sage Scrub
- Group D Unoccupied Coastal Sage Scrub, Coastal Sage/Chaparral Mix, Chaparral (excluding Southern Maritime Chaparral)
- Group E Annual (Non-Native) Grassland
- Group F Disturbed lands, Eucalyptus, Agricultural Lands

## 3.4 Flora

Plant species observed in the study area were recorded, and plants that could not be identified in the field were identified later using taxonomic keys (Baldwin et al. 2012). The biologists searched for special-status plant species that would have been apparent at the time of the survey.

## 3.5 Fauna

Animal species observed directly or detected from calls, tracks, scat, nests, or other sign were documented during the survey. Zoological nomenclature for birds is in accordance with the Cornell Lab of Ornithology (2025); for mammals using Mammals of California (Wilson and Reeder 2005); and for amphibians and reptiles using Society for the Study of Amphibians and Reptiles' Checklist of the Standard English Names of Amphibians & Reptiles (2025).

## 3.6 Focused Surveys

Rincon conducted a breeding season survey for coastal California gnatcatcher pursuant to Section IV of the USFWS *Coastal California CAGN (Polioptila californica californica) Presence/Absence Survey Protocol*, issued February 28, 1997, and revised July 28, 1997, in 2025. Survey methods and results of these protocol surveys are described in detail in the Coastal California Gnatcatcher Focused Survey Report, dated July 2025 (Appendix D). The findings and opinions conveyed in this report are based exclusively on the methodology described above.

## 3.7 Aquatic Resources Delineation

On April 17, 2025, Rincon Biologist Kevin Gugerty conducted an aquatic resources delineation. The purpose of the delineation survey was to map and record the extent of potential waters of the United States, waters of the State, and CDFW-jurisdictional streambeds within the study area.

Current federal and state policies, methods, and guidelines by the United States Army Corps of Engineers (USACE), San Diego Regional Water Quality Control Board (RWQCB), and CDFW were used as guidance for identifying potential jurisdictional areas (expanded upon in Appendix A). Potential wetland features were evaluated for presence of wetland parameters, specifically positive indicators for hydrophytic vegetation, hydric soils, and wetland hydrology, according to routine delineation procedure (USACE 1987, 2023). The biologist evaluated and mapped features that might exhibit positive indicators of an ordinary high water mark and which might constitute waters of the United States and/or State, as well as having a defined channel, bed and banks and any adjacent riparian habitat that could be subject to CDFW

jurisdiction under the CFGC. Additionally, general site characteristics were noted and vegetation present on-site was documented.

Data collection was conducted in areas that served as the best representation of the conditions of each feature. Site conditions were documented at representative sample points to determine the presence/absence of positive indicators for each of three wetland parameters, where applicable. No soil pits were dug due to a concrete restrictive layer along the entirety of the v-ditches. The extent of the potential aquatic features and vegetation community/land cover boundaries were mapped in the field using a Global Positioning System unit with submeter accuracy with the use of aerial imagery.

## 3.8 Special-Status Biological Resources Assessments

Federal, state, and local agencies regulate special-status species and other sensitive biological resources and may require an assessment of their presence or potential presence to be conducted prior to the approval of proposed development on a property. Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB and other sources, species occurrence records from other sites in the vicinity of the study area, previous reports for the project site, and the results of surveys of the project site. The potential for each special-status species to occur in the study area was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the project site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, project site history, disturbance regime); the species has no recorded occurrences within nine quadrangles of the project site indicating that the project site may be outside the range of the species; or, the species is conspicuous and would have been observed if present (e.g., oak trees). Protocol surveys (if conducted) did not detect the species. The species is not expected to be found on the site.
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the project site is unsuitable or of very poor quality, and/or there are no recent (within the last five years) records of the species within nine quadrangles or they are geographically isolated from the project. The species is not likely to be found on the project site.
- **Moderate Potential**. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the project site is unsuitable. Extant populations are known from the region and have potential connectivity to the site. The species has a moderate probability of being found on the project site.
- **High Potential.** All the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the project site is suitable. Extant populations are known from the vicinity of the project. The species has a high probability of being found on the project site.
- **Present.** Species was observed on the project site or has been recorded (e.g., CNDDB, other reports) on the project site recently (within the last five years) and suitable habitat remains.

For the purpose of this report, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the ESA and/or as Threatened, Endangered, or Rare by the CDFW under CESA or the Native Plant Protection Act, those designated as Fully Protected species by the State, those recognized as Species of Special Concern by the CDFW, Covered Species identified in the MHCP, and regulations and plants occurring on lists 1 and 2 of the CNPS CRPR system, per the following definitions:

- **CRPR 1A** = Plants presumed extirpated in California and either rare or extinct elsewhere
- **CRPR 1B** = Plants rare, threatened, or endangered in California and elsewhere
- **CRPR 2A** = Plants presumed extirpated in California but common elsewhere
- **CRPR 2B** = Plants rare, threatened, or endangered in California but more common elsewhere

Additionally, CNPS assigns the following threat codes:

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

# 4 Results

The project site contains special-status biological resources, including sensitive vegetation communities and suitable habitat for nesting birds. This section discusses special-status biological resources observed within the study area and evaluates the potential for other sensitive biological resources to occur on the project site. Special-status plants and wildlife and sensitive natural communities documented in the regional vicinity and evaluated for their potential to occur in the project site are included in Appendix E. This section also discusses the findings of the aquatic resources survey.

## 4.1 Vegetation Communities and Land Cover Types

Three vegetation communities and one land cover type occur in the study area (Table 1; Figure 7). Of these, two communities and one land cover type occur within the project site, Disturbed Diegan Coastal Sage Scrub, Disturbed Habitat, and Urban/Developed. Eucalyptus Woodland occurs in the study area but outside of the project site.

**Table 1 Vegetation Communities and Land Cover in the Study Area and Project Site**

| MHCP Habitat Group | HMP Habitat Group | Vegetation Community/ Land Cover Type (Holland Code) | Acreage | | Sensitive |
|---|---|---|---|---|---|
| | | | Study Area | Project Site | |
| C | D | Disturbed Diegan Coastal Sage Scrub (32500) | 0.71 | 0.24 | Yes |
| F | F | Eucalyptus Woodland (79100) | 0.24 | 0 | No |
| F | F | Disturbed Habitat (11300) | 2.85 | 2.16 | No |
| F | N/A | Urban/Developed (12000) | 2.79 | 0.12 | No |
| **Total** | | | **6.59** | **2.52** | |

As discussed above, the project site has been heavily disturbed and continues to show recent evidence of vehicle and foot disturbances. However, some native and non-native vegetation has regrown in the project site and surrounding study area.

### 4.1.1 Disturbed Diegan Coastal Sage Scrub (32500)

The Disturbed Diegan Coastal Sage Scrub vegetation community comprises 0.71 acre of the study area, of which 0.24 acre occurs within in the project site. It has some structural similarity to Diegan Coastal Sage Scrub but has been subjected to historical anthropogenic disturbance from land use practices. Patches of Disturbed Diegan Coastal Sage Scrub occur on the southwestern and southern slopes of the project site and on the northeastern slope of the study area. Native shrubs, such as laurel sumac (*Malosma laurina*), coyote brush (*Baccharis pilularis*), and lemonade berry (*Rhus integrifolia*), were observed. However, most of the Disturbed Diegan Coastal Sage Scrub community contains a higher proportion of weedy species than Diegan coastal sage scrub species. Other scattered native and non-native species observed include goldenbush (*Isocoma menziesii*), showy honey-myrtle (*Melaleuca nesophila*), and fountain grass (*Pennisetum setaceum*) intermixed with patches of open/bare ground. Disturbed Diegan Coastal Sage Scrub is considered a sensitive community (despite being disturbed) under Habitat Group C of the MHCP and Habitat Group D of the HMP (as unoccupied habitat).

**Figure 7 Vegetation Communities and Landcover within the Project Site and Study Area**



### 4.1.2 Eucalyptus Woodland (79100)

Eucalyptus woodland habitats range from a single-species thicket with little to no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. Typically, eucalyptus woodlands form a dense canopy with the overstory composition limited to one species of the genus, or mixed stands composed of several Eucalyptus species. Few native overstory species are present within eucalyptus planted areas, except in small, cleared pockets (Oberbauer 2008). Eucalyptus woodland occurs in the north and northeastern portion of the study area adjacent to but outside of the project site and comprises 0.24 acre. Red gum (*Eucalyptus camaldulensis*) eucalyptus trees dominate this community within the study area. This community is also found outside the study area to the east in the adjacent habitat associated with San Marcos Creek.

### 4.1.3 Disturbed Habitat (11300)

Disturbed habitats are areas that have been physically disturbed by previous human activity and are no longer recognizable as a native vegetation association but continue to retain a soil substrate. Typically, naturalized vegetation, if present, is nearly exclusively composed of non-native plant species, such as ornamentals or disturbance-adapted ruderal exotic species, that removes any capability of providing viable natural habitat for use to wildlife other than dispersal. Examples of disturbed land include areas that have been graded, repeatedly cleared for other purposes and/or have experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded areas, construction staging areas, off-road vehicle trails, and old homesites. Characteristic species found in disturbed habitats are typically invasive, non-native forb species, and a limited number of grass species, including *Brassica* sp. and fountain grass.

Disturbed habitat, comprising 2.85 acres within the study area, was observed throughout most of the project site (2.16 acres) and in the north and eastern portions of the study area. This area within the site contains multiple, large piles of debris, soil, and broken concrete blocks surrounded by disturbed non-native grasses and herbs. Non-native plant species adapted to disturbances that were observed included such species as shortpod mustard (*Hirschfeldia incana*), fennel (*Foeniculum vulgare*), fountain grass, onion weed (*Asphodelus fistulosus*), and black mustard (*Brassica nigra*). Some scattered native species are dispersed throughout the disturbed habitat, including California sagebrush (*Artemisia californica*), coyote brush, California buckwheat (*Eriogonum fasciculatum*), goldenbush, and tobaccos (*Pseudognaphalium* spp.).

### 4.1.4 Urban/Developed (12000)

Urban/Developed areas have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Approximately 2.79 acres of land cover within the study area (0.12 acre within the project site on the south side) have been developed or altered, including public/paved roadways, developments, and buildings. Developed areas occur along the west, south, and eastern sides of the study area. Ornamental species observed in the developed portions of the study area included bottlebrush (*Melaleuca quinquenervia*), strawberry tree (*Arbutus unedo*), lantana (*Lantana camara*), moss rose (*Portulaca grandiflora*), and Boston ivy (*Parthenocissus tricuspidate*).

## 4.2 Aquatic Resources

No natural drainages or wetlands were observed in the study area during surveys or background research. Two concrete v-ditches occur in the western and northern portions of the study area. The ditches are man-made and were constructed in uplands during the initial build-out of the area in 2005 for the purposes of stormwater conveyance and erosion control. The ditches are illustrated on Figure 8 and

described below. Photographs are provided in Appendix B. Completed datasheets are provided in Appendix F.

The first v-ditch is on the west side of the project site near the top of the manufactured slope above the retaining wall. It begins near the southwestern corner of the site and travels in a northerly direction, paralleling the east side of Paseo Plomo, for approximately 565 feet before exiting the study area. The second v-ditch begins at a low point in the northern portion of the project site and travels in a northwesterly direction for approximately 65 feet where it connects to the main v-ditch in the northern portion of the study area. North of the study area, the v-ditch travels in a northwesterly direction adjacent to and west of an unnamed paved road for approximately 170 feet before ending at an underground culvert inlet. The culvert appears to extend northeast underneath the road for approximately 45 feet to an outlet approximately eight feet east of the east side of the road. Both the culvert inlet and outlet are filled with soil, debris, and vegetation and do not connect to San Marcos Creek, which is approximately 230 feet east of the outlet.

The ditches are approximately three feet wide and one and a half feet deep. Vegetation has grown over the top of portions of the ditches and vegetative, sediment, and other debris cover most of the bottom of the ditches. Small, scattered herbs, including a few curly dock (*Rumex crispus*), have grown in some areas of the ditches in the accumulated debris. The ditches are constructed of impermeable concrete, and the inlet to the northern ditch is lined with an approximately six foot wide by six foot long impermeable black tarp that is partially covered with vegetation and debris. The ditches may occasionally carry ephemeral stormwater runoff during significant rainstorms. However, based on the accumulation of debris observed during the field survey in the bottom of the western ditch and at opening of the northern ditch, this is infrequent and has not occurred recently.

One sample point (SP1) was collected in the western ditch adjacent to Paseo Plomo (Figure 8). No indicators of hydrophytic vegetation, hydric soils, or wetland hydrology were observed in the ditch. Therefore, it was determined that a wetland was not present at SP1. No water and riparian vegetation were observed in or adjacent to the ditches in the study area. No ordinary high water mark was observed in either ditch.

Based on the field survey, the concrete ditches are not navigable waterways and do not have direct surface connectivity to a navigable waterway. They were excavated wholly in and drain only dry land and do not carry a relatively permanent flow of water. Therefore, these ditches would not qualify as Waters of the United States under jurisdiction of the USACE per the Revised Definition of Waters of the United States (33 Code of Federal Regulations 328.3[b]). The ditches only transmit excess stormwater immediately following significant rain events, and do not ordinarily contain hydrologic flows. The ditches do not appear to transport sediment or substantial water flows downstream; therefore, these concrete stormwater conveyance ditches are not expected to be considered jurisdictional by the RWQCB per Section 401 of the Clean Water Act or the Porter-Cologne Water Quality Control Act. The ditches are not under jurisdiction of the CDFW per Section 1600 et seq. of the CFGC, as these features are artificial waterways that do not have any characteristics of natural waterways, and CDFW does not take jurisdiction over such features (California Department of Fish and Game 1988).

**Figure 8 Artificial Concrete Ditches within the Project Site and Study Area**



## 4.3 Observed Plants

A total of 42 species of native or naturalized plants, including 16 native species (38 percent) and 26 non-native species (62 percent), were recorded in the study area during the biological surveys (Appendix C). Most of the plant species observed in the project site and study area were non-native or ornamental, including shrubs and annuals grasses and herbaceous forbs such as showy honey-myrtle, ripgut brome (*Bromus diandrus*), mustards, fennel, shortpod mustard, and Russian thistle (*Salsola tragus*) in the center of the site and along the slopes in the Disturbed Diegan Coastal Sage Scrub and Disturbed Habitat. Clusters of fountain grass were observed in the southeastern portion of the site. Eucalyptus associated with the San Marcos Creek Resource Recreation Area overhang portions of the east side of the study area. Some native species were observed scattered throughout the Disturbed Diegan Coastal Sage Scrub and Disturbed Habitat, including laurel sumac, lemonade berry, goldenbush, coyote brush, California buckwheat, two-color rabbit-tobacco, and American century plant (*Agave americana*). A complete list of floral species observed during the surveys can be found in Appendix C.

## 4.4 Observed Wildlife

A total of 17 wildlife species, including 16 native species (94 percent) and one non-native species (six percent), were recorded in the study area during the biological surveys (Appendix C). The majority of the wildlife species observed during the field surveys were birds. Some of the common bird species observed within the study area included mourning dove (*Zenaida macroura*), California towhee (*Melozone crissalis*), Anna's hummingbird (*Calypte anna*), white-crowned sparrow (*Zonotrichia leucophrys*), house finch (*Haemorhous mexicanus*), American crow (*Corvus brachyrhynchos*), and black phoebe (*Sayornis nigricans*). Mammal species observed included coyote (*Canis latrans*) scat. A few small mammal burrows (unknown species) were observed in concrete debris piles in the center of the project site. Refer to Appendix C for a complete list of faunal species observed.

## 4.5 Sensitive Plant and Wildlife Species

The project site provides suitable habitat that can support some native plant and wildlife species common in the MHCP plan area. Further discussion of sensitive plant and wildlife species' potential to occur on-site is provided in Sections 5.5.4 and 5.5.5, respectively.

### 4.5.1 Sensitive Plant Communities

The Disturbed Diegan Coastal Sage Scrub falls within the MHCP's "Coastal Sage Scrub" Habitat Group C (AMEC et al. 2003a) and HMP's "Unoccupied Coastal Sage Scrub" Habitat Group D (City of Carlsbad 2004), which is considered sensitive. There is 0.71 acre of Disturbed Diegan Coastal Sage Scrub community in the study area, of which 0.24 acre occurs within in the project site, primarily on the sloped boundary edges of the site (Figure 7). It is not included in the MHCP Hardline Reserve (i.e., conservation area), which is located north and east of the project site (Figure 9). It is also not in an HMP Hardline Reserve (City of Carlsbad 2004).

### 4.5.2 Critical Habitat

Designated critical habitat for coastal California gnatcatcher, which generally overlaps San Marcos Creek, occurs north and east of the project site (Figure 9). The mapped critical habitat boundary extends slightly into the northeast edge of the study area (likely due to mapping accuracy), where it overlaps the existing San Marcos Creek recreation trail. Portions of the proposed fuel modification zone occur within area mapped as critical habitat. Based on aerial imagery and site observations, the mapped overlap with the fuel modification zone occurs within existing developed areas associated with the recreational trail and

does not contain native habitat; however, the mapped critical habitat designation is shown as provided in USFWS GIS data and is considered in this report .

### 4.5.3 Conservation Areas

MHCP Hardline Reserve (i.e., conservation area) open space and BCLA, which generally overlap San Marcos Creek, occurs north and east of the project site (Figure 9). Both extend slightly into the northeast edge of study area where they overlap the existing San Marcos Creek recreation trail. This overlap may reflect the scale and positional accuracy limitations of available GIS mapping; however, the mapped MHCP designations are depicted as shown in the County GIS data and are considered in this report. No MHCP Hardline Reserve or BCLA occur within the project site; however, portions of the proposed fuel modification zone occur within areas mapped as MHCP conservation area and BCLA. Based on aerial imagery and site observations, these mapped overlap areas consist of existing developed areas associated with the recreation trail rather than native habitat areas.

The project site and study area are not in a City of Carlsbad HMP Hardline Conservation Area (Figure 5 of the City's HMP, City of Carlsbad 2004). City of San Marcos Open Space occurs in the eastern and northern portions of the study area but does not occur within the project site (Figure 9; City of San Marcos 2012).

### 4.5.4 Sensitive Plant Species Observed or with Potential to Occur

The evaluation of special-status plant species with potential to occur within the study area included 72 species documented in the project's regional vicinity (Appendix E). No special-status plant species were observed in the study area during the field reconnaissance survey. The survey was not conducted during the optimal blooming season for some of the species with some level of potential to occur. However, many of the species with recorded occurrences in the project's regional vicinity are associated with habitats that are not found on the project site. Additionally, some species (i.e., perennial shrubs or early blooming) would have been observable at the time of the reconnaissance survey, if present. Most of the project site has been systemically disturbed for over many years, which has altered the vegetation communities and soils, removing native habitats and seed banks, and limiting the potential for the sensitive species associated with those habitats to occur on site.

All 72 plant species have low potential or are not expected to occur on-site based on having only historical documentation, specific habitat requirements not found within the study area (e.g., forest, vernal pools, flowing water, chaparral, grassland, coastal bluff), and/or because the study area does not fall within the geographical or elevation range for the species. Due to the low probability of occurrence, they are not discussed further.

### 4.5.5 Sensitive Wildlife Species Observed or with Potential to Occur

A total of 55 special-status wildlife species documented in the project's regional vicinity were evaluated for their potential to occur within the study area (Appendix E). Of those 55 species, 52 species have low potential (and are not federal or state listed) or are not expected to occur in the study area based on the absence of suitable trees, deciduous woodlands, and vernal pools with hydroperiods of 12 weeks or more, and are also based on results of the field survey completed within the study area, and/or because the study area does not fall within the geographical or elevation range for the species. Due to the low probability of occurrence, they are not discussed further.

**Figure 9 Project Vicinity to Conservation Areas and Sensitive Biological Resources**




*Imagery provided by ESRI and its licensors © 2025.*
*Additional data provided by San Diego County, 2024, NHD, 2024, and USFWS, 2025.*

Three species were determined to have some potential to occur on site due to the presence of some suitable habitat in the study area. Two sensitive insect species have a moderate potential to occur on site: Crotch's bumble bee (*Bombus crotchii*) and monarch butterfly (*Danaus plexippus*). One federally listed species has a low potential to occur on site: California gnatcatcher (during the non-breeding season). These species are discussed in further detail below. No special-status wildlife species were observed in the study area during the field surveys.

## Crotch's Bumble Bee

Crotch's bumble bee is a state candidate for listing as endangered. Formal determination of the listing is expected to occur in 2025 and could result in the species being recorded as a state listed endangered species under CESA. Crotch's bumble bee occurs from coastal California to the Sierra-Cascade crest and south into Mexico. This species is a generalist that inhabits scrub and open grassland habitats, shrublands, chaparral, desert margins, including Joshua tree and creosote scrub, and semi-urban settings, foraging on a variety of floral resources that includes *Antirrhinum* spp., *Phacelia* spp., *Clarkia* spp., *Dendromecon* spp., *Eschscholzia* spp., *Eriogonum* spp., *Vicia* spp., *Carduus* spp., and *Amsinckia* spp. The species' queen flight season is defined as February to March, their worker active period is defined as April to August, and their gyne flight season is defined as September to October (Williams et al. 2014). Nests can be located underground in abandoned rodent nests, above ground in tufts of grass, old bird nests, brush piles, leaf litter, vegetation mulch, rock piles, or cavities in dead trees (Xerces Society 2025). New queens overwinter a few centimeters underneath bare soil, leaf litter, or vegetation mulch.

No Crotch's bumble bees, or any species of bumble bee, were observed during the reconnaissance survey conducted within the study area. The study area contains some suitable foraging resources, including California buckwheat and is within the known extant range of the species. Overwintering and nesting habitat is present within and adjacent to the project site, including bunch grasses, various rock and debris piles, leaf litter, and a low density of small mammal burrows. There are five documented occurrences of Crotch's bumble bee within 6 miles, with the closest approximately 0.8 mile south of the study area (CDFW 2025a). The Bumble Bee Watch database documents an observation approximately 3 miles east of the study area in 2024 (Xerces Society 2025). It is important to note that since the species has been identified as a candidate species for state listing, more information has become available about widespread occurrences that may have not been documented in previous years, resulting in potentially more occurrences than previously documented within the CNDDB and Xerces Society. Due to the potential foraging, nesting, and overwintering habitat present within the study area and the multiple recorded recent occurrences within 6 miles of the study area, this species has moderate potential to occur within the study area.

## Monarch Butterfly

Monarch butterfly is proposed for listing as threatened under the federal ESA. Monarchs require milkweed (*Asclepias* spp.) to begin their life cycle in the spring months, laying eggs on milkweed and hatching within two to five days. Once hatched, the eggs form into larvae (i.e., caterpillars) and then pupate into a chrysalis after approximately two weeks. After another two weeks, an adult monarch will emerge. This species can exist in a variety of habitats, including open fields, meadows, prairies, and gardens, so long as milkweed is present at the time of breeding and laying eggs (USFWS 2025d). Due to California's moderate winter climate, monarchs in western North America, typically spend the winter months along the Pacific coast of California, and in more inland areas such as Solano, Alameda, Contra Costa, and Santa Clara counties, as opposed to migrating to wintering grounds in Mexico like the monarchs in eastern North America. During the winter months, this species primarily roosts in Monterey cypresses, Monterey pines, and eucalyptus trees (USDA NRCS 2025c).

No monarch butterflies or milkweed were observed during the field reconnaissance survey of the study area. The study area is within the known range of the species and there are five recorded locations of monarch butterfly overwintering sites within approximately 7 miles of the study area, with the closest approximately 4.5 miles southwest of the study area (CDFW 2025a). The study area is not located within

the proposed overwintering critical habitat for this species, and no suitable wind-protected tree groves occur within the study area to support overwintering. It is important to note that since the species has only recently been identified as a proposed species for federal listing, more information may become available about widespread occurrences of non-breeding individuals that were not documented previously, which may result in more occurrences than previously documented within the CNDDB. The study area contains some suitable foraging resources that monarchs may use as transients through the study area, but does not contain milkweed, which is critical for breeding. Due to potential foraging habitat in the study area and the multiple recorded recent occurrences of overwintering populations within 7 miles of the study area, there is a moderate potential for monarch butterflies to occur as transients within the study area.

## Coastal California Gnatcatcher

Coastal California gnatcatcher is listed as federally threatened, a Species of Special Concern by CDFW, and is an HMP-covered species. Therefore, the City of Carlsbad can authorize "take" of this species for impacts within Carlsbad. However, impacts to coastal California gnatcatcher within the City of San Marcos would require obtainment of an Incidental Take Permit directly from the USFWS. Gnatcatchers are found on the coastal slopes of Southern California, from southern Ventura southward through Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties into Baja California, Mexico. Coastal California gnatcatchers occur in a relatively narrow elevation limit, with inland populations generally below 1,640 feet and coastal populations below 820 feet). They are obligate, permanent residents in or near coastal sage scrub, which includes species such as California sagebrush, California buckwheat, laurel sumac, lemonade berry, and various species of sage (*Salvia* spp.). Gnatcatchers are non-migratory and exhibit strong site tenacity.

The study area is generally within a Core Gnatcatcher Conservation area (a general area identified by the USFWS around La Costa/University Commons as having some relatively large and intact patches of contiguous coastal sage scrub) (AMEC et al. 2003a). However, the study area is not contiguous with any intact coastal sage scrub habitat and vegetation on site is sparse and of low quality not suitable for coastal California gnatcatcher breeding. California gnatcatchers have not been documented in the study area, and none were observed during the site reconnaissance survey or protocol surveys.

There are several occurrences of coastal California gnatcatchers within 5 miles of the project site, and designated critical habitat for this species occurs north and east of the project site, generally overlapping with the vegetation adjacent to San Marcos Creek (Figure 9) (CDFW 2005a; USFWS 2025b). Although not coastal sage scrub habitat, gnatcatchers may use the vegetated creek corridor during dispersal between more suitable and intact habitats in the surrounding region. Due to the proximity of this corridor to the study area, and presence of some disturbed sage scrub plant species in the study area, young, transient gnatcatchers have a low potential to occur in the study area during the non-breeding season. Because of this, and the fact that gnatcatchers can occur in small, discontinuous coastal sage scrub habitat patches, protocol breeding season surveys were conducted in 2025. No gnatcatchers were observed or otherwise detected during the six breeding season protocol surveys (Rincon 2025). However, updated surveys would be needed if project vegetation clearing does not occur until after the 2027 breeding season.

## Nesting Birds and Raptors

The project site and study area provide suitable nesting habitat for a variety of bird species such as passerines and non-passerine terrestrial birds that may nest on the ground or within the grass or scrub vegetation. The project site does not contain suitable nesting habitat for raptor species due to the lack of trees and the isolated, planted trees around the western and southern edges of the study area are unlikely to support nesting raptors. Eucalyptus trees and other woodland habitat associated with San Marcos Creek east and north of the study area could provide nesting habitat for a variety of birds and raptor species such as red-tailed hawk (*Buteo jamaicensis*) and Cooper's hawk (*Accipiter cooperii*). Nesting birds are protected pursuant to the CFCG and MBTA.

## 4.6 Habitat Connectivity and Wildlife Corridors

Wildlife movement corridors, or habitat linkages, are generally defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance and allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. Natural features such as canyon drainages, ridgelines, and areas with vegetation cover provide corridors for wildlife travel. A group of habitat linkages in an area can form a wildlife corridor network.

Habitats within a linkage are not necessarily the same as those being linked. Rather, the linkage needs only contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species during periods of movement among areas of suitable habitat. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending on the species, a linkage may require specific minimum physical characteristics (such as rock outcroppings, vernal pools, specific vegetation cover, etc.) to function as an effective wildlife corridor, and allow those species to traverse the linkage. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a relatively short period of time.

Regionally, the project is not within or adjacent to a defined Essential Connectivity Area or natural landscape block as identified by the California Essential Habitat Connectivity Project (Spencer et al. 2010, CDFW 2025c). The area surrounding the project site is highly disturbed and developed with various housing, commercial, and industrial infrastructure, including several major roads, which can be considered significant movement barriers. The project site is not in an existing or proposed HMP Preserve Area in the City of Carlsbad *General Plan* (2015) or HMP Subarea Plan (1999). San Marcos Creek, which is east and north of the study area, can provide movement (i.e., stepping stone) for local wildlife and migratory birds. San Marcos Creek is identified as a wildlife corridor and open space in the City of San Marcos *General Plan* (2012) and as a BLCA in the Final MHCP Plan (AMEC et al. 2003a, 2003b). The project site is not located within these identified MHCP conservation area or BCLA; however, portions of the proposed fuel modification zone slightly extend into areas mapped as BCLA and MHCP conservation area adjacent to San Marcos Creek where they overlap the existing recreational trail (Figure 9).

# 5 Project Impacts, Significance, and Mitigation Measures

Guidelines for determining CEQA significance require that impacts of a proposed project be analyzed for significance. Implementation of the proposed project has potential to result in direct and/or indirect impacts to sensitive biological resources, including sensitive vegetation communities and special-status wildlife species. The following sections provide an analysis of potential impacts to biological resources within the project site using the threshold criteria specified in the CEQA Environmental Checklist (Appendix G of the *CEQA Guidelines*) and recommended mitigation measures (MM) to reduce impacts to a less-than-significant level.

## 5.1 Impacts and Significance

### 5.1.1 Special-Status Species

The proposed project would have a significant effect on biological resources if it would:

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

This section describes impacts on special-status species that are likely to occur on the project site and may be affected by the project. Species with no or low potential to occur are not expected to be affected by the Project and are not discussed except for coastal California gnatcatcher, a federally listed and HMP-covered species.

#### Special-Status Plant Species

No special-status plant species were observed during the survey. All regionally occurring special-status plant species, such as thread-leaved brodiaea (*Brodiaea filifolia*), were determined to have no or a low potential to occur within the project site and none have been documented in the project vicinity. Vegetation and soils on the project site have been significantly disturbed and subject to frequent human activities, which decreases the likelihood of special-status plant species inhabiting the area. The project site was subject to vegetation removal and grading in the early- to mid-2000s, which likely removed the Cieneba and San Miguel soils from the ground surface. As a result, the soil substrates within the project site are likely limited to fill. Due to the apparent lack of suitable soils and the presence of disturbed vegetation, the habitat on-site is not expected to support any special-status plant species, as determined during the field reconnaissance survey. Therefore, a focused rare plant survey is not warranted. The project is not expected to impact special-status plant species.

#### Special-Status Wildlife Species

##### *Crotch's Bumble Bee and Monarch Butterfly*

There is a moderate potential for Crotch's bumble bee to occur within the project site based on recent occurrences in the region and the potentially suitable foraging and nesting habitat available throughout the site. Monarch butterflies have a moderate potential to forage in and transient the study area based on occurrence in the region and the presence of some forage plants but are not expected to breed or overwinter on site due to the absence of milkweed and suitable overwintering refugia.

Direct impacts to Crotch's bumble bee and monarch butterflies during construction could include injury or death because of individuals being struck by vehicles or equipment, crushed or buried by project vehicles, equipment, or displaced soil, accidental destruction of active nests or overwintering sites (Crotch's bumble bee only) by construction vehicles or equipment, or disturbance of individuals by construction-related noise, lighting, and vibration. Potential indirect impacts to these species during construction could include the degradation of foraging habitat or refugia, including through the introduction or spread of invasive plants into the adjacent habitat. Loss of burrow habitat for Crotch's bumble bee could also occur due to soil compaction and debris pile removal, and permanent structures that will be present after construction. Direct and indirect impacts to Crotch's bumble bee and monarch butterflies would be significant under CEQA and therefore mitigation is required. Additionally, Crotch's bumblebee and monarch butterfly are not covered species under the MHCP or HMP. Therefore, impacts to these species, if found to be present within the project site, would require permitting directly with CDFW or USFWS.

Mitigation Measures

Direct and indirect impacts to Crotch's bumble bee and monarch butterfly would be reduced to less than significant through implementation of the following measures. MM-1 (Worker Environmental Awareness Program) requires that a Worker Environmental Awareness Program (WEAP) be implemented for the project, which would include a discussion of the special-status wildlife species that have potential to occur on the project site and would instruct the contractor to avoid these species. MM-2 (Pre-Construction Biological Survey and Biological Monitoring) requires a pre-construction survey and biological monitoring during initial vegetation clearing and grading. Construction would be temporarily halted to allow wildlife, including monarch butterflies, to move out of the work area. MM-3 (Construction Best Management Practices) requires implementation of standard best management practices, including but not limited to delineating construction work limits, limiting vehicle speeds, limiting vehicle and equipment parking areas prior to initial ground and vegetation disturbance, avoidance of chemicals, pesticides, and pets, trash removal and containment, directional construction lighting, and wildlife entrapment avoidance. MM-4 (Mitigation for Disturbed Diegan Coastal Sage Scrub) requires compensation at a 1:1 ratio for the loss of the Disturbed Diegan Coastal Sage Scrub habitat in accordance with the MHCP, which would benefit Crotch's bumble bee and monarch butterfly. MM-5 (Bumble Bee Surveys) requires that a qualified biologist conduct a habitat assessment and protocol survey for Crotch's bumble bee. If bumble bees are not detected during the surveys, no further action or mitigation would be required. Additionally, if Crotch's bumble bee or monarch butterfly are no longer a candidate under CESA/ESA at the time of construction, no further action or mitigation would be required. However, if Crotch's bumble bee is still a candidate under CESA at the time of construction and this species is detected during the surveys, then development of a Crotch's Bumble Bee Avoidance Plan would be required. If impacts to Crotch's bumble bee cannot be feasibly avoided, then consultation with CDFW, obtainment of an Incidental Take Permit per CESA, and compensatory mitigation at a minimum 1:1 habitat replacement ratio would be required.

### *Coastal California Gnatcatcher*

Coastal California gnatcatcher has a low potential to occur as a transient in the Disturbed Diegan Coastal Sage Scrub on-site during the non-breeding season but is not expected to nest on-site during the breeding season due to the absence of suitable and sufficient nesting habitat, routine human disturbance, and negative protocol survey results.

Potential direct impacts to California gnatcatchers could include displacement of individuals during construction due to lighting, noise,[2] and vibration. Injury or death could occur if individuals are struck by vehicles or construction equipment. The project could impact foraging transient California gnatcatcher through the permanent removal of 0.24 acre of Disturbed Diegan Coastal Sage Scrub habitat by the proposed development footprint and through vegetation management activities affecting an additional

[2] The USFWS typically considers noise more than 60 dBA Leq. (Equivalent Continuous Level) to constitute a risk of impacting nesting birds.

0.47 acre of Disturbed Diegan Coastal Sage Scrub located off-site within the FMZs. The introduction of fugitive dust, erosion, sedimentation, and potential runoff of hazardous materials during construction could indirectly impact California gnatcatchers by degrading adjacent habitat. Direct and indirect impacts to California gnatcatchers would be significant under CEQA and therefore mitigation is required.

Rincon conducted a protocol breeding season coastal California gnatcatcher survey in 2025. No gnatcatchers were observed or otherwise detected during the six breeding season surveys. As a result, the habitat on-site is determined to be unoccupied. Transient gnatcatchers have a low potential to move through the project site during the non-breeding season.

Mitigation Measures

Direct and indirect impacts to California gnatcatchers would be reduced to less than significant through implementation of MM-1 (Worker Environmental Awareness Program), MM-2 (Pre-Construction Biological Survey and Biological Monitoring), and MM-3 (Construction Best Management Practices). These measures require construction worker education training prior to the initiation of work, pre-construction survey and biological monitoring during initial vegetation and ground disturbance, and implementation of best management practices, such as delineating the construction site boundary, minimizing vehicle speeds, directional lighting, and noise shielding. MM-6 (Coastal California Gnatcatcher Surveys and Monitoring) requires pre-construction surveys and monitoring for California gnatcatchers and the establishment of avoidance measures in the event individuals are detected that may be impacted by project activities. As detailed under MM-4 (Mitigation for Disturbed Diegan Coastal Sage Scrub) and compliant with the MHCP for impacts to Habitat Group C, the project would be required to preserve Disturbed Diegan Coastal Sage Scrub at a 1:1 ratio through off-site acquisition, in lieu fees, purchase of credits from an approved mitigation bank, or a combination thereof. Off-site mitigation shall be achieved through the purchase of Diegan Coastal Sage Scrub credits at the Cleveland Corridor Conservation Bank. Also as detailed under MM-4 and compliant with the HMP for impacts to Habitat Group D, payment of the required HMP Mitigation Fee at a 1:1 ratio would be completed. In the event vegetation clearing is not initiated until after the 2027 California gnatcatcher breeding season, then updated protocol surveys would need to be conducted to confirm the status of the species on-site. Although not expected, if any California gnatcatchers are detected and impacts are unavoidable, an Incidental Take Permit would be required from USFWS for impacts within the City of San Marcos.

## Nesting Birds and Raptors

Common bird species were observed throughout the study area, including many species that occur as residents and breed in northern San Diego County. Native birds protected by the CFGC and the MBTA could potentially nest in all areas of the project site. Construction activity has the potential to directly impact nesting birds through the destruction of nests during vegetation clearing and reduced nesting success due to disturbance from noise and other project activities; or indirectly through impacts to nesting habitat or degradation of foraging habitat from invasive plants, fugitive dust, erosion, and runoff. Impacts to nesting birds protected under the CFGC and MBTA would be significant under CEQA.

Mitigation Measures

Impacts to birds protected by the CFGC and MBTA would be reduced to less than significant through implementation of MM-7 (Nesting Bird Surveys), which requires initial ground and vegetation disturbance to occur outside the nesting bird season, or if not feasible, completion of a nesting bird survey prior to the initiation of these activities during the breeding season. Active nests would be buffered by a qualified biologist and avoided by construction until complete. MM-1 (Worker Environmental Awareness Program) includes providing education to construction workers that may encounter nesting birds and "no work" buffers for avoidance of active nests. MM-2 (Pre-Construction Biological Survey and Biological Monitoring) requires a pre-construction survey and biological monitoring during initial vegetation and ground disturbance. MM-3 (Construction Best Management Practices) requires implementation of best

management practices, such as work boundary delineation prior to work start, minimizing vehicle speeds, directional lighting, noise shielding, and wildlife entrapment prevention.

### 5.1.2 Riparian Habitat, Sensitive Natural Communities, and Critical Habitat

The proposed project would have a significant effect on biological resources if it would:

*b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*

Impacts to vegetation communities in the project site are summarized in Table 1 and required mitigation ratios are provided in Table 2 and Table 3. The project would result in the direct removal of 0.24 acre of Disturbed Diegan Coastal Sage Scrub within the proposed development footprint and an 0.47 acre of impacts associated with vegetation management within the off-site FMZs, for a total impact of 0.71 acre. Disturbed Diegan Coastal Sage Scrub is considered a sensitive natural community and falls under Habitat Group C (Coastal Sage Scrub) in the MHCP and Habitat Group D (Unoccupied Coastal Sage Scrub) in the HMP, both which require mitigation at a 1:1 ratio. Of the total impact area, 0.18 acre is in the City of Carlsbad and 0.53 acre is within the City of San Marcos.

If the 0.18 acre of Disturbed Diegan Coastal Sage Scrub in the City of Carlsbad becomes occupied by California gnatcatcher, it would instead be classified as Habitat Group C (Gnatcatcher-Occupied Coastal Sage Scrub) in the HMP, requiring 2:1 mitigation. Direct impacts to Diegan Coastal Sage Scrub would be considered significant under CEQA.

No riparian habitat or designated or proposed critical habitat exists within the project site. The San Marcos Creek corridor, which contains riparian vegetation and overlaps with designed critical habitat for California gnatcatcher, is located north and east of the study area. However, the north and eastern edges of the project site are approximately 30 to 40 feet above (higher elevation) the western edge of this habitat and approximately 100 to 175 linear feet away. Therefore, the project will not result in direct impacts to riparian or critical habitat.

Fugitive dust, erosion, and runoff during construction could result in indirect impacts to riparian vegetation or California gnatcatcher critical habitat in the nearby San Marcos Creek corridor, or to adjacent Disturbed Diegan Coastal Sage Scrub habitat in the study area. However, these indirect impacts would be less than significant under CEQA due to the temporary and short duration of construction impacts from dust or runoff and implementation of standard construction best management practices. These habitats could also be indirectly impacted through degradation from the spread of invasive plants. However, these indirect impacts would be less than significant under CEQA as the site and surrounding area are heavily disturbed and urbanized, and ubiquitous non-native species are already prevalent and widespread and are not expected to substantially increase or spread due to the project.

#### Mitigation Measures

Direct impacts to 0.53 acre of Disturbed Diegan Coastal Sage Scrub within the City of San Marcos would be reduced to less than significant through implementation of MM-4 (Mitigation for Disturbed Diegan Coastal Sage Scrub), which includes 1:1 mitigation as required under the MHCP and the draft City of San Marcos Subarea plan. Mitigation can be accomplished through off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof and as approved by the Planning Manager and applicable wildlife agencies prior to issuance of the grading permit. Additionally, impacts to 0.18 acre of unoccupied Disturbed Diegan Coastal Sage Scrub within the City of Carlsbad would be mitigated through payment of an HMP Mitigation Fee at a 1:1 ratio (allowed for projects outside of the coastal zone). However, should the 0.18 acre of Disturbed Diegan Coastal Sage Scrub within the City of Carlsbad become occupied by California gnatcatcher, then impacts to 0.18 acre of gnatcatcher-occupied Disturbed Diegan Coastal Sage Scrub would be mitigated through payment of an HMP

Mitigation Fee at a 2:1 ratio. Potential indirect impacts to adjacent riparian habitat, California gnatcatcher critical habitat, and Disturbed Diegan Coastal Sage Scrub are less than significant under CEQA. However, impacts would be further reduced through the implementation of MM-1 (Worker Environmental Awareness Program), MM-2 (Pre-Construction Biological Survey and Biological Monitoring), and MM-3 (Construction Best Management Practices), which require construction worker education, pre-construction survey and biological monitoring during initial project activities, and implementation of best management practices including vehicle and equipment containment, spill containment and clean up, and stormwater protection measures.

### 5.1.3 Jurisdictional Waters and Wetlands

The proposed project would have a significant effect on biological resources if it would:

c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means*

No potential wetlands were identified within the project site during the literature review or aquatic resources delineation survey. Two concrete v-ditches, constructed during development of San Elijo and Rancho Santa Fe roads in 2005 for the purposes of stormwater conveyance and erosion control, occur in the western and northern portions of the project site. Upland vegetation has grown over portions of the ditches and vegetative debris has accumulated inside most areas of the ditches. No sign of recent flows was evident during the surveys. These ditches do not contain riparian vegetation and do not support critical habitat functions for aquatic life and stream-dependent terrestrial wildlife. Concrete v-ditches are not typically considered to comprise waters of the United States or waters of the State; therefore, no direct or indirect impacts to state or federally protected wetlands or waters have been identified on-site. Based on the aquatic resources delineation survey, the concrete ditches do not have a downstream connection to San Marcos Creek and were determined to not fall under the jurisdiction of the USACE, RWQCB, or CDFW. Therefore, no impacts to state or federal jurisdictional waters or wetlands would occur.

### 5.1.4 Wildlife Corridors

The proposed project would have a significant effect on biological resources if it would:

d) *Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.*

The project is not in a mapped regional wildlife linkage or corridor or in a locally identified open space, FPA, BCLA, or HMP Preserve Area, although portions of the proposed fuel modification zones slightly extend into areas mapped as MHCP conservation area and BCLA adjacent to San Marcos Creek. The project site is heavily disturbed and generally surrounded by residential, commercial, and industrial infrastructure and major roads. Local wildlife, including dispersing California gnatcatcher and migrating birds may use the San Marcos Creek corridor to the east of the project for movement; however, construction and operation of the project would not create a significant barrier for wildlife movement therein. Therefore, construction and operation of the project would not impact wildlife movement.

### 5.1.5 Local Policies and Ordinances

The proposed project would have a significant effect on biological resources if it would:

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

The Conservation and Open Space Element of the City of San Marcos *General Plan* includes policies related to the protection of biological resources. The applicable policies, as well as the project's consistency with these policies, are presented below:

- **Policy COS-1.1:** Support the protection of biological resources through the establishment, restoration, and conservation of high-quality habitat areas.

  The project site has been heavily disturbed, is surrounded by urbanization, and is not located in a high-priority habitat area. The project site is not in an open space, FPA, BCLA, or wildlife movement corridor, although portions of the proposed fuel modification zone slightly extend into areas mapped as MHCP conservation area and BCLA adjacent to San Marcos Creek. Project implementation would permanently impact 0.71 acre of Disturbed Diegan Coastal Sage Scrub. Impacts to this habitat would be subject to 1:1 mitigation as described in MM-4 (Mitigation for Disturbed Diegan Coastal Sage Scrub). This can be accomplished through off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof as approved by the Planning Manager. Therefore, implementation of the project does not conflict with this policy.

- **Policy COS-1.2:** Ensure that new development, including Capital Improvement Projects, maintain the biotic habitat value of riparian areas, oak woodlands, habitat linkages, and other sensitive habitats.

  The project site does not support any riparian areas or oak woodlands and is not located in a wildlife habitat linkage or movement corridor. As described above, project implementation would permanently impact 0.71 acre of Disturbed Diegan Coastal Sage Scrub. Impacts to this habitat would be subject to 1:1 mitigation as described in MM-4 (Mitigation for Disturbed Diegan Coastal Sage Scrub). The project would therefore not conflict with this policy.

- **Policy COS-2.1:** Provide and protect open space areas throughout the City for its recreational, agricultural, safety, and environmental value.

  The project is not located in a designated open space or recreational area. The project site has been heavily disturbed and is surrounded by urbanization. Project implementation would permanently impact 0.71 acre of Disturbed Diegan Coastal Sage Scrub. Impacts to this habitat would be subject to 1:1 mitigation as described in MM-4 (Mitigation for Disturbed Diegan Coastal Sage Scrub). Therefore, implementation of the project does not conflict with this policy.

- **Policy COS-2.2:** Limit, to the extent feasible, the conversion of open space to urban uses and place a high priority on acquiring and preserving open space lands for recreation, habitat protection and enhancement, flood hazard management, water and agricultural resources protection, and overall community benefit.

  The project site has been heavily disturbed, is surrounded by urbanization, and is not located in a high-priority habitat area. The project is not located in a designated open space or high-value recreational area or flood hazard or water resource management area and does not include any current or ongoing habitat restoration efforts. Project implementation would permanently impact 0.71 acre of Disturbed Diegan Coastal Sage Scrub. Impacts to this habitat would be subject to 1:1 mitigation as described in MM-4 (Mitigation for Disturbed Diegan Coastal Sage Scrub). This can be accomplished through off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof as approved by the Planning Manager. Therefore, implementation of the project does not conflict with this policy.

- **Policy COS-2.6:** Preserve healthy mature trees where feasible; where removal is necessary, trees shall be replaced at a ratio of 1:1.

  No mature trees exist within the project site; therefore, implementation of the project does not conflict with this policy.

The Open Space, Conservation, and Recreation Element of the City of Carlsbad *General Plan* includes policies related to the protection of biological resources. The applicable policies, as well as the project's consistency with these policies, are presented below:

- **Policy 4-P.9:** Maintain and implement the City's Habitat Management Plan (HMP), including the requirement that all development projects comply with the HMP and related documents. Require assessments of biological resources prior to approval of any development on site with sensitive habitat, as depicted in Figure 4-3.

  The project would comply with the City of Carlsbad HMP. This Full Biological Resources Report serves as an assessment of biological resources on the project site; therefore, implementation of the project does not conflict with this policy.

- **Policy 4-P.10:** Consider working with private foundations and organizations or designating a conservancy agency to be responsible for protection, maintenance, monitoring and liability of open space lands.

  No open space lands are proposed within the project site; therefore, implementation of the project does not conflict with this policy.

- **Policy 4-P.11**: Ensure that the improvements recommended for open space areas are appropriate for the type of open space and the use proposed. No improvements (excluding necessary infrastructure) shall be made in environmentally sensitive areas, except to enhance the environmental value of the areas.

  The project site is not located within a designated open space area or environmentally sensitive area; therefore, implementation of the project does not conflict with this policy.

- **Policy 4-P.12**: Continue participation in regional planning efforts to protect habitat and environmentally sensitive species.

  With implementation of the mitigation measures in Section 6.2, the project would preserve and protect Diegan Coastal Sage Scrub and environmentally sensitive species; therefore, implementation of the project does not conflict with this policy.

- **Policy 4-P.13**: Support innovative site design techniques such as cluster-type housing and transfer-of-development-rights to preserve sensitive environmental resources and to allow development projects to comply with the City's Habitat Management Plan.

  With implementation of the mitigation measures in Section 6.2, the project would preserve sensitive environmental resources and would comply with the City of Carlsbad HMP; therefore, implementation of the project does not conflict with this policy.

- **Policy 4-P.14:** Assure that development or grading on hillsides (if allowed) relates to the slope of the land in order to preserve the integrity and appearance of natural hillsides and other landforms wherever possible.

  The project would not be developed on a hillside; therefore, implementation of the project does not conflict with this policy.

- **Policy 4-P.15**: Maintain functional wildlife corridors and habitat linkage in order to contribute to regional biodiversity and the viability of rare, unique or sensitive biological resources throughout the City.

  The project is not in a mapped regional wildlife linkage or corridor or in a locally identified open space, FPA, BCLA, or HMP Preserve Area, although portions of the proposed fuel modification zone slightly extend into areas mapped as MHCP conservation area and BCLA adjacent to San Marcos Creek. The project site is heavily disturbed and generally surrounded by residential, commercial, and industrial infrastructure and major roads. Local wildlife, including dispersing California gnatcatcher, and migrating birds may use the San Marcos Creek corridor to the east of the project for movement; however, construction and operation of the project would not create a significant barrier for wildlife

movement therein. Therefore, construction and operation of the project would not impact wildlife movement and implementation of the project does not conflict with this policy.

- **Policy 4-P.18**: Require that, at the time of any discretionary approval, any land identified as open space for its habitat or scenic value shall have an appropriate easement and/or land use and zoning designation placed on it for resource protection.

  The project site is not identified as open space or HMP Preserve Area and therefore does not require an easement and/or land use and zoning designation placed on it for resources protection. Therefore, implementation of the project does not conflict with this policy.

- **Policy 4-P.19**: Require a City permit for any grading, grubbing, or clearing of vegetation in undeveloped areas, with appropriate penalties for violations.

  The project applicant is seeking obtainment of the required City permits for the grading, grubbing, and clearing of vegetation associated with the project; therefore, implementation of the project does not conflict with this policy.

City of Carlsbad Municipal Code 21.210.040, Habitat Preservation Requirements, sets forth provisions that apply to all development projects. The applicable provisions, as well as the project's consistency with these provisions, are presented below:

- A. Hardline Preserve Areas. Properties or areas of the city identified in the HMP as existing hardline preserve areas shall be prohibited from development located in or encroaching into the hardline preserve area. Minor modifications to the boundaries of the proposed hardline preserve area shall only be allowed if approved as an equivalency finding pursuant to Section 21.210.090 of this chapter. Incidental take of covered species and direct impacts to habitat shall only occur outside the boundaries of the hardline preserve areas. Hardline preserve areas are to be designated as biological open space and preserved in such designation in perpetuity.

  The project site is not within a hardline preserve area and development is allowed on the project site. Therefore, implementation of the project does not conflict with this provision.

- B. Standards Areas. Properties or areas of the city identified in the HMP as standards areas (HMP Figure 26) shall comply with all the habitat preservation standards contained in Section D.3(C) of the HMP which are incorporated by reference. Incidental take of covered species and direct impacts to habitat shall not be permitted in these areas until a development project is approved which complies with the standards and provides any land to the habitat preserve areas as required by the standards.

  The project site is not within a standards area and incidental take of covered species and direct impacts to habitat is permitted on the project site. Therefore, implementation of the project does not conflict with this provision.

- C. Additional Mitigation 1. All development projects which impact habitat shall provide on-site or off-site replacement habitat in accordance with the mitigation ratios contained in Table 11 in Section D.6 of the HMP. Preference shall be given for on-site mitigation unless off-site mitigation provides for improved quality or configuration of open space. Replacement habitat shall be identified as part of the approval of the development project.

  The project applicant will mitigate impacts to 0.18 acre of unoccupied Disturbed Diegan Coastal Sage Scrub within the City of Carlsbad by paying an HMP Mitigation Fee at a ratio of 1:1 in accordance with Table 11. Therefore, implementation of the project does not conflict with this provision.

  C. Additional Mitigation 2. Larger, connected areas of habitat that is not impacted by development or brush management and preserved on-site within the boundaries of the property where the project is located shall be credited toward the mitigation ratios.

The project site is not located on a larger, connected area of habitat. Therefore, implementation of the project does not conflict with this provision.

- D. Additional Mitigation 3. If at least 67 percent of the habitat on the property where the development project is located is preserved, the project shall not be required to obtain off-site mitigation land in compliance with the mitigation ratios except if: 1) the project would otherwise be inconsistent with the HMP, IA, MHCP, and NCCP and 10(a)1(B) permits; 2) the proposed on-site preservation would reduce the City's ability to meet the specific habitat conservation obligations in the HMP; and/or 3) the areas to be preserved on-site would not benefit the City's preserve system (e.g., habitat exists in a small, isolated patch or patches outside of the FPA, and containing no narrow endemic species).

  The project applicant is not proposing to preserve any habitat on the project site. The project is consisted with the HMP, IA, MHCP, and NCCP and 10(a)1(B) permits. Therefore, implementation of the project would not conflict with this provision.

- C. Additional Mitigation.4. Mitigation of impacts through habitat restoration or habitat creation shall be allowed in limited circumstances and shall be mitigated at a higher ratio as determined by the City in consultation with the Wildlife Agencies.

  The project does not involve mitigation of impacts through habitat restoration or habitat creation. The project applicant will mitigate impacts to 0.18 acre of unoccupied Disturbed Diegan Coastal Sage Scrub within the City of Carlsbad by paying an HMP Mitigation Fee at a ratio of 1:1. Therefore, implementation of the project does not conflict with this provision.

- D. Additional Conditions 1. Impacts to narrow endemic species shall be avoided to the maximum extent practicable in conformance with the narrow endemic species policy contained in the MHCP and incorporated herein by reference, however where impacts to a narrow endemic species population are demonstrated to be unavoidable, impacts shall be limited to five percent of the total narrow endemic species population within the boundaries of the property where the development project is located. Relocation of the narrow endemic species cannot be used to meet the five percent numeric standard.

  Project implementation would not impact any narrow endemic species. Therefore, implementation of the project would not conflict with this provision.

- D. Additional Conditions 2. Grading for a development project during wildlife breeding seasons shall be prohibited, except as provided by the HMP and MHCP, unless a minor adjustment is specifically approved by the City and the Wildlife Agencies.

  With implementation of the proposed mitigation, project implementation would not result in any impacts to breeding special status species wildlife. The project site is not within a critical wildlife area. Therefore, implementation of the project would not conflict with this provision.

- D. Additional Conditions 3. All development projects shall be located and designed to minimize overall impacts to natural habitat.

  The project has been located and designated to minimize overall impacts to natural habitat. Therefore, implementation of the project would not conflict with this provision.

- D. Additional Conditions 4. All fuel modification (brush management) zones required as a result of the development project, and as required by the Fire Marshal, shall be located outside the preserve areas, shall be considered impacted and shall be mitigated according to subsection **C** of this section.

  All fuel modification zones are included within the project disturbance limits and have been evaluated as part of the project impact analysis. The project applicant will mitigate impacts to 0.18 acre of unoccupied Disturbed Diegan Coastal Sage Scrub within the City of Carlsbad by paying an HMP Mitigation Fee at a ratio of 1:1. Therefore, implementation of the project does not conflict with this provision.

D. Additional Conditions 5. Impacts to wetland and riparian habitats shall be avoided to the maximum extent possible. All development projects that would affect these habitats must demonstrate that the impacts: 1) cannot be avoided by a feasible alternative; 2) have been minimized to the maximum extent practicable; 3) mitigated at a minimum 3:1 ratio; and 4) will be mitigated in ways that assure no net loss of habitat value or function.

Project implementation will not impact any wetland or riparian habitats. Therefore, implementation of the project does not conflict with this provision.

D. Additional Conditions 6. Impacts to vernal pools shall be avoided. In the event that no project alternative is feasible that avoids all impacts on a particular property, the impacts must be minimized and mitigated to achieve a no net loss of biological functions and values through strict adherence to the wetland avoidance and mitigation criteria (Section 3.6.1 of MHCP Volume I), standard best management practices (MHCP Appendix B), and revegetation guidelines (MHCP Appendix C).

The project would not result in impacts to any vernal pools. Therefore, implementation of the project does not conflict with this provision.

D. Additional Conditions 7. In the standards areas, 67 percent of coastal sage scrub and 75 percent of the gnatcatchers located in the area shall be preserved. Some areas may preserve more or less than these percentages due to parcel size, location, resources, or long-term conservation potential as approved by the City and the Wildlife Agencies.

The project is not located within a standards area. Therefore, implementation of the project does not conflict with this provision.

- D. Additional Conditions 8. All development projects shall comply with the applicable standards of the MHCP (dated March 2003) and the measures to minimize impacts to covered species described in Section D.6, Table 9, and Appendix C of the HMP.

  The project complies with the applicable standards of the MHCP and the measures to minimize impacts to covered species described in the HMP. Therefore, implementation of the project does not conflict with this provision.

- D. Additional Conditions 9. All development projects located in the coastal zone shall also be required to comply with the additional, general conservation standards contained in Section D.7, Standards 7-1 through 7-12 of the HMP and the additional, parcel-specific conservation standards contained in Section D.7, Standards 7-13 and 7-14 of the HMP as incorporated into the local coastal program.

  The project site is not located in the coastal zone. Therefore, implementation of the project does not conflict with this provision.

- E. Habitat In-Lieu Mitigation Fee. Development projects which are subject to additional mitigation pursuant to subsection **C** of this section and which impact habitat types D, E, and F listed in Table 11 of the HMP shall pay a fee in an amount to be determined by City Council resolution, in lieu of providing on-site or off-site mitigation land. The fee shall be used to fund the acquisition of habitat land in the MHCP as required by the HMP and implementing agreement. The fee shall be adjusted as necessary to acquire suitable habitat on a per acre basis comparable to the land being developed.

  Project implementation will impact habitat types D and F. Mitigation for these types will involve payment of the HMP Mitigation Fee as required by Table 11. Therefore, implementation of the project does not conflict with this provision.

### 5.1.6 Habitat Conservation Plans

The proposed project would have a significant effect on biological resources if it would:

*f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.*

The project site is within the County's MHCP planning area. The west side of the project site is in the City of Carlsbad's HMP planning area and the central and eastern sides of the site are in the City of San Marcos Draft (not formally approved or adopted) Subarea planning area. However, the project is not located in an open space, FPA, BCLA, HMP Preserve Area, or wildlife movement corridor. The project site is generally within a Core Gnatcatcher Conservation area identified in the MHCP. However, the scrub habitat on-site is fragmented by development, sparse, and highly disturbed such that it is of low quality and not suitable for coastal California gnatcatcher breeding (and no individuals have been documented on or near the project site). As such, the project site does not qualify as a California gnatcatcher core breeding area. As a covered species under the HMP, take authorization of non-breeding, transient California gnatcatcher, if necessary, would be provided under the HMP for the portion of the site that is within the City of Carlsbad. However, take authorization of non-breeding California gnatcatcher for the portion of the site that is within the City of San Marcos, if necessary, would be required from USFWS. Gnatcatchers were not observed or otherwise detected during protocol breeding season surveys in 2025. Therefore, the Disturbed Diegan Coastal Scrub within the project site is considered unoccupied. However, surveys will need to be updated if project vegetation clearing does not occur until after the 2027 breeding season. Although not expected, if California gnatcatcher is detected during surveys then the Disturbed Diegan Coastal Sage Scrub on-site would be considered occupied and impacts within the City of San Marcos would require take authorization from USFWS.

Project impacts to 0.53 acre of Disturbed Diegan Coastal Sage Scrub within the City of San Marcos and 0.18 acre of unoccupied Disturbed Diegan Coastal Sage Scrub within the City of Carlsbad requires mitigation.

With implementation of MM-1 through MM-4 and MM-6 (Coastal California Gnatcatcher Surveys and Monitoring), as discussed above and provided below, impacts to non-breeding, transient California gnatcatcher would be reduced to less than significant, and impacts to Disturbed Diegan Coastal Sage Scrub will be reduced to a less than significant level. Therefore, the project will not conflict with any adopted MHCP, HCP, Natural Community Conservation Plan, or other approved local, regional, or state HCPs.

## 5.2 Summary of Mitigation Measures

The following mitigation measures are proposed to reduce potential project impacts to a less-than-significant level.

### MM-1 Worker Environmental Awareness Program

The applicant shall implement a WEAP for the construction crew that will be developed by a qualified biologist. Each employee (including temporary, contractors, and subcontractors) will receive the WEAP presentation on the first day of project work. They will be advised of sensitive species and habitats in the area and avoidance measures being implemented to protect them at the site. At a minimum, the WEAP will include the following topics: occurrence of listed and sensitive species that may occur in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of federal and State laws, reporting requirements, and project features and conditions designed to reduce direct and indirect impacts to these species, role of the Biological Monitor and their contract information, and worker responsibilities to maintain compliance with mitigation measures while working at the site. An acknowledgement form signed by each worker indicating that WEAP training has been completed shall be kept on record.

## MM-2 Pre-Construction Biological Survey and Biological Monitoring

Prior to initial ground-disturbing project activities, including vegetation removal, a qualified biologist shall conduct a pre-construction survey to document site conditions, identify any wildlife that may be in harm's way, confirm the project disturbance limits including the fuel modification zones, and to provide recommendations to avoid unnecessary impacts to sensitive biological resources. During construction, a qualified biologist shall be present during initial vegetation clearing and ground-disturbing activities and shall have the authority to halt project activities that may be in violation of the protective measures.

If wildlife, including special-status species such as monarch butterfly, are found within the immediate project disturbance area and the individual(s) are likely to be killed or injured, construction activities that could potential impact them will be temporarily halted until the individual(s) have left the site. If necessary, a qualified biologist holding the appropriate permits and authorization shall be allowed sufficient time to capture and relocate the animal(s) from the project site before construction activities begin. The qualified biologist shall relocate the individual(s) the shortest distance possible to a location that contains suitable habitat not likely to be affected by project activities. The biologist shall maintain records of any individual observed, captured, or relocated and will maintain a daily monitoring log when on site. The biologist shall report observations of sensitive-species to the CNDDB.

## MM-3 Construction Best Management Practices

Standard construction Best Management Practices will be implemented during construction and shall include the following:

- Approved construction work area limits shall be delineated and marked clearly, by flagging, temporary orange construction fencing, or similar, in the field prior to the start of project activities. The marked boundaries shall be maintained and clearly visible to personnel on foot and by heavy equipment operators for the duration of the construction.
- Vehicle speeds shall not exceed 10 miles per hour in all construction areas and shall be clearly posted.
- Vehicles and equipment shall be driven and parked on pavement, existing roads, or previously disturbed and compacted bare ground prior to the clearing of vegetation or site-wide grading to the greatest extent feasible.
- Drip pans or other suitable containment shall be placed under staged equipment and vehicles, which shall be regularly inspected, maintained, and kept in good working condition and free of leaks.
- Spills shall be immediately contained and cleaned up and any contaminated materials shall be properly disposed. A spill kit shall be on the project site and readily available.
- Chemicals and pesticides shall not be used.
- Pets and firearms shall not be allowed at the site.
- Trash shall be removed from the site daily or be stored in wildlife proof containers. Construction personnel shall not feed or otherwise attract wildlife to the construction area.
- Stormwater protection (i.e., straw waddles, silt fence) shall be employed to prevent spills, runoff, or sediment from entering nearby habitats. These materials shall be weed free, and no project debris or rubbish shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into adjacent habitat.
- All pipes, culverts, or similar structures with a 4-inch diameter or greater opening that are stored or installed on-site shall be capped or the opening otherwise covered and secured to prevent wildlife entry and entrapment. Pipes, culverts, or similar structures stored on-site overnight shall be thoroughly inspected for wildlife, including nesting birds, before being subsequently curried, capped, or otherwise used or moved in any way.
- To prevent inadvertent entrapment of wildlife during construction, all excavated wells, steep-walled holes, trenches, or similar that are more than 2 feet deep shall be covered with plywood or similar

materials and the edges sealed at the close of each working day. Alternatively, a wildlife escape ramp may be installed and maintained.

- Construction lighting will be directed toward the work area and away from adjacent habitats.
- Construction noise in excess of 60 dBA Leq. shall be shielded and as feasible, directed away from adjacent habitats.

## MM-4 Mitigation for Disturbed Diegan Coastal Sage Scrub

The MHCP has classified vegetation communities and landcover into six classes, as shown in Table 2 based on rarity and ecological importance (AMEC et al. 2003a, 2003b). The MHCP has also established mitigation ratios based upon whether the impacted habitat is within or outside an FPA.

### Table 2 MHCP Habitat Group and Type and Associated Mitigation Ratios

| Habitat Group | Type | Mitigation Ratio by Location of Impacted Habitat outside Focus Planning Area | Mitigation Ratio by Location of Impacted Habitat within Focused Planning Area |
|---|---|---|---|
| A | Coastal salt marsh, alkali marsh, freshwater marsh, estuarine, salt pan/mudflats, riparian forest, riparian woodland, riparian scrub, vernal pool, disturbed wetland, flood channel, fresh water | No net loss goal (mitigation varies by type of replacement habitat) | No net loss goal (mitigation varies by type of replacement habitat) |
| B | Southern coastal bluff scrub, maritime succulent scrub, southern maritime chaparral, Engelmann oak woodland, coast live oak woodland, native grassland | 2:1 | 3:1 |
| C | Coastal sage scrub, coastal sage/chaparral mix | 1:1 | 2:1 |
| D | Chaparral (excluding southern maritime chaparral) | 0.5:1 | 1:1 |
| E | Annual (non-native) grassland | 0.5:1 | 0:5:1 |
| F | Disturbed, agriculture land, eucalyptus | None | None |

Source: AMEC et al. 2003a, 2003b

The HMP has classified vegetation communities and landcover into six classes, as shown in Table 3 based on rarity and ecological importance (City of Carlsbad 2004). This table is based on Table 11 Mitigation Ratios for Impacts to HMP Habitats in the HMP.

### Table 3 HMP Habitat Group and Type and Associated Mitigation Ratios

| Habitat Group | Type | Mitigation Ratio/Requirement by Type of Impacted Habitat |
|---|---|---|
| A | Coastal salt marsh, alkali marsh, freshwater marsh, estuarine, salt pan/mudflats, riparian forest, riparian woodland, riparian scrub, vernal pools, disturbed wetlands, flood channel, fresh water Engelmann oak woodland, coast live oak woodland | No net loss goal (mitigation ratio varies by type of replacement habitat) |
| B | Beach, southern coastal bluff scrub, maritime succulent scrub, southern maritime chaparral, native grass | 3:1 |
| C | Gnatcatcher – Occupied coastal sage scrub | 2:1 |
| D | Unoccupied coastal sage scrub, coastal sage/chaparral mix, chaparral (excluding southern maritime chaparral) | 1:1 |
| E | Annual (non-native) grassland | 0.5:1 |
| F | Disturbed lands, eucalyptus, agriculture lands | Mitigation Fee |

Although disturbed and unoccupied, for mitigation purposes, the Disturbed Diegan Coastal Sage Scrub on site is considered to have the same sensitivity under the MHCP as Habitat Group C and under the HMP as Habitat Group D. The impact acreage addressed by this mitigation measure includes impacts associated with both the proposed development footprint and required fuel modification zones. The project site is not within an MHCP FPA; therefore, the permanent loss of 0.53 acre of Disturbed Diegan Coastal Sage Scrub within the City of San Marcos shall be mitigated at a minimum 1:1 ratio. As on-site mitigation is likely not feasible, the removal of 0.53 acre of Disturbed Diegan Coastal Sage Scrub is expected be mitigated by the project applicant through off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof as approved by the Planning Manager and wildlife agencies prior to issuance of the grading permit. Section 5.2.1 of the Draft Subarea Plan for San Marcos references the preferred order of mitigation to be on-site mitigation, off site acquisition, in-lieu fees, and mitigation credits. Off-site mitigation shall be achieved through the purchase of Diegan Coastal Sage Scrub credits at the Cleveland Corridor Conservation Bank.

The permanent loss of 0.18 acre of unoccupied coastal sage scrub habitat within the City of Carlsbad shall be mitigated by payment of an HMP Mitigation Fee at a 1:1 ratio.

## MM-5 Crotch's Bumble Bee Surveys

Focused surveys for Crotch's bumble bee shall be conducted by a qualified biologist, with expertise in surveying for bumble bees, within the project impact footprint, including fuel modification zones, prior to the start of ground-disturbing construction activities. The focused surveys shall be conducted prior to project implementation, and shall include (1) a habitat assessment, (2) foraging surveys, and (3) nesting surveys, in accordance with the recommendations described in the Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species, released by CDFW on June 6, 2023, or the most current version at the time of construction. If more than 1 year after the completion of the focused Crotch's bumble bee surveys (i.e., date of last survey) has passed before ground disturbance has been initiated within any of the project component areas, focused surveys shall be repeated within such project areas.

The habitat assessment shall be conducted concurrently with the foraging and nesting surveys, and shall at a minimum, include historical and current species occurrences; document potential on-site habitat, including foraging, nesting, and/or overwintering resources; and identify which plant species are in bloom during the foraging and nesting surveys, as well as their percent cover. For the purpose of this mitigation measure, potential nest resources are defined as abandoned small mammal burrows, bunch grasses with a duff layer, grass thatch, hollow trees, rock piles, brush piles, and human-made structures that may support bumble bee colonies such as bird houses.

Nesting surveys shall occur during the Queen Flight Season through the Colony Active Period (February 1 through August 31 for Crotch's bumble bee). These surveys shall be conducted concurrently with foraging surveys described below. Potential nesting sites should be surveyed for active Crotch's bumble bee colonies either through observations of queens searching for nesting sites or by looking for concentrated bumble bee activity entering and exiting a given area. Potential nesting sites investigated by colony founding queens should be GPS marked if the queen exhibits signs of interest in the potential site (e.g. she doesn't emerge from the site within a few minutes and then continues to nest search). Potential nesting sites identified during the queen nest searching phase shall be evaluated later during the Colony Active Period to determine whether an active colony has been established. Potential nest sites in project areas will be observed for up to 5 minutes during the Colony Active Period to monitor for Crotch's bumble bees entering or exiting. If a nest site is confirmed to be occupied by Crotch's bumble bees, the location GPS coordinates will be recorded; however, no flagging or visual marking of the nest location will occur until just prior to and during construction.

Foraging surveys shall include at least three on-site surveys that are spaced two to four weeks apart. The timing of these surveys shall coincide with the Colony Active Period (April 1 through August 31 for Crotch's bumble bee). Surveys may occur between 1 hour after sunrise and 2 hours before sunset. Surveys shall not be conducted during wet conditions (e.g., foggy, raining, or drizzling) and surveyors shall wait at least 1 hour following rain. Optimal surveys are conducted when there are sunny to partly sunny skies, temperatures are between 65°F and 90°F, and winds are less than 8 mph. Surveys may be conducted outside these weather parameters if other bees or butterflies are observed flying. A qualified biologist who is in possession of a valid MOU with CDFW (and valid Scientific Collecting Permit, if applicable) shall conduct capture surveys and record non-lethal photo vouchers of all captured bumble bees in accordance with the CDFW Survey Considerations for CEQA Candidate Bumble Bee Species document (June 2023).

A written survey report shall be submitted to the Cities of San Marcos and Carlsbad and CDFW within 30 days following completion of the focused surveys. The report shall include survey methods, weather conditions, and survey results, including a detailed habitat assessment, floral resources blooming and percent cover, bumble bee species observed and floral species bumble bees observed visiting, nesting and overwintering habitat surveyed, and a figure showing the locations of any Crotch's bumble bee nest sites or individuals observed. The survey report shall also include the qualifications/resumes of the surveyor(s) and approved taxonomist(s) for identification of photo vouchers. If Crotch's bumble bee nests or individuals are observed, the location information shall be submitted to the California Natural Diversity Database at the time of, or prior to, submittal of the survey report.

If Crotch's bumble bee is not detected during the focused surveys, no further action or mitigation would be required. If Crotch's bumble bee is detected, the project proponent, in consultation with a qualified entomologist, will develop a Crotch's Bumble Bee Avoidance Plan to fully avoid direct and indirect impacts to this species. If impacts to Crotch's bumble bee cannot be feasibly avoided, the project applicant will consult with CDFW and obtain appropriate take authorization from CDFW through the CESA Incidental Take Permit process.

- In the event that avoidance is not possible, and an Incidental Take Permit is needed, mitigation for direct impacts to Crotch's bumble bee shall be fulfilled through compensatory mitigation at a minimum 1:1 habitat replacement of equal or better functions and values to those impacted by the project, or as otherwise determined through the Incidental Take Permit process. Mitigation shall be accomplished either through off-site conservation or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate shall be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source shall be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount shall be established following the completion of a project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record shall take into account all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s).

## MM-6 Coastal California Gnatcatcher Surveys and Monitoring

In the event vegetation clearing is not initiated until after the 2027 California gnatcatcher breeding season, then updated protocol surveys would need to be conducted to confirm the status of the species on-site. A qualified biologist with a USFWS 10(a)(1)(A) permit for California gnatcatcher shall survey the project site and up to a 500-foot buffer, as accessible and where potential suitable habitat exists, within 10 calendar days prior to the initiation of project activities and generally following the guidance of the current USFWS survey protocol for the species, such as surveying between 6:00 am and 12:00 pm during weather conducive to detection. This pre-construction survey is not intended to be a full protocol-level survey in accordance with the USFWS survey protocol for this species. Results of the survey shall be provided to the City of San Marcos and City of Carlsbad within 10 days following the survey. If

gnatcatcher is not detected during this pre-construction survey, no additional actions or mitigation is required.

If California gnatcatcher is detected during the pre-construction survey, the following shall apply.

- A qualified biologist shall monitor for gnatcatcher daily during construction until all vegetation clearing and initial grading have been completed. The biologist shall have the authority to halt work if California gnatcatcher is observed and may be impacted by project activities. Work may resume once the gnatcatcher has left the area of its own volition or would otherwise not be impacted by work activities, as determined by the monitoring biologist. If the gnatcatcher does not disperse off-site and is located within the San Marcos MHCP side of the project site, then consultation with USFWS shall be required. If the gnatcatcher is located within the Carlsbad HMP side of the project site, then the qualified biological monitor may gently flush the gnatcatcher from the project impact area. Additionally, payment of an HMP mitigation fee to achieve the required 2:1 ratio for gnatcatcher-occupied Diegan Coastal Sage Scrub shall be required.

## MM-7 Nesting Bird Surveys

Vegetation and initial ground disturbing activities, including activities within the fuel modification zones, shall be conducted outside the bird breeding season (generally February 1 to August 15; raptors January 1 to August 31). If this is not feasible, or work is initiated but then delayed until the bird breeding season, a qualified biologist shall conduct a nesting bird survey(s) no more than three days prior to the start of vegetation and ground-disturbing activities. Once initiated, if work is stopped for more than seven days during the nesting season, a follow-up survey shall be conducted prior to the restart of activities. Surveys shall include the disturbance area plus a 100-foot buffer for passerine species, or as determined by a qualified biologist based on the species' biology, and up to a 500-foot buffer for raptors and listed species, as feasible.

If an active nest is identified, an appropriate non-disturbance buffer shall be established by the biologist within which no work activity that could adversely impact the nest would be allowed. The size of the avoidance buffer shall be established by the qualified biologist on a case-by-case basis based on the species and site-specific conditions such as topography, line-of-sight to the nest, or the existing ambient level of activity. The nest and buffer area shall be monitored by the biologist until the young have fledged and are independent of the nest site or the nest is determined to be inactive. At the discretion of the qualified biologist, short duration, low intensity work may occur within a buffer. The qualified biologist shall be present to monitor the activities and evaluate the nesting individuals for signs of adverse disturbance. The biologist shall have the authority to halt activities that may lead to nest failure.

# 6 Limitations, Assumptions, and Use Reliance

This Biological Resources Report has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. The reconnaissance biological survey conducted as part of this assessment may not have been performed during a particular blooming period, nesting period, or portion of a season. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, review of CNDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary regarding accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, Rincon gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of publicly available geographic information system data. Pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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# 8 List of Preparers

### Rincon Consultants, Inc.

*Primary Authors*

- Nick Julier, Biologist
- Stella Moore, Biologist
- Kevin Gugerty, Biologist

*Technical Review*

- Jared Reed, Senior Biologist
- Jennifer M. Turner, M.S., Director
- Angie Harbin, Director—Natural Resources
- Thomas Liddicoat, Director – Natural Resources

*Graphics*

- Abby Robles, Geographic Information System Analyst

*Publishing and Technical Edits*

- Alvin Flores, Publishing Specialist
- Dario Campos, Formatting and Technical Editor
- Yaritza Ramirez, Publishing Specialist

*Field Reconnaissance Survey*

- Nick Julier, Biologist

*Aquatic Resources Delineation*

- Kevin Gugerty, Biologist

*2025 Breeding Season Coastal California Gnatcatcher Protocol Surveys*

- Molly Morrissey, Biologist

# Appendix A

Regulatory Setting

# Regulatory Setting

Special-status habitats are vegetation types, associations, or sub-associations that support concentrations of special-status plant or animal species, are of relatively limited distribution, or are of particular value to wildlife.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g., United States Fish and Wildlife Service [USFWS]), pursuant to the federal Endangered Species Act (ESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e., California Fish and Game Commission), pursuant to the California Endangered Species Act (CESA) or the California Native Plant Protection Act (NPPA). Some species are considered rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g., Audubon Society, California Native Plant Society, The Wildlife Society), and the scientific community.

The following is a brief summary of the regulatory context under which biological resources are managed at the federal and State levels. A number of federal and State statutes provide a regulatory structure that guides the protection of biological resources. Federal and State agencies with the responsibility for protection of biological resources include the following:

- United States Army Corps of Engineers (USACE; wetlands and other waters of the United States)
- USFWS (federally listed species and migratory birds)
- San Diego Regional Water Quality Control Board (RWQCB) (waters of the State)
- California Department Fish and Wildlife (CDFW; riparian areas, streambeds, and lakes; state listed species; nesting birds, marine resources)
- California Coastal Commission

## United States Army Corps of Engineers

The USACE is responsible for administering several federal programs related to ensuring the quality and navigability of the nation’s waters.

### Clean Water Act Section 404

Congress enacted the Clean Water Act (CWA) “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.” The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the law was significantly reorganized and expanded in 1972. “Clean Water Act” became the law’s common name with amendments in 1972.

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Section 404 of the CWA authorizes the Secretary of the Army, acting through the USACE, to issue permits regulating the discharge of dredged or fill materials into the “navigable waters at specified disposal sites.” Section 404 requires that a permit be issued before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from regulation under Section 404 (e.g., certain farming and forestry activities).

#### Waters of the United States

The USACE and United States Environmental Protection Agency (USEPA) have undertaken several efforts to modernize their regulations defining “waters of the United States” (e.g., the 2015 Clean Water Rule and 2020 Navigable Waters Protection Rule), but these efforts have been frustrated by legal challenges which

have invalidated the updated regulations. As a result of the Supreme Court ruling in *Sackett v. Environmental Protection Agency*, EPA and USACE issued a final rule that amends the "Revised Definition of 'Waters of the United States'" to conform key aspects of the regulatory text to the United States Supreme Court's decision (88 Federal Register 61964–61969, September 8, 2023).

Under the "Revised Definition of 'Waters of the United States'; Conforming" rule, the term "waters of the United States" is defined as follows (33 Code of Federal Regulations [CFR] 328.3[a]):

(1) Waters which are:
   (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
   (ii) The territorial seas; or
   (iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:
   (i) Waters identified in paragraph (a)(1) of this section; or
   (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

In addition, the amended regulations include eight types of excluded waters (33 CFR 328.3[b]) which are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

The lateral limits of USACE jurisdiction in non-tidal waters is defined by the "ordinary high-water mark" (OHWM) unless adjacent wetlands are present. The OHWM is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or the presence of debris (33 CFR 328.3(e)). As such, waters are recognized in the field by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within, or adjacent to, waters of the United States, the lateral limits of USACE jurisdiction extend beyond the OHWM to the outer edge of the wetlands (33 CFR 328.4 (c)). The upstream limit of jurisdiction in the absence of adjacent wetlands is the point beyond which the OHWM is no longer perceptible (33 CFR 328.4; see also 51 FR 41217).

### Wetlands

The USACE defines wetlands as "those areas that are inundated or saturated by surface or groundwater 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" (33 CFR 328.3). Indicators of three wetland parameters (hydric soils, hydrophytic vegetation, and wetlands hydrology), as determined by site investigation, must be present at a site for USACE to classify the site as a wetland (Environmental Laboratory 1987).

## Limitations on Jurisdiction based on Sackett v. USEPA Supreme Court Decision

On May 25, 2023, the Supreme Court issued its decision on the petition from the Sacketts, a family in Idaho that was subject to a compliance order from the USEPA for backfilling their lot near Priest Lake, which the USEPA claimed contained federally regulated wetlands. The wetlands in question were adjacent to a ditch that fed a creek that ultimately drained into Priest Lake, a navigable water body. The USEPA asserted that the Sacketts had violated the law by filling the wetlands on their property without a permit. The Court's decision addressed controversy over whether, and under what conditions, the CWA reaches navigable waters' tributaries or adjacent wetlands. The Supreme Court's decision in *Sackett* provides definitive guidance to the agencies in determining the limits of their Clean Water Act authority. Major tenets of the decision have been incorporated into the agencies' current regulations through the September 2023 Conforming Rule.

The Court decided:

- "Adjacent wetlands" are WOTUS only if there is a continuous surface connection between the wetland and a navigable or relatively permanent water body, such that it is difficult to determine the boundary between the wetland and the water body. The opinion notes that "temporary interruptions to surface connection may sometimes occur because of phenomena like low tides or dry spells." The agencies addressed this element by defining the term "adjacent" to mean "having a continuous surface connection" in the Conforming Rule.
- The Significant Nexus Standard, introduced by the Court in prior decisions, is not mentioned in the Clean Water Act and should not be used. The Court determined that the standard applies ecological factors whose use in determining jurisdiction is not supported by the statute. The Conforming Rule removed significant nexus considerations from the definition.
- Although jurisdiction over tributaries was not addressed by the Court, the decision stated that "…the [Clean Water Act's] use of "waters" encompasses only those relatively permanent, standing or continuously flowing bodies of water forming geographical features that are described in ordinary parlance as streams, oceans, rivers, and lakes." The Conforming Rule makes clear that only relatively permanent tributaries qualify as "waters of the United States."

## Rivers and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable water of the United States. Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable water of the United States and applies to all structures and work. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction. It is important to note that Section 10 applies only to navigable waters and thus does not apply to work in non-navigable wetlands or tributaries. In some cases, Section 10 authorization is issued by the USACE concurrently with CWA Section 404 authorization, such as when certain Nationwide Permits are used.

## Coastal Zone Management Act of 1972

The Coastal Zone Management Act of 1972 (16 USC 1451 et seq.), administered by the National Oceanic and Atmospheric Administration, provides for the management of the nation's coastal resources, including the Great Lakes. The goal is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." Each federal agency activity within or outside of the coastal zone that affects any land or water use or natural resources of the coastal zone must be carried out in a manner consistent to the maximum extent practicable with the enforceable policies of the approved state management programs. The policies of the California Coastal Act of 1976 (Coastal Act) govern the types of developments and uses allowed within wetlands and other waters within the Coastal Zone, including open coastal waters. Along the Pacific coast, open coastal waters extend from the mean high-water line to the state's outer limit of jurisdiction, approximately 3 miles offshore.

# Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and nine RWQCBs have jurisdiction over "waters of the State," which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state (California Water Code sec. 13050(e)). These agencies also have responsibilities for administering portions of the CWA.

## Clean Water Act Section 401

Section 401 of the CWA requires an applicant requesting a federal license or permit for an activity that may result in any discharge into navigable waters (such as a Section 404 Permit) to provide state certification that the proposed activity will not violate state and federal water quality standards. In California, CWA Section 401 Water Quality Certification (Section 401 Certification) is issued by the RWQCBs and by the SWRCB for multi-region projects. The process begins when an applicant submits an application to the RWQCB and informs the USACE (or the applicable agency from which a license or permit was requested) that an application has been submitted. The USACE will then determine a "reasonable period of time" for the RWQCB to act on the application; this is typically 60 days for routine projects and longer for complex projects but may not exceed one year. When the period has elapsed, if the RWQCB has not either issued or denied the application for Section 401 Certification, the USACE may determine that Certification has been waived and issue the requested permit. If a Section 401 Certification is issued it may include binding conditions, imposed either through the Certification itself or through the requested federal license or permit.

## Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 et seq.), the policy of the State is as follows:

- The quality of all the waters of the State shall be protected
- All activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason
- The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation

The Porter-Cologne Act established nine RWQCBs (based on watershed boundaries) and the SWRCB, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The SWRCB provides program guidance and oversight, allocates funds, and reviews RWQCB decisions. In addition, the SWRCB allocates rights to the use of surface water. The RWQCBs have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The SWRCB and RWQCBs have numerous nonpoint source related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

Section 13260 of the Porter-Cologne Act requires any person discharging or proposing to discharge waste that could affect the quality of waters of the State to file a Report of Waste Discharge with the appropriate RWQCB. The RWQCB may then authorize the discharge, subject to conditions, by issuing Waste Discharge Requirements (WDRs). While this requirement was historically applied primarily to outfalls and similar point source discharges, the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, effective May 2020, make it clear that the agency will apply the Porter-Cologne Act's requirements to discharges of dredge and fill material as well. The *Procedures* state that they are to be used in issuing CWA Section 401 Certifications and WDRs, and largely mirror the existing review requirements for CWA Section 404 Permits and Section 401 Certifications, incorporating most elements of the USEPA's *Section 404(b)(1) Guidelines*. Following issuance of the *Procedures*, the SWRCB produced a consolidated application form for dredge/fill discharges that can be used to obtain a CWA Section 401 Water Quality Certification, WDRs, or both.

### Non-Wetland Waters of the State

The SWRCB and RWQCBs have not established regulations for field determinations of waters of the State except for wetlands currently. In many cases the RWQCBs interpret the limits of waters of the State to be bounded by the OHWM unless isolated conditions or ephemeral waters are present. However, in the absence of statewide guidance each RWQCB may interpret jurisdictional boundaries within their region and the SWRCB has encouraged applicants to confirm jurisdictional limits with their RWQCB before submitting applications. As determined by the RWQCB, waters of the State may include riparian areas or other locations outside the OHWM, leading to a larger jurisdictional area over a given water body compared to the USACE.

### Wetland Waters of the State

Procedures for defining wetland waters of the State pursuant to the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* went into effect May 28, 2020. The SWRCB defines an area as wetland if, under normal circumstances:

(i) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;

(ii) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and

(iii) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The SWRCB's *Implementation Guidance for the Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State* (2020), states that waters of the United States and waters of the State should be delineated using the standard USACE delineation procedures, taking into consideration that the methods shall be modified only to allow for the fact that a lack of vegetation does not preclude an area from meeting the definition of a wetland.

# California Department of Fish and Wildlife Jurisdiction

California Fish and Game Code section 1602 states that it is unlawful for any person to "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake" without first notifying the California Department of Fish and Wildlife (CDFW) of that activity. Thereafter, if CDFW determines and informs the entity that the activity will not substantially adversely affect any existing fish or wildlife resources, the entity may commence the activity. If, however, CDFG determines that the activity may substantially adversely affect an existing fish or wildlife resource, the entity may be required to obtain from CDFW a Streambed Alteration Agreement (SAA), which will include reasonable measures necessary to protect the affected resource(s), before the entity may conduct the activity described in the notification. Upon receiving a complete Notification of Lake/Streambed Alteration, CDFW has 60 days to present the entity with a Draft SAA. Upon review of the Draft SAA by the applicant, any problematic terms are negotiated with CDFW and a final SAA is executed.

The CDFW has not defined the term "stream" for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. However, four relevant sources of information offer insight as to the appropriate limits of CDFW jurisdiction as discussed below.

- **The plain language of Section 1602 of CFGC** establishes the following general concepts:
  - References "river," "stream," and "lake"
  - References "natural flow"
  - References "bed," "bank," and "channel"
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987), which interpreted Section 1602's use of "stream" to be as defined in common law. The Court indicated that a "stream" is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel
  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM
- **CDFW regulations** defining "stream" for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life

  - Can be dry for a period of time
  - Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation

- **Guidance documents**, including *A Field Guide to Lake and Streambed Alteration Agreements* (CDFG 1994) and *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (Brady and Vyverberg 2013), which suggest the following:
  - A stream may flow perennially or episodically
  - A stream is defined by the course in which water currently flows, or has flowed during the historic hydrologic course regime (approximately the last 200 years)
  - Width of a stream course can reasonably be identified by physical or biological indicators
  - A stream may have one or more channels (single thread vs. compound form)
  - Features such as braided channels, low-flow channels, active channels, banks associated with secondary channels, floodplains, islands, and stream-associated vegetation, are interconnected parts of the watercourse
  - Canals, aqueducts, irrigation ditches, and other means of water conveyance can be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife
  - Biologic components of a stream may include aquatic and riparian vegetation, all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system
  - The lateral extent of a stream can be measured in different ways depending on the particular situation and the type of fish or wildlife resource at risk

The tenets listed above, among others, are applied to establish the boundaries of streambeds in various environments. Importance of each factor may be weighted based on site-specific considerations and the applicability of the indicators to the streambed at hand.

California Fish and Game Code Section 1610 exempts certain types of emergency work from the notification requirements in Section 1602

# California Coastal Act of 1976

The Coastal Act (Public Resources Code Section 30000 et seq.) was enacted to establish policies and guidelines that provide direction for the conservation and development of the California coastline. The Coastal Act established the California Coastal Commission (CCC) and created a state and local government partnership to ensure that public concerns regarding coastal development are addressed. Some of the basic goals of this program are to protect, maintain, and, where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources; maximize public access to and public recreational opportunities along the coast; and ensure priority for coastal-dependent and coastal-related development over other development on the coast.

The CCC serves as the coastal management and regulatory agency with jurisdiction over the Coastal Zone (Public Resources Code Section 30103). The California Coastal Zone generally extends seaward 3 miles and inland anywhere from 0.5 miles to 5 miles. The CCC is responsible for assisting in the preparation, review, and certification of Local Coastal Programs/Local Coastal Plans (LCPs), which are developed by municipalities for that portion of their jurisdiction that falls within the Coastal Zone. Once the LCP has been certified, regulatory responsibility is delegated to the local jurisdiction, although the CCC retains jurisdiction over the immediate shoreline.

# United States Fish and Wildlife Service

The USFWS implements several laws protecting the Nation's fish and wildlife resources, including the ESA (16 United States Code [USC] Sections 153 et seq.), the Migratory Bird Treaty Act (MBTA; 16 USC Sections 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668).

## Endangered Species Act

The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA. Generally, the USFWS implements the ESA for terrestrial and freshwater species, while the NMFS implements the ESA for marine and anadromous species. Projects that would result in "take" of any threatened or endangered wildlife species, or a threatened or endangered plant species if occurring on federal land, are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of ESA, depending on the involvement by the federal government in funding, authorizing, or carrying out the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of ESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

## Migratory Bird Treaty Act

The MBTA of 1918 implements four international conservation treaties that the United States entered into with Canada in 1916, Mexico in 1936, Japan in 1972, and Russia in 1976. It is intended to ensure the sustainability of populations of all protected migratory bird species. The law has been amended with the signing of each treaty, as well as when any of the treaties were amended, such as with Mexico in 1976 and Canada in 1995. The MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the USFWS.

The list of migratory bird species protected by the law, in regulations at 50 CFR Part 10.13, is primarily based on bird families and species included in the four international treaties. A migratory bird species is included on the list if it meets one or more of the following criteria:

1. It occurs in the United States or United States territories as the result of natural biological or ecological processes and is currently, or was previously listed as, a species or part of a family protected by one of the four international treaties or their amendments.
2. Revised taxonomy results in it being newly split from a species that was previously on the list, and the new species occurs in the United States or United States territories as the result of natural biological or ecological processes.
3. New evidence exists for its natural occurrence in the United States or United States territories resulting from natural distributional changes and the species occurs in a protected family.

In 2004, the Migratory Bird Treaty Reform Act limited the scope of the MBTA by stating the MBTA applies only to migratory bird species that are native to the United States or United States territories, and that a native migratory bird species is one that is present as a result of natural biological or ecological processes. The Migratory Bird Treaty Reform Act requires the USFWS to publish a list of all non-native, human-introduced bird species to which the MBTA does not apply, and an updated list was published in 2020. The 2020 update identifies species belonging to biological families referred to in treaties the MBTA implements but are not protected because their presence in the United States or United States territories is solely the result of intentional or unintentional human-assisted introductions.

## Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act prohibits anyone, without a permit issued by the USFWS, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs. This act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

"Disturb" means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

# California Department of Fish and Wildlife

The CDFW derives its authority from the Fish and Game Code of California and administers several State laws protecting fish and wildlife resources and the habitats upon which they depend.

## California Endangered Species Act

The CESA (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened or endangered. Take under CESA is defined as "Hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (Fish and Game Code sec. 86). This definition does not prohibit indirect harm by way of habitat modification, except where such harm is the proximate cause of death of a listed species. Where incidental take would occur during construction or other lawful activities, CESA allows the CDFW to issue an Incidental Take Permit upon finding, among other requirements, that impacts to the species have been minimized and fully mitigated. Unlike the ESA, CESA's protections extend to candidate species during the period (typically 1 year) while the California Fish and Game Commission decides whether the species warrants CESA listing.

## Native Plant Protection Act

The CDFW also has authority to administer the NPPA (Fish and Game Code Section 1900 *et seq.*). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare, and prohibits the take of listed plant species. Effective in 2015, CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA's permitting procedures would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

## Fully Protected Species Laws

The CDFW enforces sections 3511, 4700, 5050, and 5515 of the Fish and Game Code, which prohibit take of species designated as Fully Protected. The CDFW is not allowed to issue an Incidental Take Permit for Fully Protected species; therefore, impacts to these species must be avoided. The exception is situations where a Natural Community Conservation Plan is in place that authorizes take of the fully protected species.

## Avian Protection Laws

California Fish and Game Code sections 3503, 3503.5, and 3513 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Section 3513 makes it a state-level offense to take any bird in violation of the MBTA.

## Protection of Lakes and Streambeds

California Fish and Game Code Section 1602 states that it is unlawful for any person to "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake" without first notifying the CDFW of that activity. Thereafter, if CDFW determines and informs the entity that the activity will not substantially adversely affect any existing fish or wildlife resources, the entity may commence the activity. If, however, CDFW determines that the activity may substantially adversely affect an existing fish or wildlife resource, the entity may be required to obtain from CDFW a Streambed Alteration Agreement (SAA), which will include reasonable measures necessary to protect the affected resource(s), before the entity may conduct the activity described in the notification. Upon receiving a complete Notification of Lake/Streambed Alteration, CDFW has 60 days to present the entity with a Draft SAA. Upon review of the Draft SAA by the applicant, any problematic terms are negotiated with CDFW and a final SAA is executed.

The CDFW has not defined the term "stream" for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. However, four relevant sources of information offer insight as to the appropriate limits of CDFW jurisdiction as discussed below.

- **The plain language of Section 1602 of California Fish and Game Code** establishes the following general concepts:
  - References "river," "stream," and "lake"
  - References "natural flow"
  - References "bed," "bank," and "channel"
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987), which interpreted Section 1602's use of "stream" to be as defined in common law. The Court indicated that a "stream" is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel
  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM
- **CDFW regulations** defining "stream" for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life

  - Can be dry for a period of time
  - Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation

- **Guidance documents**, *including A Field Guide to Lake and Streambed Alteration Agreements* (CDFG 1994) *and Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (Brady and Vyverberg 2013), which suggest the following:
  - A stream may flow perennially or episodically
  - A stream is defined by the course in which water currently flows, or has flowed during the historic hydrologic course regime (approximately the last 200 years)
  - Width of a stream course can reasonably be identified by physical or biological indicators
  - A stream may have one or more channels (single thread vs. compound form)
  - Features such as braided channels, low-flow channels, active channels, banks associated with secondary channels, floodplains, islands, and stream-associated vegetation, are interconnected parts of the watercourse
  - Canals, aqueducts, irrigation ditches, and other means of water conveyance can be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife
  - Biologic components of a stream may include aquatic and riparian vegetation, all aquatic wildlife including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system
  - The lateral extent of a stream can be measured in different ways depending on the particular situation and the type of fish or wildlife resource at risk

The tenets listed above, among others, are applied to establish the boundaries of streambeds in various environments. Importance of each factor may be weighted based on site-specific considerations and the applicability of the indicators to the streambed at hand.

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# Appendix B

Site Photographs



**Photograph 1.** Overview of the project site from the southwestern boundary, facing north. April 17, 2025.



**Photograph 2.** View of the southern boundary and southcentral portion of the project site showing Disturbed and Disturbed Diegan Coastal Sage Scrub vegetation, facing west. April 17, 2025.



**Photograph 3.** View of the eastern boundary of the project site, facing northwest. February 11, 2025.



**Photograph 4.** View of the eastern side of the study area outside the project site showing Disturbed and Disturbed Diegan Coastal Sage Scrub vegetation, and Eucalyptus east of the study area (right), facing northwest. April 17, 2025.



**Photograph 5.** View of the Eucalyptus Woodland community in the northeastern portion of the study area, facing northeast. April 17, 2025.



**Photograph 6.** View of the northern portion of the project site from the northwest corner of the site, facing southeast. February 11, 2025.



**Photograph 7.** View of the western side of the project site, retaining wall below Paseo Plomo, and Disturbed Diegan Coastal Sage Scrub vegetation, facing northwest. April 17, 2025.



**Photograph 8.** View of the southwestern portion of project site, showing piles of trash and debris in Disturbed vegetation, facing north. February 11, 2025.



**Photograph 9.** View of the northcentral and west side of the project site showing debris piles and Disturbed vegetation, facing northeast. February 11, 2025.



**Photograph 10.** View of the central portion of project site showing debris piles and Disturbed vegetation, facing west. February 11, 2025.



**Photograph 11.** View of the central portion of the project site showing broken concrete debris piles, facing north. February 11, 2025.



**Photograph 12.** View of small mammal burrows in the concrete debris piles in the central portion of the project site. February 11, 2025.



**Photograph 13.** View of the northern portion of the western concrete ditch adjacent to Paseo Plomo in the project site with accumulated vegetative debris, facing south. April 17, 2025.



**Photograph 14.** View of the northern portion of the western concrete ditch adjacent to Paseo Plomo in the project site overgrown with vegetation, facing north. April 17, 2025.



**Photograph 15.** View of the central portion of the western concrete ditch in the project site with accumulated soil, rocks, vegetative debris, and small forbs, facing south. April 17, 2025.



**Photograph 16.** View of the inlet to the northern concrete ditch in the northern portion of the project site in Disturbed vegetation and accumulated vegetative debris, facing northeast. February 11, 2025.



**Photograph 17.** View of the tarp-lined inlet to the northern concrete ditch in the northern portion of the project site, facing northwest. April 17, 2025.



**Photograph 18.** View of the confluence of the two concrete ditches north of the project site in the northern portion of the study area, facing south. April 17, 2025.



**Photograph 19.** View of the terminus of the concrete ditch and underground culvert inlet approximately 170 feet north of the study area with accumulated vegetative debris, facing northwest. April 17, 2025.



**Photograph 20.** View of the the concrete ditch and underground culvert inlet on the west side of an unnamed road approximately 170 feet north of the study area, facing southeast. April 17, 2025.



**Photograph 21.** Overview of the the northern terminus of the ditch approximately 170 feet north of the study area and the underground culvert area, facing northwest. April 17, 2025.



**Photograph 22.** View upslope towards the underground culvert outlet, which is covered in dense vegetation approximately eight feet from the eastern edge of the road, facing southwest. May 16, 2025.

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# Appendix C

Floral and Faunal Compendium

## Plant Species Observed within the Study Area on February 11, 2025 and April 17, 2025

| Scientific Name | Common Name | Status | Native or Introduced |
|---|---|---|---|
| **Shrubs** | | | |
| *Artemisia californica* | California sagebrush | None | Native |
| *Baccharis pilularis* | coyote brush | None | Native |
| *Cytisus scoparius* | common broom | None | Introduced<br>Cal-IPC High |
| *Eriogonum fasciculatum* | California buckwheat | None | Native |
| *Encelia californica* | California encelia | None | Native |
| *Diplacus puniceus* | red bush monkeyflower | None | Native |
| *Gazania rigens* | treasure flower | None | Introduced |
| *Heteromeles arbutifolia* | toyon | None | Native |
| *Isocoma menziesii* | Coastal goldenbush | None | Native |
| *Lantana camara* | lantana | None | Introduced<br>Cal-IPC Watch |
| *Malacothamnus fasciculatus* | chaparral mallow | None | Native |
| *Malosma laurina* | laurel sumac | None | Native |
| *Melaleuca nesophila* | showy honey-myrtle | None | Introduced |
| *Rhus integrifolia* | lemonade berry | None | Native |
| **Herbs** | | | |
| *Asphodelus fistulosus* | onion weed | None | Introduced<br>Cal-IPC Moderate |
| *Brassica nigra* | black mustard | None | Introduced<br>Cal-IPC Moderate |
| *Erodium moschatum* | Musky's stork's bill | None | Introduced |
| *Euphorbia peplus* | petty spurge | None | Introduced |
| *Foeniculum vulgare* | fennel | None | Introduced<br>Cal-IPC Moderate |
| *Geranium molle* | dove`s foot crane's-bill | None | Introduced |
| *Hirschfeldia incana* | shortpod mustard | None | Introduced<br>Cal-IPC Moderate |
| *Medicago polymorpha* | burclover | None | Introduced |
| *Melilotus officinalis* | yellow sweet clover | None | Introduced |
| *Portulaca grandiflora* | moss rose | None | Introduced |
| *Pseudognaphalium biolettii* | two-color rabbit tobacco | None | Native |
| *Pseudognaphalium californicum* | ladies' tobacco | None | Native |
| *Pseudognaphalium canescens* | Wright’s cudweed | None | Native |
| *Pseudognaphalium obtusifolium* | rabbit tobacco | None | Native |
| *Raphanus sativus* | wild radish | None | Introduced<br>Cal-IPC Limited |
| *Rumex crispus* | curly dock | None | Introduced<br>Cal-IPC Limited |
| *Salsola tragus* | Russian thistle | None | Introduced<br>Cal-IPC Limited |

| Scientific Name | Common Name | Status | Native or Introduced |
|---|---|---|---|
| *Sisymbrium* sp. | mustard | None | Introduced |
| **Vines** | | | |
| *Parthenocissus tricuspidate* | Boston ivy | None | Introduced |
| **Agave** | | | |
| *Agave americana* | American century plant | None | Native |
| *Agave attenuate* | foxtail agave | None | Introduced |
| **Grasses** | | | |
| *Bromus diandrus* | ripgut brome | None | Introduced |
| *Pennisetum setaceum* | fountain grass | None | Introduced<br>Cal-IPC Moderate |
| **Trees** | | | |
| *Arbutus unedo* | strawberry tree | None | Introduced |
| *Eucalyptus camaldulensis* | red gum | None | Introduced<br>Cal-IPC Limited |
| *Melaleuca quinquenervia* | bottlebrush | None | Introduced |
| *Myoporum laetum* | Ngaio | None | Introduced<br>Cal-IPC Moderate |
| *Populus fremontii* | Fremont cottonwood | None | Native |

## Wildlife Species Observed within the Study Area on February 11, 2025 and April 17, 2025

| Scientific Name | Common Name | Status | Native or Introduced |
|---|---|---|---|
| **Insects** | | | |
| *Apis mellifera* | Western honeybee | None | Introduced (naturalized) |
| **Birds** | | | |
| *Aphelocoma californica* | California scrub-jay | None | Native |
| *Calypte anna* | Anna's hummingbird | None | Native |
| *Corvus brachyrhynchos* | American crow | None | Native |
| *Corvus corax* | common raven | None | Native |
| *Haemorhous mexicanus* | house finch | None | Native |
| *Melospiza melodia* | song sparrow | None | Native |
| *Melozone crissalis* | California towhee | None | Native |
| *Psaltriparus minimus* | American bushtit | None | Native |
| *Sayornis nigricans* | black phoebe | None | Native |
| *Selasphorus sasin* | Allen's hummingbird | None | Native |
| *Setophaga coronata* | yellow-rumped warbler | None | Native |
| *Zenaida macroura* | mourning dove | None | Native |
| *Zonotrichia leucophrys* | white-crowned sparrow | None | Native |
| **Mammals** | | | |
| *Canis latrans* | coyote (scat) | None | Native |
| *Otospermophilus beecheyi* | California ground squirrel | None | Native |
| *Sylvilagus* spp. | cottontail rabbit | None | Native |

# Appendix D

Coastal California Gnatcatcher Focused Survey Report

# Appendix E

Special-Status Species Evaluation Tables

## Special-Status Plant Species in the Regional Vicinity of the Project Site

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| **Plants and Lichens** | | | | |
| *Acanthomintha ilicifolia*<br>San Diego thorn-mint | Threatened/ Endangered<br>G1/S1<br>1B.1<br>HMP Covered Species | Chaparral, coastal scrub, valley and foothill grassland, vernal pools. Endemic to active vertisol clay soils of mesas and valleys. Usually on clay lenses within grassland or chaparral communities. 25-945 m. annual herb. Blooms Apr-Jun | Not Expected | The species' associated soils are not present in the project site. |
| *Acmispon prostratus*<br>Nuttall's acmispon | None/None<br>G1G2/S1<br>1B.1 | Coastal dunes, coastal scrub. On sand dunes. 0-18 m. annual herb. Blooms Mar-Jun (Jul). | Not Expected | Sand dunes are not present in the project site. |
| *Adolphia californica*<br>California adolphia | None/None<br>G3/S2<br>2B.1 | Chaparral, coastal sage scrub, valley and foothill grassland. From sandy/gravelly to clay soils within grassland, various exposures. 5-335 m. perennial deciduous shrub. Blooms Dec-May | Not Expected | This conspicuous shrub species was not observed during any of the surveys. |
| *Agave shawii var. shawii*<br>Shaw's agave | None/None<br>G2G3T2T3/S1<br>2B.1 | Perennial leaf. Coastal bluff scrub, coastal scrub. Coastal bluffs and slopes within coastal sage scrub. Elevations: 3-120 m. Blooms Sep-May. | Not Expected | The site's elevation range occurs outside of the elevation range where this species is found. |
| *Ambrosia pumila*<br>San Diego ambrosia | Endangered/None<br>G1/S1<br>1B.1 | Chaparral, coastal scrub, valley and foothill grassland. Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3-580 m. perennial rhizomatous herb. Blooms Apr-Oct | Low Potential | The disturbances within and adjacent to the project site have been substantial over a long period of time, which has resulted in non-native herbaceous annuals to dominate the understory in the Disturbed Habitat and within the openings of the Disturbed Diegan Coastal Sage Scrub on the project site. Marginal habitat for the species is present, but there are no observations within 5 miles of the project site. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Aphanisma blitoides*<br>aphanisma | None/None<br>G3G4/S2<br>1B.2 | Annual herb. Coastal bluff scrub, coastal dunes, coastal scrub. Gravelly (sometimes), sandy (sometimes). Elevations: 5-1000 ft. (1-305 m.) Blooms Feb-Jun. | Not Expected | Although marginally suitable habitat is present within the project site, disturbances within and adjacent to the project site have been substantial over a long period of time, which has resulted in non-native herbaceous annuals to dominate the understory in the Disturbed Habitat and within the openings of the Disturbed Diegan Coastal Sage Scrub on the project site. |
| *Aphyllon parishii* ssp. *brachylobum*<br>short-lobed broomrape | None/None<br>G4?T4/S3<br>4.2 | Coastal bluff scrub, Coastal dunes, Coastal scrub. Sandy 3-305 m. Blooms Apr-Oct. | Not Expected | Although marginally suitable habitat is present within the project site, this species is considered possibly extirpated. |
| *Arctostaphylos glandulosa* ssp. *crassifolia*<br>Del Mar manzanita | Endangered/None<br>G5T2/S2<br>1B.1<br>HMP Covered Species | Chaparral. Sandy coastal mesas and ocean bluffs; in chaparral or Torrey pine forest. 30-365 m. perennial evergreen shrub. Blooms Dec-Jun | Not Expected | This conspicuous shrub species was not observed during field survey, |
| *Arctostaphylos rainbowensis*<br>rainbow manzanita | None/None<br>G2/S2<br>1B.1 | Chaparral. Usually found in gabbro chaparral. 100-870 m. perennial evergreen shrub. Blooms Dec-Mar | Not Expected | This conspicuous shrub species was not observed during the field survey. |
| *Artemisia palmeri*<br>San Diego sagewort | None/None<br>G3?/S3?<br>4.2 | Perennial deciduous shrub. Found in chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland. Mesic, sandy. Elevations: 15-915 m. Blooms (Feb) May-Sep. | Low Potential | This species is typically found along moist drainages in sandy soil within or adjacent to riparian woodland habitat. Marginally suitable coastal scrub habitat is found on site, however no riparian habitat is present in the project site. This conspicuous shrub species was not observed during field survey. |
| *Astragalus tener* var. *titi*<br>coastal dunes milk-vetch | FE/SE<br>G2T1/S1<br>1B.1 | Annual herb. Coastal bluff scrub, coastal dunes, coastal prairie. Moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean; one site on a clay terrace. Elevations: 5-165 ft. (1-50 m.) Blooms Mar-May. | Not Expected | The species' associated soils and habitat are not present in the project site. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Atriplex coulteri*<br>Coulter's saltbush | None/None<br>G3/S1S2<br>1B.2 | Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 2-460 m. perennial herb. Blooms Mar-Oct | Not Expected | The species' associated topography is not present in the project site. |
| *Atriplex pacifica*<br>south coast saltscale | None/None<br>G4/S2<br>1B.2 | Coastal scrub, coastal bluff scrub, playas, coastal dunes. Alkali soils. 1-400 m. annual herb. Blooms Mar-Oct | Not Expected | The species' associated soils are not present in the project site. |
| *Baccharis vanessae*<br>Encinitas baccharis | Threatened/ Endangered<br>G1/S1<br>1B.1<br>HMP Covered Species | Chaparral, cismontane woodland. On sandstone soils in steep, open, rocky areas with chaparral associates. 60-900 m. perennial deciduous shrub. Blooms Aug, Oct, Nov | Not Expected | This conspicuous shrub species was not observed during the field survey. |
| *Bergerocactus emoryi*<br>golden-spined cereus | None/None<br>G2G3/S2<br>2B.2 | Perennial stem. Chaparral, closed-cone coniferous forest, coastal scrub. Sandy. Elevations: 10-1295ft. (3-395m.) Blooms May-Jun. | Not Expected | Although marginally suitable habitat is present within the project site, disturbances within and adjacent to the project site have been substantial over a long period of time, which has resulted in non-native herbaceous annuals to dominate the understory in the Disturbed Habitat and within the openings of the Disturbed Diegan Coastal Sage Scrub on the project site. |
| *Bloomeria clevelandii*<br>San Diego goldenstar | None/None<br>G2/S2<br>1B.1 | Chaparral, coastal scrub, valley and foothill grassland, vernal pools. Mesa grasslands, scrub edges; clay soils. Often on mounds between vernal pools in fine, sandy loam. 60-465 m. perennial bulbiferous herb. Blooms Apr-May | Not Expected | The species' associated soils are not present in the project site. |
| *Brodiaea filifolia*<br>thread-leaved brodiaea | Threatened/ Endangered<br>G2/S2<br>1B.1 | Perennial bulbiferous herb. Found in chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 15-1030 m. Blooms Mar-Jun | Not Expected | The species' associated soils are not present in the project site. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Brodiaea orcuttii*<br>Orcutt's brodiaea | None/None<br>G2/S2<br>1B.1 | Vernal pools, valley and foothill grassland, closed-cone coniferous forest, cismontane woodland, chaparral, meadows and seeps. Mesic, clay habitats; usually in vernal pools and small drainages. 30-1615 m. perennial bulbiferous herb. Blooms May-Jul | Not Expected | The species' associated soils are not present in the project site. |
| *Ceanothus cyaneus*<br>Lakeside ceanothus | None/None<br>G2/S2<br>1B.2 | Perennial evergreen shrub. Chaparral, closed-cone coniferous forest. Elevations: 770-2475 ft. (235-755 m.) Blooms Apr-Jun. | Not Expected | This conspicuous shrub species was not observed during the field survey. |
| *Ceanothus verrucosus*<br>wart-stemmed ceanothus | None/None<br>G2/S2?<br>2B.2<br>HMP Covered Species | Chaparral. 25-470 m. perennial evergreen shrub. Blooms Dec-May | Not Expected | This conspicuous shrub species was not observed during the field survey. |
| *Centromadia parryi* ssp. *australis*<br>southern tarplant | None/None<br>G3T2/S2<br>1B.1 | Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. 0-975 m. annual herb. Blooms May-Nov | Not Expected | The species' associated habitat is not present in the project site. |
| *Centromadia pungens* ssp. *laevis*<br>smooth tarplant | None/None<br>G3G4T2/S2<br>1B.1 | Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m. annual herb. Blooms Apr-Sep | Not Expected | The species' associated habitat is not present in the project site. |
| *Chaenactis glabriuscula* var. *orcuttiana*<br>Orcutt's pincushion | None/None<br>G5T1T2/S1<br>1B.1 | Coastal bluff scrub, coastal dunes. Sandy sites. 3-80 m. annual herb. Blooms Jan-Aug | Not Expected | The species' associated habitat is not present in the project site. |
| *Chorizanthe orcuttiana*<br>Orcutt's spineflower | Endangered/ Endangered<br>G1/S1<br>1B.1<br>HMP Covered Species | Coastal scrub, chaparral, closed-cone coniferous forest. Sandy sites and openings; sometimes in transition zones. 3-125 m. annual herb. Blooms Mar-May | Not Expected | The project is outside the known range of the species, with most records being coastal. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Chorizanthe polygonoides* var. *longispina*<br>long-spined spineflower | None/None<br>G5T3/S3<br>1B.2 | Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Gabbroic clay. 30-1540 m. annual herb. Blooms Apr-Jul | Not Expected | The species' associated soils are not present in the project site. |
| *Clarkia delicata*<br>delicate clarkia | None/None<br>G3/S3<br>1B.2 | Cismontane woodland, chaparral. Often on gabbro soils. 50-1360 m. annual herb. Blooms Apr-Jun | Not Expected | The species' associated habitat is not present in the project site. |
| *Comarostaphylis diversifolia* ssp. *diversifolia*<br>summer holly | None/None<br>G3T2/S2<br>1B.2<br>HMP Covered Species | Chaparral, cismontane woodland. Often in mixed chaparral in California, sometimes post-burn. 30-945 m. perennial evergreen shrub. Blooms Apr-Jun | Not Expected | This conspicuous shrub species was not observed during any of the surveys. |
| *Corethrogyne filaginifolia* var. *incana*<br>San Diego sand aster | None/None<br>G4T1Q/S1<br>1B.1 | Coastal scrub, coastal bluff scrub, chaparral. Most sites are disturbed, so hard to tell. Possibly in disturbed sites and ecotones. 35-115 m. perennial herb. Blooms Jun-Sep | Low Potential | Although marginally suitable habitat is present within the project site, disturbances within and adjacent to the project site have been substantial over a long period of time, which has resulted in non-native herbaceous annuals to dominate the understory in the Disturbed Habitat and within the openings of the Disturbed Diegan Coastal Sage Scrub on the project site. Furthermore, there are no CNDDB occurrences within 9 quadrangles of the project site. |
| *Corethrogyne filaginifolia* var. *linifolia*<br>Del Mar Mesa sand aster | None/None<br>G4T1T2Q/S1S2<br>1B.1<br>HMP Covered Species | Chaparral, coastal scrub, coastal bluff scrub. In coastal, shrubby communities on maritime sediments and conglomerates; in openings. 15-150 m. perennial herb. Blooms May, Jul, Aug, and Sep | Not Expected | The species' associated soils are not present in the project site. |
| *Cryptantha wigginsii*<br>Wiggins' cryptantha | None/None<br>G2/S1<br>1B.2 | Coastal scrub. Often on clay soils. 45-110 m. annual herb. Blooms Feb-Jun | Not Expected | The species' associated soils are not present in the project site. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Cylindropuntia californica* var. *californica*<br>snake cholla | None/None<br>G3T2/S1<br>1B.1 | Perennial stem. Chaparral, coastal scrub. Elevations: 100-490ft. (30-150m.) Blooms Apr-May. | Low Potential | Although marginally suitable habitat is present within the project site, disturbances within and adjacent to the project site have been substantial over a long period of time, which has resulted in non-native herbaceous annuals to dominate the understory in the Disturbed Habitat and within the openings of the Disturbed Diegan Coastal Sage Scrub on the project site. Furthermore, there are no CNDDB occurrences within 9 quadrangles of the project site. |
| *Dudleya blochmaniae* ssp. *blochmaniae*<br>Blochman's dudleya | None/None<br>G3T2/S2<br>1B.1 | Coastal scrub, coastal bluff scrub, chaparral, valley and foothill grassland. Open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil. 5-450 m. perennial herb. Blooms Apr-Jun | Not Expected | The species' associated soils are not present in the project site. |
| *Dudleya brevifolia*<br>short-leaved dudleya | None/SE<br>G1/S1<br>1B.1 | Perennial herb. Chaparral, coastal scrub. On Torrey sandstone soils; in pebbly openings. Elevations: 100-820ft. (30-250m.) Blooms Apr-May. | Not Expected | Marginally suitable coastal scrub habitat is present within the study area; however, suitable soils are not present within the study area. |
| *Dudleya variegata*<br>variegated dudleya | None/None<br>G2/S2<br>1B.2 | Chaparral, coastal scrub, cismontane woodland, valley and foothill grassland. In rocky or clay soils; sometimes associated with vernal pool margins. 3-550 m. perennial herb. Blooms Apr-Jun | Not Expected | The species' associated soils are not present in the project site. |
| *Dudleya viscida*<br>sticky dudleya | None/None<br>G2/S2<br>1B.2 | Coastal scrub, coastal bluff scrub, chaparral, cismontane woodland. On north and south-facing cliffs and banks. 20-870 m. perennial herb. Blooms May-Jun | Not Expected | The species' associated topography is not present in the project site. |
| *Ericameria palmeri* var. *palmeri*<br>Palmer's goldenbush | None/None<br>G4T2?/S2<br>1B.1 | Coastal scrub, chaparral. On granitic soils, on steep hillsides. Mesic sites. 5-625 m. perennial evergreen shrub. Blooms (Jul) Sep-Nov | Not Expected | This conspicuous shrub species was not observed during any of the surveys. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Eryngium aristulatum* var. *parishii*<br>San Diego button-celery | Endangered/ Endangered<br>G5T1/S1<br>1B.1 | Vernal pools, coastal scrub, valley and foothill grassland. San Diego mesa hardpan and claypan vernal pools and southern interior basalt flow vernal pools; usually surrounded by scrub. 15-880 m. annual/perennial herb. Blooms Apr-Jun | Not Expected | Vernal pools are not present in the project site. |
| *Erysimum ammophilum*<br>sand-loving wallflower | None/None<br>G2/S2<br>1B.2 | Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 5-130 m. perennial herb. Blooms Feb-Jun | Not Expected | Marginally suitable habitat is present in the study area, but the species does not have recorded occurrences within the 9 quadrangles CNDDB search. |
| *Euphorbia misera*<br>cliff spurge | None/None<br>G5/S2<br>2B.2<br>HMP Covered Species | Coastal bluff scrub, coastal scrub, Mojavean desert scrub. Rocky sites. 3-430 m. perennial shrub. Blooms Dec-Aug (Oct) | Low Potential | Marginally suitable habitat is present in the project site, but the species does not have recorded occurrences within 5 miles of the project. Most records are coastal. |
| *Ferocactus viridescens*<br>San Diego barrel cactus | None/None<br>G3?/S2S3<br>2B.1<br>HMP Covered Species | Chaparral, coastal scrub, valley and foothill grassland. Often on exposed, level or south-sloping areas; often in coastal scrub near crest of slopes. 3-490 m. perennial stem succulent. Blooms May-Jun | Not Expected | This conspicuous species was not observed during any of the surveys. |
| *Geothallus tuberosus*<br>Campbell's liverwort | None/None<br>G2/S2<br>1B.1 | Ephemeral liverwort. Coastal scrub, vernal pools. Liverwort known from mesic soil. Elevations: 35-1970ft. (10-600m.) | Not Expected | Vernal pools are not present in the project site. |
| *Grindelia hallii*<br>San Diego gumplant | None/None<br>G2/S2<br>1B.2 | Perennial herb. Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland. Frequently occurs in low moist areas in meadows. Associated species commonly include Wyethia, Ranunculus, Sidalcea. Elevations: 605-5725 ft. (185-1745 m.) Blooms May-Oct. | Not Expected | The species' associated soils are not present in the project site. |
| *Harpagonella palmeri*<br>Palmer's grapplinghook | None/None<br>G4/S3<br>4.2 | Annual herb. Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland. Elevations: 65-3135 ft. (20-955 m.) Blooms Mar-May. | Not Expected | The species' associated soils are not present in the project site. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Hazardia orcuttii*<br>Orcutt's hazardia | None/Threatened<br>G1/S1<br>1B.1<br>HMP Covered Species | Chaparral, coastal scrub. Often on clay; in grassy edges of chaparral and coastal scrub. 5-85 m. perennial evergreen shrub. Blooms Aug-Oct | Not Expected | The species' associated soils are not present in the project site. |
| *Heterotheca sessiliflora* ssp. *sessiliflora*<br>beach goldenaster | None/None<br>G4T2T3/S1<br>1B.1 | Coastal dunes, coastal scrub, chaparral (coastal). Sandy sites. 0-5 m. perennial herb. Blooms Mar-Dec | Not Expected | Suitable habitat is present in the project site, but the species does not have recorded occurrences within 10 miles of the project. |
| *Horkelia truncata*<br>Ramona horkelia | None/None<br>G3/S3<br>1B.3 | Chaparral, cismontane woodland. Habitats in California include: mixed chaparral, vernal streams, and disturbed areas near roads. Clay soil; at least sometimes on gabbro. 380-1190 m. perennial herb. Blooms May-Jun | Not Expected | The species' associated soils are not present in the project site. |
| *Isocoma menziesii* var. *decumbens*<br>decumbent goldenbush | None/None<br>G3G5T2T3/S2<br>1B.2 | Coastal scrub, chaparral. Sandy soils; often in disturbed sites. 1-915 m. perennial shrub. Blooms Apr-Nov | Low Potential | Although marginally suitable habitat is present within the project site, disturbances within and adjacent to the project site have been substantial over a long period of time, which has resulted in non-native herbaceous annuals to dominate the understory in the Disturbed Habitat and within the openings of the Disturbed Diegan Coastal Sage Scrub on the project site. Furthermore, there are no recent CNDDB occurrences within 5 miles of the project site. |
| *Iva hayesiana*<br>San Diego marsh-elder | None/None<br>G3/S2<br>2B.2<br>HMP Covered Species | Marshes and swamps, playas. Riverwashes. 1-430 m. perennial herb. Blooms Apr-Oct | Not Expected | The species' associated habitat is not present in the project site. |
| *Lasthenia glabrata* ssp. *coulteri*<br>Coulter's goldfields | None/None<br>G4T2/S2<br>1B.1 | Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m. annual herb. Blooms Feb-Jun | Not Expected | The species' associated habitat is not present in the project site. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Lepidium virginicum* var. *robinsonii*<br>Robinson's pepper-grass | None/None<br>G5T3/S3<br>4.3 | Annual herb. Chaparral, coastal scrub. Dry soils, shrubland. Elevations: 5-2905 ft. (1-885 m.) Blooms Jan-Jul. | Low Potential | Although marginally suitable habitat is present within the project site, disturbances within and adjacent to the project site have been substantial over a long period of time, which has resulted in non-native herbaceous annuals to dominate the understory in the Disturbed Habitat and within the openings of the Disturbed Diegan Coastal Sage Scrub on the project site. Furthermore, there are no CNDDB occurrences within 5 miles of the project site. |
| *Leptosyne maritima*<br>sea dahlia | None/None<br>G2/S1<br>2B.2 | Coastal scrub, coastal bluff scrub. Occurs on a variety of soil types, including sandstone. 5-185 m. perennial herb. Blooms Mar-May | Not Expected | Marginally suitable habitat is present in the project site, but the project is outside the known distribution of the species. Occurrences are closer to the coast. |
| *Monardella hypoleuca* ssp. *lanata*<br>felt-leaved monardella | None/None<br>G4T3/S3<br>1B.2 | Chaparral, cismontane woodland. Occurs in understory in mixed chaparral, chamise chaparral, and southern oak woodland; sandy soil. 425-1585 m. perennial rhizomatous herb. Blooms Jun-Aug | Not Expected | The species' associated habitat is not present in the project site. |
| *Monardella viminea*<br>willowy monardella | FE/SE<br>G1/S1<br>1B.1 | Perennial herb. Chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland. In canyons, in rocky and sandy places, sometimes in washes or floodplains, with Baccharis, Iva, etc. Alluvial, ephemeral washes with adjacent coastal scrub. Elevations: 165-740ft. (50-225m.) Blooms Jun-Aug. | Not Expected | The species' associated habitat is not present in the project site. |
| *Myosurus minimus ssp. apus*<br>little mousetail | None/None<br>G5T2Q/S2<br>3.1<br>HMP Covered Species | Annual herb. Valley and foothill grassland, vernal pools. Alkaline soils. Elevations 20-640 m. Blooms Mar-Jun. | Not Expected | Vernal pools and alkaline soils are not present in the project site. |
| *Nama stenocarpa*<br>mud nama | None/None<br>G4G5/S1S2<br>2B.2 | Marshes and swamps. Lake shores, riverbanks, intermittently wet areas. 5-500 m. annual/perennial herb. Blooms Jan-Jul | Not Expected | The species' associated habitat is not present in the project site. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Navarretia fossalis*<br>spreading navarretia | Threatened/None<br>G2/S2<br>1B.1<br>HMP Covered Species | Vernal pools, chenopod scrub, marshes and swamps, playas. San Diego hardpan and San Diego claypan vernal pools; in swales and vernal pools, often surrounded by other habitat types. 15-850 m. annual herb. Blooms Apr-Jun | Not Expected | The species' associated habitat is not present in the project site. |
| *Nemacaulis denudata* var. *denudata*<br>coast woolly-heads | None/None<br>G3G4T2/S2<br>1B.2 | Coastal dunes. 0-100 m. annual herb. Blooms Apr-Sep | Not Expected | The species' associated habitat is not present in the project site. |
| *Nemacaulis denudata* var. *gracilis*<br>slender cottonheads | None/None<br>G3G4T3?/S2<br>2B.2 | Coastal dunes, desert dunes, Sonoran desert scrub. In dunes or sand. -50-400 m. annual herb. Blooms (Mar) or May | Not Expected | The species' associated habitat is not present in the project site. |
| *Orcuttia californica*<br>California Orcutt grass | Endangered/ Endangered<br>G1/S1<br>1B.1<br>HMP Covered Species | Vernal pools. 10-660 m. annual herb. Blooms Apr-Aug | Not Expected | The species' associated habitat is not present in the project site. |
| *Phacelia stellaris*<br>Brand's star phacelia | None/None<br>G1/S1<br>1B.1 | Annual herb. Coastal dunes, coastal scrub. Open areas. Elevations: 5-1310 ft. (1-400 m.) Blooms Mar-Jun. | Not Expected | The species' associated habitat is not present in the project site. |
| *Pinus torreyana* ssp. *torreyana*<br>Torrey pine | None/None<br>G1T1/S1<br>1B.2<br>HMP Covered Species | Closed-cone coniferous forest, chaparral. On dry, sandstone slopes. 70-160 m.; perennial evergreen tree. | Not Expected | This conspicuous tree species was not observed during any of the surveys. |
| *Pogogyne abramsii*<br>San Diego mesa mint | Endangered/ Endangered<br>G1/S1<br>1B.1 | Vernal pools. Vernal pools within grasslands, chamise chaparral, or Coastal Sage Scrub communities. 70-195 m. annual herb. Blooms Mar-Jul | Not Expected | The species' associated habitat is not present in the project site. |
| *Quercus dumosa*<br>Nuttall's scrub oak | None/None<br>G3/S3<br>1B.1<br>HMP Covered Species | Closed-cone coniferous forest, chaparral, coastal scrub. Generally, found on sandy soils near the coast; sometimes on clay loam. 15-640 m. perennial evergreen shrub. Blooms Feb-Apr (May-Aug) | Not Expected | This conspicuous tree species was not observed during any of the surveys. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Salvia munzii*<br>Munz's sage | None/None<br>G2/S2<br>2B.2 | Coastal scrub, chaparral. Rolling hills and slopes, in rocky soil. 35-575 m. perennial evergreen shrub. Blooms Feb-Apr | Not Expected | This conspicuous shrub species was not observed during any of the surveys. |
| *Senecio aphanactis*<br>chaparral ragwort | None/None<br>G3/S2<br>2B.2 | Annual herb. Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Elevations: 50-2625ft. (15-800m.) Blooms Jan-Apr (May). | Not Expected | Marginally suitable habitat is present in the project site, but there are no CNDDB occurrences within 9 quadrangles of the project site. |
| *Sidalcea neomexicana*<br>salt spring checkerbloom | None/None<br>G4/S2<br>2B.2 | Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes. 3-2380 m. perennial herb. Blooms Mar-Jun | Not Expected | The species' associated habitat is not present in the project site. |
| *Sphaerocarpos drewiae*<br>bottle liverwort | None/None<br>G1/S1<br>1B.1 | Ephemeral liverwort. Chaparral, coastal scrub. Liverwort in openings; on soil. Elevations: 295-1970ft. (90-600m.) | Not Expected | Marginally suitable habitat is present in the project site, but there are no CNDDB occurrences within 9 quadrangles of the project site. |
| *Sphenopholis interrupta* ssp. *californica*<br>prairie false oat | None/None<br>G4T1/S1<br>1B.1 | Annual herb. Chaparral. Clay. Elevations: 50-50ft. (15-15m.) Blooms Apr. | Not Expected | The species' associated habitat is not present in the project site. |
| *Stemodia durantifolia*<br>purple stemodia | None/None<br>G5/S2<br>2B.1 | Sonoran desert scrub. Sandy soils; mesic sites. 35-385 m. perennial herb. Blooms (Jan) Apr, Jun, Aug, Sep, Oct, Dec | Not Expected | The species' associated habitat is not present in the project site. |
| *Suaeda esteroa*<br>estuary seablite | None/None<br>G3/S2<br>1B.2 | Marshes and swamps. Coastal salt marshes in clay, silt, and sand substrates. 0-80 m. perennial herb. Blooms (May) Jul-Oct (Jan) | Not Expected | The species' associated habitat is not present in the project site. |
| *Tetracoccus dioicus*<br>Parry's tetracoccus | None/None<br>G3?/S2<br>1B.2<br>HMP Covered Species | Chaparral, coastal scrub. Stony, decomposed gabbro soil. 135-705 m. perennial deciduous shrub. Blooms Apr-May | Not Expected | This conspicuous shrub species was not observed during any of the surveys. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Texosporium sancti-jacobi*<br>woven-spored lichen | None/None<br>G3/S2<br>3 | Crustose lichen (terricolous). Chaparral. Open sites; in California with *Adenostoma fasciculatum, Eriogonum,* and *Selaginella.* Found on soil, small mammal pellets, dead twigs, and *Selaginella*. Elevations: 195-2165 ft. (60-660 m.) | Low Potential | The disturbances within and adjacent to the project site have been substantial over a long period of time, which has resulted in non-native herbaceous annuals to dominate the understory in the Disturbed Habitat and within the openings of the Disturbed Diegan Coastal Sage Scrub on the project site. Marginal habitat for the species is present and there is at least one recent observation from within 5 miles of the project site; however, these occurrences are associated with lower levels of disturbances (e.g., grazing). |
| **Sensitive Natural Communities** | | | | |
| *Diegan Coastal Sage Scrub* | None/None<br>City of San Marcos Sensitive Community | | Present | A disturbed version of this community is present within the project site. |
| *Maritime Succulent Scrub*<br>Maritime Succulent Scrub | None/None<br>G2/S1.1 | | Not Expected | The community's plant species were not identified in the project site. |
| *San Diego Mesa Claypan Vernal Pool*<br>San Diego Mesa Claypan Vernal Pool | None/None<br>GNR/SNR | | Not Expected | The community's plant species were not identified in the project site. |
| *Southern Coastal Salt Marsh*<br>Southern Coastal Salt Marsh | None/None<br>G2/S2.1 | | Not Expected | The community's plant species were not identified in the project site. |
| *Southern Cottonwood Willow Riparian Forest*<br>Southern Cottonwood Willow Riparian Forest | None/None<br>G3/S3.2 | | Not Expected | The community's plant species were not identified in the project site. |

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|
| *Southern Maritime Chaparral*<br>Southern Maritime Chaparral | None/None<br>G1/S1.1 | | Not Expected | The community's plant species were not identified in the project site. |
| *Southern Riparian Forest*<br>Southern Riparian Forest | None/None<br>G4/S4 | | Not Expected | The community's plant species were not identified in the project site. |
| *Southern Riparian Scrub*<br>Southern Riparian Scrub | None/None<br>G3/S3.2 | | Not Expected | The community's plant species were not identified in the project site. |
| *Southern Sycamore Alder Riparian Woodland*<br>Southern Sycamore Alder Riparian Woodland | None/None<br>G4/S4 | | Not Expected | The community's plant species were not identified in the project site. |
| *Southern Willow Scrub*<br>Southern Willow Scrub | None/None<br>G3/S2.1 | | Not Expected | The community's plant species were not identified in the project site. |

Regional Vicinity refers to within a 9-quad search radius of site.

**Status (Federal/State)**

FE = Federal Endangered

FT = Federal Threatened

FPE = Federal Proposed Endangered

FPT = Federal Proposed Threatened

FD = Federal Delisted

FC = Federal Candidate

SE = State Endangered

ST = State Threatened

SCE = State Candidate Endangered

SCT = State Candidate Threatened

SR = State Rare

**California Rare Plant Rank (California Native Plant Society California Rare Plant Rank)**

1A = Presumed extirpated in California, and rare or extinct elsewhere

1B = Rare, Threatened, or Endangered in California and elsewhere

2A = Presumed extirpated in California, but common elsewhere

2B = Rare, Threatened, or Endangered in California, but more common elsewhere

**California Rare Plant Rank Threat Code Extension**

.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)

.2 = Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat)

.3 = Not very endangered in California (<20% of occurrences threatened/low degree and immediacy of threat)

| Scientific Name<br>Common Name | Status | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/ Observations |
|---|---|---|---|---|

SD = State Delisted

SSC = CDFW Species of Special Concern

FP = CDFW Fully Protected

WL = CDFW Watch List

**Other Statuses**

G1 or S1 Critically Imperiled Globally or Subnationally (state)

G2 or S2 Imperiled Globally or Subnationally (state)

G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)

G4/5 or S4/5 Apparently secure, common and abundant

GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery

**Additional notations may be provided as follows**

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)

Q – Questionable taxonomy that may reduce conservation priority

? – Inexact numeric rank

## Special-Status Wildlife Species in the Regional Vicinity of the Project Site

| Scientific Name<br>Common Name | Status<br>Fed/State ESA<br>CDFW | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/Observations |
|---|---|---|---|---|
| **Invertebrates** | | | | |
| *Bombus crotchii*<br>Crotch's bumble bee | None/None<br>G3G4/S1S2<br>CCESA | Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Ant*irrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.* | Moderate Potential | The study area contains some suitable foraging resources, including *Eriogonum fasciculatum* and is within the known extant range of *B crotchii.* Overwintering and nesting habitat is present within the project site, including bunch grasses, rock piles and leaf litter. CNDDB records indicate this species has been recorded within one mile of the project site in 2020. The Xerces Society documents a 2024 observation of the species 3 miles east of the study area. |
| *Branchinecta sandiegonensis*<br>San Diego fairy shrimp | Endangered/<br>None<br>G2/S2<br>None | Endemic to San Diego and Orange County mesas. Vernal pools. | Not Expected | The species' associated habitat is not present in the project site. |
| *Danaus plexippus*<br>monarch butterfly | FPT/None<br>G4T1T2Q/S2 | Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Individuals can exist in a variety of habitats, including open fields, meadows, prairies, and gardens. May breed in the winter or year-round due to the expansive nature of breeding and migratory habitat, the variability in the suitability of specific locations from year to year, and the opportunistic nature of monarch habitat use. Requires milkweed for breeding and egg laying. | Moderate Potential | No milkweed (*Asclepias* spp.) was observed during the field reconnaissance survey of the study area. There are five CNDDB records of overwintering populations within the nine quadrangle search, with the closest approximately 4.5 miles southwest of the study area. The study area is not within the proposed overwintering critical habitat for this species. No suitable wind-protected tree groves occur within the study area to support the overwintering population. Some non-breeding foraging habitat is present in the study area. This species has potential to transient the study area. |

| Scientific Name<br>Common Name | Status<br>Fed/State ESA<br>CDFW | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/Observations |
|---|---|---|---|---|
| *Streptocephalus woottoni*<br>Riverside fairy shrimp | FE/None<br>G1G2/S2 | Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season. | Not Expected | The species' associated habitat is not present in the project site. |
| **Fish** | | | | |
| *Eucyclogobius newberryi*<br>tidewater goby | Endangered/<br>None<br>G3/S3<br>SSC | Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels. | Not Expected | The species' associated habitat is not present in the project site. |
| **Reptiles** | | | | |
| *Actinemys pallida*<br>southwestern pond turtle | FPT/None<br>G2G3/SNR<br>SSC | A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying. Occurs in southern California from Monterey County south to Los Angeles, Riverside, and San Diego Counties into northern Baja California, Mexico. | Not Expected | The species' associated habitat is not present in the project site. |
| *Anniella stebbinsi*<br>southern California legless lizard | None/None<br>G3/S3<br>SSC | Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content. | Not Expected | The species' associated habitat is not present in the project site. Furthermore, moist soils to support this species are not present within the project site. |
| *Arizona elegans occidentalis*<br>California glossy snake | None/None<br>G5T2/S2<br>SSC | Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils. | Low Potential | Suitable habitat is present in the project site, but the species does not have any recent recorded occurrences within 5 miles of the project. |

| Scientific Name<br>Common Name | Status<br>Fed/State ESA<br>CDFW | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/Observations |
|---|---|---|---|---|
| *Aspidoscelis hyperythra*<br>orange-throated whiptail | None/None<br>G5/S2S3<br>WL<br>HMP Covered Species | Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites. | Low Potential | Marginally suitable habitat is present within the study area, although the project site is heavily disturbed. This species was previously observed approximately 0.4 mile north of the project site in 2000. Furthermore, there is one recent occurrence from 2017 within 4 miles of the project site within a disturbed site surrounded by Diegan coastal sage scrub. |
| *Aspidoscelis tigris stejnegeri*<br>coastal whiptail | None/None<br>G5T5/S3<br>SSC | Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky. | Low Potential | Marginally suitable habitat is present within the study area, although the project site is heavily disturbed. The species was observed in 2001 approximately 0.6 mile southwest of the project site. There are 2 other occurrences within 5 miles from 2000 and 2001. |
| *Crotalus ruber*<br>red-diamond rattlesnake | None/None<br>G4/S3<br>SSC | Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects. | Low Potential | Marginally suitable scrub habitat is present within the study area; however, the disturbed nature of the Diegan Coastal Sage Scrub would not support this species. The study area is surrounded by developed areas that could not support this species. Furthermore, there is only one recent occurrence recorded within 5 miles of the project site. |
| *Phrynosoma blainvillii*<br>coast horned lizard | None/None<br>G3G4/S3S4<br>SSC | Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects. | Low Potential | No sandy washes are present within the study area. Disturbed Diegan Coastal Sage Scrub with scattered shrubs is marginally suitable for this species. However, his species does have recent recorded occurrences within 5 miles of the project. |
| *Plestiodon skiltonianus interparietalis*<br>Coronado skink | None/None<br>G5T5/S2S3<br>WL | Grassland, chaparral, pinon-juniper and juniper sage woodland, pine-oak and pine forests in Coast Ranges of Southern California. Prefers early successional stages or open areas. Found in rocky areas close to streams and on dry hillsides. | Not Expected | The species' associated habitat is not present in the project site. |

| Scientific Name<br>Common Name | Status<br>Fed/State ESA<br>CDFW | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/Observations |
|---|---|---|---|---|
| *Salvadora hexalepis virgultea*<br>coast patch-nosed snake | None/None<br>G5T4/S2S3<br>SSC | Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites. | Low Potential | Marginally suitable habitat is present in the study area; however, the project site is largely developed or disturbed. The species does have two recorded occurrences within 5 miles of the project site, however these occurrences are associated with sandy soil and granitic rock outcrops and preserved land which has since been developed. |
| *Thamnophis hammondii*<br>two-striped gartersnake | None/None<br>G4/S3S4<br>SSC | Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 feet elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth. | Not Expected | The species' associated habitat is not present in the project site. |
| *Thamnophis sirtalis* pop. 1<br>south coast gartersnake | None/None<br>G5T1T2/S1S2<br>SSC | Southern California coastal plain from Ventura County to San Diego County, and from sea level to about 850 m. Marsh and upland habitats near permanent water with good strips of riparian vegetation. | Not Expected | Although upland habitat is present in the study area. However, no permanent water source is present within the study area to support this species. |
| **Amphibians** | | | | |
| *Spea hammondii*<br>western spadefoot<br>Distinct Population Segment (DPS)<br>Southern California | FPT/None<br>G3/S3<br>SSC<br>HMP Covered Species | Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying. | Not Expected | The species' associated habitat is not present in the project site. |
| **Birds** | | | | |
| *Accipiter cooperii*<br>Cooper's hawk | None/None<br>G5/S4<br>WL<br>HMP Covered Species | Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks. | Low Potential | The species has some potential to transient on the project site; however, the species' associated nesting habitat is not present on site. |
| *Agelaius tricolor*<br>tricolored blackbird | None/Threatened<br>G2G3/S1S2<br>SSC | Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |

| Scientific Name<br>Common Name | Status<br>Fed/State ESA<br>CDFW | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/Observations |
|---|---|---|---|---|
| *Aimophila ruficeps canescens*<br>southern California rufous-crowned sparrow | None/None<br>G5T3/S3<br>WL<br>HMP Covered Species | Resident in Southern California Coastal Sage Scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches. | Low Potential | Marginally suitable foraging and nesting habitat is present on site for this species. The closest record of a previous recorded occurrence with similar habitat surrounded by development is approximately 4.2 miles to the northwest of the project. This species was not observed during the field survey. |
| *Artemisiospiza belli belli*<br>Bell's sparrow | None/None<br>G5T2T3/S3<br>WL | Nests in chaparral dominated by fairly dense stands of chamise. Found in Coastal Sage Scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yards apart. | Low Potential | Marginal habitat for this species is found in the project site. This species was not observed during the field survey. |
| *Athene cunicularia*<br>burrowing owl | None/None<br>G4/S3<br>SSC | Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. No suitable burrows were identified during the survey, although concrete rock piles within the project site could support this species. There are no recent occurrences within 9 quadrangles of the project site. |
| *Buteo swainsoni*<br>Swainson's hawk | None/Threatened<br>G5/S3<br>None | Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. The developed surrounding areas also do not support this species, so this species is unlikely to transient the project site during migration. |
| *Campylorhynchus brunneicapillus sandiegensis*<br>coastal cactus wren | None/None<br>G5T3Q/S3<br>SSC<br>HMP Covered Species | Southern California coastal sage scrub. Wrens require tall *Opuntia* sp. cactus for nesting and roosting. | Not Expected | No *Opuntia* sp. cactus occurs within the study area. Therefore, no suitable habitat for occupation by the species occurs within the study area. |
| *Charadrius alexandrinus nivosus*<br>western snowy plover | Threatened/None<br>G3T3/S2S3<br>SSC<br>HMP Covered Species | Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |

| Scientific Name<br>Common Name | Status<br>Fed/State ESA<br>CDFW | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/Observations |
|---|---|---|---|---|
| *Circus hudsonius*<br>northern harrier | None/None<br>G5/S3<br>SSC | Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |
| *Coccyzus americanus occidentalis*<br>western yellow-billed cuckoo | Threatened/ Endangered<br>G5T2T3/S1<br>None | Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |
| *Elanus leucurus*<br>white-tailed kite | None/None<br>G5/S3S4<br>FP | Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. There is only one CNDDB occurrence from 2003 that is approximately 5 miles northwest of the project site. The other CNDDB occurrence is over 40 years old. |
| *Empidonax traillii extimus*<br>southwestern willow flycatcher | Endangered/ Endangered<br>G5T2/S1<br>None<br>HMP Covered Species | Riparian woodlands in southern California. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |
| *Eremophila alpestris actia*<br>California horned lark | None/None<br>G5T4Q/S4<br>WL | Coastal regions, chiefly from Sonoma County to San Diego County. Also, main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats. | Low Potential | The species may forage in the open disturbed areas of the site. Not expected to nest on site. |
| *Falco mexicanus*<br>prairie falcon | None/None<br>G5/S4<br>WL | Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |
| *Icteria virens*<br>yellow-breasted chat | None/None<br>G5/S3<br>SSC<br>HMP Covered Species | Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |

| Scientific Name<br>Common Name | Status<br>Fed/State ESA<br>CDFW | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/Observations |
|---|---|---|---|---|
| *Laterallus jamaicensis coturniculus*<br>California black rail | None/Threatened<br>G3G4T1/S1<br>FP | Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |
| *Passerculus sandwichensis beldingi*<br>Belding's savannah sparrow | None/<br>Endangered<br>G5T3/S3<br>None | Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in Salicornia on and about margins of tidal flats. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |
| *Plegadis chihi*<br>white-faced ibis | None/None<br>G5/S3S4<br>WL<br>HMP Covered Species | Shallow freshwater marsh. Dense tule thickets for nesting, interspersed with areas of shallow water for foraging. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |
| *Polioptila californica californica*<br>coastal California gnatcatcher | Threatened/None<br>G4G5T2Q/S2<br>SSC<br>HMP Covered Species | Obligate, permanent resident of coastal sage scrub below 2,500 feet in Southern California. Low in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied. | Not Expected for breeding<br>Low Potential for non-breeding | Marginally suitable dispersal habitat is present within the study area; however, the project site is heavily disturbed and would not support nesting. There are several occurrences within 5 miles of the project site, the closest of which is from 2005 and is located approximately 0.5 mile southwest of the project site. The eastern edge of the study area overlaps with USFWS Critical Habitat for this species. This species was not observed or otherwise detected during 2025 protocol surveys. |
| *Rallus obsoletus levipes*<br>light-footed Ridgway's rail | Endangered/<br>Endangered<br>G5T1T2/S1<br>FP | Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on mollusks and crustaceans. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |
| *Riparia riparia*<br>bank swallow | None/Threatened<br>G5/S2<br>None | Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |

| Scientific Name<br>Common Name | Status<br>Fed/State ESA<br>CDFW | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/Observations |
|---|---|---|---|---|
| *Setophaga petechia*<br>yellow warbler | None/None<br>G5/S3S4<br>SSC | Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |
| *Sternula antillarum browni*<br>California least tern | Endangered/<br>Endangered<br>G4T2T3Q/S2<br>FP<br>HMP Covered Species | Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |
| *Vireo bellii pusillus*<br>least Bell's vireo | Endangered/<br>Endangered<br>G5T2/S2<br>None<br>HMP Covered Species | Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 feet Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite. | Not Expected | The species' associated nesting and foraging habitat is not present in the project site. |
| **Mammals** | | | | |
| *Antrozous pallidus*<br>pallid bat | None/None<br>G5/S3<br>SSC | Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. | Not Expected | The species associated roosting habitat is not present in the project site. The project site is heavily disturbed and would not support foraging for this species. |
| *Choeronycteris mexicana*<br>Mexican long-tongued bat | None/None<br>G4/S1<br>SSC | Occasionally found in San Diego County, which is on the periphery of their range. Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves, and in and around buildings. | Not Expected | The species associated roosting habitat is not present in the project site. The project site is heavily disturbed and would not support foraging for this species. |
| *Corynorhinus townsendii*<br>Townsend's big-eared bat | None/None<br>G3G4/S2<br>SSC | Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings of caves and abandoned buildings. Roosting sites limiting. Extremely sensitive to human disturbance. | Not Expected | The species associated roosting habitat is not present in the project site. The project site is heavily disturbed and would not support foraging for this species. |

| Scientific Name<br>Common Name | Status<br>Fed/State ESA<br>CDFW | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/Observations |
|---|---|---|---|---|
| *Dipodomys stephensi*<br>Stephens' kangaroo rat | Endangered/<br>Threatened<br>G2/S2<br>None<br>HMP Covered Species | Primarily annual and perennial grasslands but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil. | Not Expected | The project site is outside the known range of the species. There are no recent CNDDB occurrences within 9 quadrangles of the study area. |
| *Euderma maculatum*<br>spotted bat | None/None<br>G4/S3<br>SSC | Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Typically forages in open terrain; over water and along washes. Feeds almost entirely on moths. Roosts in rock crevices in cliffs or caves. Occasionally roosts in buildings. | Not Expected | The species associated roosting habitat is not present in the project site. The project site is heavily disturbed and would not support foraging for this species. |
| *Eumops perotis californicus*<br>western mastiff bat | None/None<br>G5T4/S3S4<br>SSC | Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, broad-leaved trees and tunnels. | Not Expected | The species associated roosting habitat is not present in the project site. The project site is heavily disturbed and would not support foraging for this species. |
| *Lasiurus frantzii*<br>western red bat | None/None<br>G4/S3<br>SSC | Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging. | Not Expected | The species' associated roosting habitat is not present in the project site. The project site is heavily disturbed and would not support foraging for this species. |
| *Lasiurus xanthinus*<br>western yellow bat | None/None<br>G5/S3<br>SSC | Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in broad-leaved trees, particularly palms. Forages over water and among trees. | Not Expected | The species' associated roosting habitat is not present in the project site. The project site is heavily disturbed and would not support foraging for this species. |
| *Leptonycteris yerbabuenae*<br>lesser long-nosed bat | Endangered/<br>None<br>G4/S1<br>None | Arid regions such as desert grasslands and shrub land. Suitable day roosts (caves and mines) and suitable concentrations of food plants (columnar cacti and agaves) are critical resources. No maternity roosts known from California; may only be vagrant. Caves and mines are used as day roosts. Caves, mines, rock crevices, trees and shrubs, and abandoned buildings are used as night roosts for digesting meals. Nectar, pollen, and fruit eating bat; primarily feeding on agaves, saguaro, and organ pipe cactus. | Not Expected | Individuals of the species could potentially use the trees outside of the study area to the east for night roosts, but winter and maternal roosting by the species is not expected. Nectar, pollen and fruit producing plants do not occur within the study area to support this species. |

| Scientific Name<br>Common Name | Status<br>Fed/State ESA<br>CDFW | Habitat Requirements | Potential to Occur in Project Site | Habitat Suitability/Observations |
|---|---|---|---|---|
| *Neotoma lepida intermedia*<br>San Diego desert woodrat | None/None<br>G5T3T4/S3S4<br>SSC | Occurs in scrub habitats of southern California from San Luis Obispo County to San Diego County. | Not Expected | Although marginally suitable scrub habitat was present within the study area the disturbed nature of the project site does not have potential to support this species. No woodrat middens were observed during the field survey. |
| *Nyctinomops femorosaccus*<br>pocketed free-tailed bat | None/None<br>G4/S3<br>SSC | Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs. | Not Expected | The species associated roosting habitat is not present in the project site. The project site is heavily disturbed and would not support foraging for this species |
| *Nyctinomops macrotis*<br>big free-tailed bat | None/None<br>G5/S3<br>SSC | Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths. | Not Expected | The species associated roosting habitat is not present in the project site. The project site is heavily disturbed and would not support foraging for this species |
| *Perognathus longimembris pacificus*<br>Pacific pocket mouse | Endangered/<br>None<br>G5T1/S1<br>SSC | Inhabits the narrow coastal plains from the Mexican border north to El Segundo, Los Angeles County. Seems to prefer soils of fine alluvial sands near the ocean, but much remains to be learned. | Not Expected | This species is only known from three viable populations: Dana Point, San Mateo Creek, and Camp Pendleton. Suitable soils not found on the project site. |
| *Taxidea taxus*<br>American badger | None/None<br>G5/S3<br>SSC | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows. | Not Expected | No diagnostic sign of the species (e.g., burrows or digs) were identified in the project site. |

Regional Vicinity refers to within a 9-quad search radius of site.

**Status (Federal/State)**

FE = Federal Endangered
FT = Federal Threatened
FPE = Federal Proposed Endangered
FPT = Federal Proposed Threatened
FD = Federal Delisted
FC = Federal Candidate
SE = State Endangered
ST = State Threatened
SCE = State Candidate Endangered
SCT = State Candidate Threatened
SR = State Rare
SD = State Delisted
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List
CCESA = Candidate California Endangered Species Act

**Additional notations may be provided as follows**

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
? – Inexact numeric rank

# Appendix F

Aquatic Resources Delineation Datasheets

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Sunrise Assisted Living Project City/County: San Marcos and Carlsbad Sampling Date: April 17, 2025

Applicant/Owner: _____ State: CA Sampling Point: 1

Investigator(s): K. Gugerty Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Artificial concrete ditch Local relief (concave, convex, none): concave Slope (%): 1-3

Subregion (LRR): Arid West Lat: _____ Long: _____ Datum: NAD 83

Soil Map Unit Name: Cieneba and San Miguel Series NWI classification: N/A

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 _____ | No ✔ | **Is the Sampled Area within a Wetland?** Yes _____ No ✔ |
| Hydric Soil Present? | Yes _____ | No ✔ | |
| Wetland Hydrology Present? | Yes _____ | No ✔ | |

Remarks:

Concreted

## VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: 10x10) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | = Total Cover | | |
| **Sapling/Shrub Stratum (Plot size: 10x10)** | | | |
| 1. Baccharis pilularis | 25 | D | FAC |
| 2. Meleluca quinquenervia | 10 | D | NL |
| 3. Myoparum latum | 5 | | FACU |
| 4. | | | |
| 5. | | | |
| | 40 = Total Cover | | |
| **Herb Stratum (Plot size: 10x10)** | | | |
| 1. Medicago polymorpha | 20 | D | FACU |
| 2. Hirschfeldia incana | 8 | | NL |
| 3. Isocoma menziessi | 3 | | FACU |
| 4. Psuedognaphalium californica | 1 | | NL |
| 5. Euphorbia peplus | 1 | | NL |
| 6. Psuedognaphalium microcephalum | 1 | | NL |
| 7. | | | |
| 8. | | | |
| | = Total Cover | | |
| **Woody Vine Stratum (Plot size: _____)** | | | |
| 1. | | | |
| 2. | | | |
| | = Total Cover | | |

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

**Dominance Test worksheet:**

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 3 (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Hydrophytic Vegetation Present?** Yes _____ No ✔

Remarks:

## SOIL

Sampling Point: 1

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

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

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

**Restrictive Layer (if present):**

Type: concrete

Depth (inches): 0

**Hydric Soil Present?** Yes _____ No ✔

Remarks:

No sample pit was dug due to restrictive concrete layer.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

**Field Observations:**

Surface Water Present? Yes _____ No ✔ 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:

no hydrologic indicators present

U.S. Army Corps of Engineers (USACE)

# RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-CO-R.

*OMB Control No. 0710-XXXX*

*Approval Expires:*

| Project ID #: | Site Name: Sunrise Assisted Living Project | Date and Time: April 17, 2025;1000 |
|---|---|---|
| Location (lat/long): | Investigator(s): K. Gugerty | |

**Step 1** Site overview from remote and online resources

**Check boxes for online resources used to evaluate site:**

- ☐ gage data
- ☐ LiDAR
- ☐ geologic maps
- ☐ climatic data
- ☒ satellite imagery
- ☐ land use maps
- ☐ aerial photos
- ☐ topographic maps
- ☐ Other: _____

**Describe land use and flow conditions from online resources.** Were there any recent extreme events (floods or drought)?

none

**Step 2** Site conditions during field assessment

First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

One concrete ditch begins near San Elijo Rd South to North downhill adjacent to Paseo Plomo. Second concrete ditch inlet in north side of project site. Both ditches join north of project site. Ditch terminus ends outside of Study Area to underground culvert that outlets on adjacent slope.

**Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.**

**OHWM is at a transition point,** therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM.

**OHWM.** Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

### Geomorphic indicators

- ☐ **Break in slope:**
  - ☐ *on the bank:*
  - ☐ *undercut bank:*
  - ☐ *valley bottom:*
  - ☐ Other: _____
- ☐ **Shelving:**
  - ☐ *shelf at top of bank:*
  - ☐ *natural levee:*
  - ☐ *man-made berms or levees:*
  - ☐ *other berms:* _____
- ☐ **Channel bar:**
  - ☐ *shelving (berms) on bar:*
  - ☐ *unvegetated:*
  - ☐ *vegetation transition (go to veg. indicators)*
  - ☐ *sediment transition (go to sed. indicators)*
  - ☐ *upper limit of deposition on bar:*
- ☐ **Instream bedforms and other bedload transport evidence:**
  - ☐ *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - ☐ *bedforms (e.g., poofs, riffles, steps, etc.):*
  - ☐ *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*
- ☐ **Secondary channels:**

### Sediment indicators

- ☐ **Soil development:**
- ☐ **Changes in character of soil:**
- ☐ **Mudcracks:**
- ☐ **Changes in particle-sized distribution:**
  - ☐ *transition from* _____ to _____
  - ☐ *upper limit of sand-sized particles*
  - ☐ *silt deposits:*

### Vegetation Indicators

- ☐ **Change in vegetation type and/or density:**

  Check the appropriate boxes and select the general vegetation change *(e.g., graminoids to woody shrubs).* ***Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.***
  - ☐ *vegetation absent to:*
  - ☐ *moss to:*
  - ☐ *forbs to:*
  - ☐ *graminoids to:*
  - ☐ *woody shrubs to:*
  - ☐ *deciduous trees to:*
  - ☐ *coniferous trees to:*
- ☐ **Vegetation matted down and/or bent:**
- ☐ **Exposed roots below intact soil layer:**

### Ancillary indicators

- ☐ **Wracking/presence of organic litter:**
- ☐ **Presence of large wood:**
- ☐ **Leaf litter disturbed or washed away:**
- ☐ **Water staining:**
- ☐ **Weathered clasts or bedrock:**

**Other observed indicators?**

**Describe:**

no OHWM indicators observed in concrete ditches

**Step 4** Is additional information needed to support this determination?

☐ Yes ☒ No

If yes, describe and attach information to datasheet:

Project ID #: _____

**Step 5** Describe rationale for location of OHWM

n/a

**Additional observations or notes**

No downstream connection.
Ditches are 3 ft wide by 1.5 ft deep
Vegetative and other debris in bottom of ditches
Inlet to north ditch lined with 6 x 6 foot impermeable black tarp
Inlet and ditches partially covered with vegetation and debris
Western ditch above retaining wall on south section; adjacent to road on north section
Ditches artificial/man made.

Attach a photo log of the site. Use the table below, or attach separately.

Photo log attached? ☐ Yes ☐ No If no, explain why not: _____

List photographs and include descriptions in the table below.

Number photographs in the order that they are taken. Attach photographs and include annotations of features.

| Photo Number | Photograph description |
|---|---|
| | |
| | |
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| | |

## OHWM Field Identification Datasheet Instructions and Field Procedure

Step 1 **Site overview from remote and online resources** **Complete Step 1 prior to site visit.**

**Online Resources: Identify what information is available for the site. Check boxes on datasheet next to the resources used to assess this site.**

a. gage data
b. aerial photos
c. satellite imagery
d. LiDAR
e. topographic maps
f. geologic maps
g. land use maps
h. climatic data (precipitation and temperature)

**Landscape context: Use the online resources to put the site in the context of the surrounding landscape.**

a. **Note on the datasheet under Step 1:**
   i. Overall land use and change if known
   ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires)
b. Consider the following to inform weighting of evidence observed during field visit.
   i. What physical characteristics are likely to be observed in specific environments?
   ii. Was there a recent flood or drought? Are you expecting to see recently formed or obscured indicators?
   iii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been over the last year, decade, century?

**Step 2 Site conditions during the field assessment (assemble evidence)**

a. Identify the assessment area.
b. Walk up and down the assessment area noting all the potential OHWM indicators.
c. Note broad trends in channel shape, vegetation, and sediment characteristics.
   i. Is this a single thread or multi-thread system? Is this a stream-wetland complex?
   ii. Are there any secondary and/or floodplain channels?
   iii. Are there obvious man-made alterations to the system?
   iv. Are there man-made (e.g., bridges, dams, culverts) or natural structures (e.g., bedrock outcrops, Large Wood jams) that will influence or control flow?
d. Look for signs of recurring fluvial action.
   i. Where does the flow converge on the landscape?
   ii. Are there signs of fluvial action (sediment sorting, bedforms, etc.) at the convergence zone?
e. Look for indicators on both banks. If the opposite bank is not accessible, then look across the channel at the bank.
f. **In Step 2 of the datasheet** describe any adjacent land use or flow conditions that may influence interpretation of each line of evidence.
   i. What land use and flow conditions may be affecting your ability to observe indicators at the site?
   ii. What recent extreme events may have caused changes to the site and affected your ability to observe indicators?

**Step 3a List evidence**

**Assemble evidence by checking the boxes next to each line of evidence:**

a. If needed, use a separate scratch datasheet to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
b. If using fillable form, then follow the instructions for filling in the fillable form.

*Context is important when assembling evidence. For instance, pool development may be an indicator of interest on the bed of a dry stream, but may not be a useful indicator to take note of in a flowing stream. On the other hand, if the pool is found in a secondary channel adjacent to the main channel, it could provide a line of evidence for a minimum elevation of high flows. Therefore, consider the site context when deciding which indicators provide evidence for identifying the OHWM. Explain reasoning in Step 5.*

**Questions to consider while making observations and listing evidence at a site:**

| **Geomorphic indicators** | **Sediment and soil indicators** | **Vegetation Indicators** | **Ancillary indicators** |
|---|---|---|---|
| Where are the breaks in slope? | Where does evidence of soil formation appear? | Where are the significant transitions in vegetation species, density, and age? | Is there organic litter present? |
| Are there identifiable banks? | | Is there vegetation growing on the channel bed? | |
| Is there an easily identifiable top of bank? | Are there mudcracks present? | If no, how long does it take for the non-tolerant vegetation to establish relative to how often flows occur in the channel? | Is there any leaf litter disturbed or washed away? |
| Are the banks actively eroding? | | | |
| Are the banks undercut? | Is there evidence of sediment sorting by grain size? | Where are the significant transitions in vegetation? | Is there large wood deposition? |
| Are the banks armored? | | | |
| Is the channel confined by the surrounding hillslopes? | | Is the vegetation tolerant of flowing water? | Is there evidence of water staining? |
| Are there natural or man-made berms and levees? | | Has any vegetation been flattened by flowing water? | |
| Are there fluvial terraces? | | | |
| Are there channel bars? | | | |

Are the following features of fluvial transport present?

*Evidence of erosion: obstacle marks, scour, armoring*
*Bedforms; riffles, pools, steps, knickpoints/headcuts*
*Evidence of deposition: imbricated clasts, gravel sheets, etc.*

**In some cases, it may be helpful to explain why an indicator was NOT at the OHWM elevation, but found above or below. It can also be useful to note if specific indicators (e.g., vegetation) are NOT present. For instance, note if the site has no clear vegetation zonation.**

**OHWM Field Identification Datasheet Instructions and Field Procedure**

**Step 3b Weight each line of evidence and weigh body of evidence**

**Weight each indicator by considering its importance based upon:**

**a. Relevance:**

i. Is this indicator left by low, high, or extreme flows?

**Tips on how to assess the indicator relative to type of flow:**

*Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.*

***Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.**

***Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining relevance, strength, and reliability.**

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.
2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.
3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

**b. Strength:**

i. Is this indicator persistent across the landscape?

1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
2. Does the indicator occur at the same elevation as other indicators?

**c. Reliability:**

i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?

1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of land use or other natural disturbances.
2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

**d. Weigh body of evidence:**

i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.

ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).

iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.

**e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos.**

i. Annotate photos with descriptions of indicators.

**Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?**

a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.

b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.

c. Attach any remote data and data analysis to the datasheet.

**Step 5 Describe rationale for location of OHWM:**

a. Why do the combination of indicators represent the OHWM?

b. If there are multiple possibilites for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.

c. If needed, add additional site notes on page 2 of the datasheet under Step 5.