Woodward Specific Plan

Full Biological Resources Report

prepared for

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Revised May 2025

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Acronyms and Abbreviations

BCLA	Biological Core and Linkage Area
CAGN	Coastal California Gnatcatcher
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
FESA	Federal Endangered Species Act
FPA	Focused Planning Area
MBTA	Migratory Bird Treaty Act
MHCP	Multiple Habitat Conservation Program
Rincon	Rincon Consultants, Inc.
SANDAG	San Diego Association of Governments
SSAR	Society for the Study of Amphibians and Reptiles
SSC	Species of Special Concern
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
WL	Watch List

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Executive Summary

This Full Biological Resources Report documents the findings of a biological survey conducted by Rincon Consultants, Inc. and evaluates potential impacts from the implementation of the Woodward Specific Plan Development Project (project), located in the city of San Marcos, California. The 8.27-acre project site is located northeast of the intersection of East Mission Avenue and Woodward Street. Project development includes the following components:

- 46 duplex multifamily units consisting of 23 buildings with two units in each building
- A private access road originating from Woodward Street would be constructed along the portion of the northwest portion of the site.
- A water quality basin would be constructed within the northeast portion of the site.

The study area totals 27.29 acres (project site boundary plus a 200-foot buffer) and is comprised of five vegetation communities and one land cover type, including Diegan Coastal Sage Scrub, Disturbed Diegan Coastal Sage Scrub, Disturbed Habitat, Eucalyptus Woodland, Southern Riparian Forest, and Urban/Developed areas. The project site, which includes the project impact area, contains Diegan Coastal Sage Scrub (including disturbed) and the developed Woodward Street. The project impact area is defined as the proposed project footprint/limits of disturbance within the boundaries of the project site. The central portion of the project site shows a history of anthropogenic disturbances with disturbed habitat, trash, and old equipment observed. The project site and study area include existing fuel modification easements located along the western, eastern, and southeastern boundaries.

The study area includes vegetation that is within the boundaries of a Focused Planning Area of the San Diego Association of Governments Final Multiple Habitat Conservation Program (MHCP). The project site is not within a Focused Planning Area, or within a Biological Core and Linkage Area.

Five MHCP-covered species, including Cooper's hawk (*Accipiter cooperii)*, orange-throated whiptail (*Aspidoscelis hyperythra*), coastal whiptail (*Aspidoscelis tigris stejnegeri,* and Bryant's woodrat (*Neotoma bryanti intermedia*) have a high potential to occur on the project site. The coastal California gnatcatcher, a federally threatened and State listed Species of Special Concern and MHCP covered species, has been previously observed within the project site and study area. However, gnatcatchers were not observed during the field reconnaissance survey or protocol surveys conducted in 2023.

Two other MHCP-covered species, rufus-crowned sparrow (*Aimophila ruficeps canescens*), and San Diego sand aster (*Corethrogyne filaginifolia* var. *incana*) were considered to have a moderate potential to occur. Given the potential for rare plants to occur on site, focused surveys were conducted during the appropriate time in spring and summer 2023. Results from focused rare plant surveys were negative, therefore they are presumed absent, and no project impacts are anticipated.

Due to the presence of suitable Diegan Coastal Sage Scrub habitat for foraging and potential nesting, Crotch's bumble bee (*Bombus crotchii*), a Candidate for the California Endangered Species Act focused surveys were conducted in 2024. One Crotch's bumble bee was detected in the Diegan Coastal Sage Scrub habitat within the southern central portion of the project site and mitigation measures are proposed to reduce potential project impacts to the species.

The project site contains vegetation communities considered sensitive by the MHCP, as described above, which include Diegan Coastal Sage Scrub and Disturbed Diegan Coastal Sage Scrub. Implementation of mitigation measures described in this report would reduce potential impacts to these species and sensitive habitats to a less-than-significant level.

The project site does not contain any potential jurisdictional features, and no impacts are anticipated to waters of the state or United States.

1 Introduction

This report provides information pertaining to the existing biological resources observed by Rincon Consultants, Inc. (Rincon) for the Woodward Specific Plan Project (project) located in the city of San Marcos. The purpose of this report is to document the existing conditions of the project site and to evaluate the potential for impacts to biological resources, facilitating the City of San Marcos' (City) environmental review of the project.

1.1 Purpose of the Report

The purpose of this Biological Resources Report is to provide a biological resources assessment of the existing conditions of the project parcel (project site) and an evaluation of the potential for impacts from the project to biological 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, 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 Guidelines (May 2022). A summary of the regulatory context, structure, and applicable statues at the federal, state, and local levels can be found in Appendix A.

1.2 Project Location and Description

The project site is in San Marcos, in northern San Diego County. The approximate 8.57-acre project site is identified as Assessor's Parcel Number 220-210-49-00 and is located to the east of Woodward Street and north of East Mission Road, as seen in Figure 1 and Figure 2. The project site is located within the United States Geological Survey (USGS) 7.5-minute topographic quadrangle *San Marcos, California*, as seen in Figure 3.

The project proposes 46 duplex multifamily units, consisting of 23 buildings with 2 units in each building, a park, and water quality basin. The study area includes the proposed project encompassing 8.57 acres plus an additional 200-foot buffer that was surveyed as shown in Figure 2.The project site will be accessed via a proposed private road off Woodward Street. The project site is surrounded by a mix of land uses and sits north of East Mission Avenue from the Inland Rail Line, as seen in Figure 3. A 7.73-acre open space easement (Tract No. 173-6) which is considered a Multiple Habitat Conservation Program (MHCP) Hardline Reserve lands are located to the north, northeastern corner, southeast, and west of the project site (Figure 7). The portions of MHCP Hardline Reserve Lands located in the northeastern and southeastern corners of the project site as shown in Figure 7, are likely misaligned and boundaries do not overlap within the project site but do still coincide with the study area. To the east of the project site are multifamily residential units, and single-family residences are located northeast of the project site. A multifamily residential development (Mission Villas) is currently under construction to the south of the project site. The south edge of the project site is also subject to routine fuel modification (vegetation clearing) activities associated with the Mission Villas project. The City of San Marcos Civic Center is located to the south of the project site and includes the public library, the Veteran's Center, and City Hall. Open spaces supporting natural vegetation communities are found to the north, east, and across Woodward Street to the west and northwest.

Figure 1 Regional Project Location

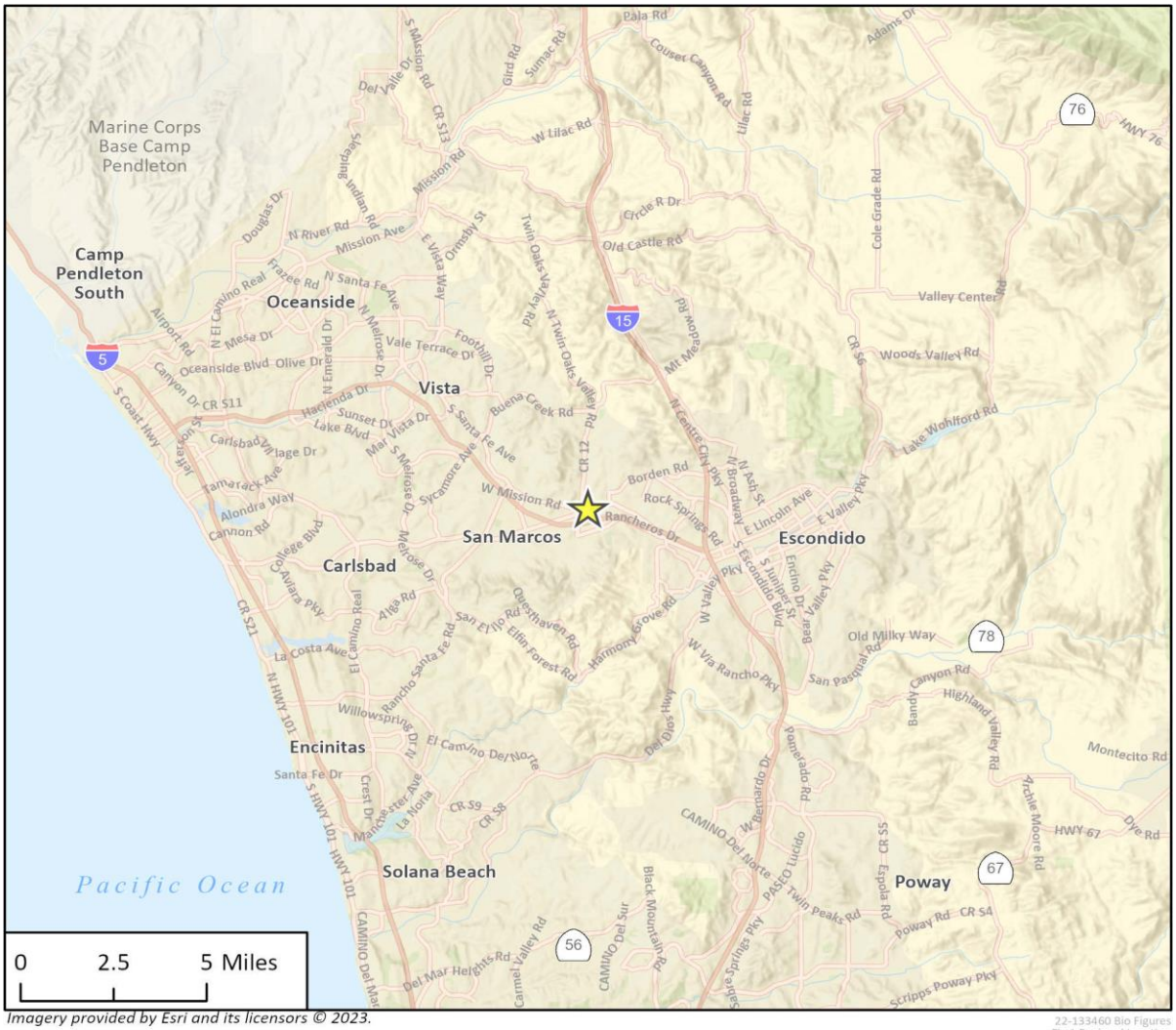

Figure 2 Project Location Map

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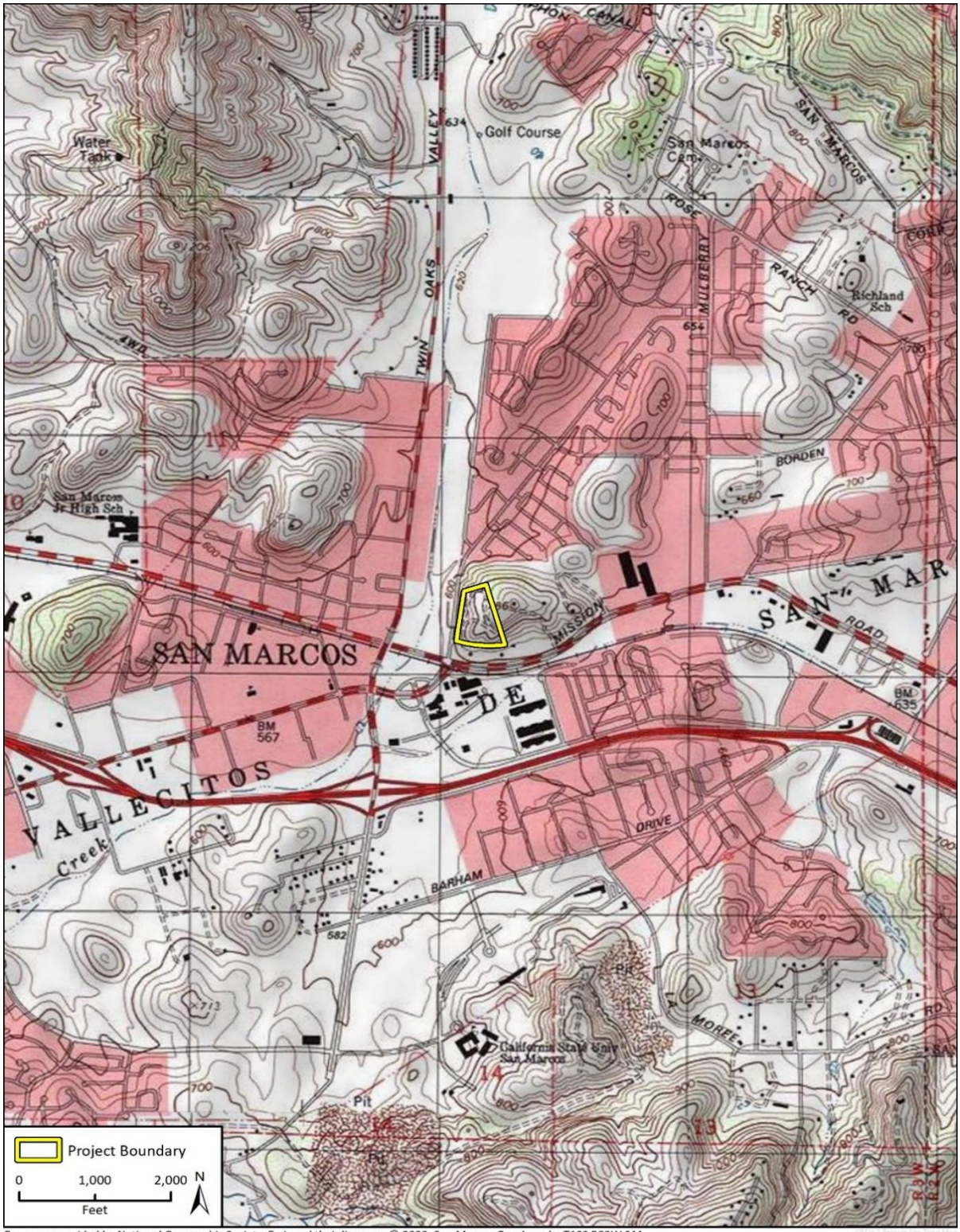
Fig X Project Location

Figure 3 Project Site Overview



Basemap provided by National Geographic Society, Esri, and their licensors © 2023. San Marcos Quadrangle. T12S R03W S11.
The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

2 Agency Consultation

No consultation with the resource agencies has occurred for the proposed project to date. It is likely, however, that coordination with the United States Fish and Wildlife Service will be required for potential project impacts to coastal California gnatcatcher (*Polioptila californica californica*), which was detected on the project site during protocol surveys in 2018 and preconstruction surveys conducted in 2020 for the Mission Villas project.

3 Environmental Setting (Existing Conditions)

The following sections describe the conditions of the study area (project site plus a 200-foot buffer) based upon the background research and observations recorded during a field survey described in Section 5. Representative photos of the project site and study area can be found in Appendix B.

3.1 Topography and Soils

The majority of the project site is very rugged with large boulder outcroppings, with a steep hillside sloping down towards the Mission Villas project. Elevation ranges from 754 feet above mean sea level from the east, 700 feet from the northern boundary or the project, sloping down to 615 feet in the southwestern portion.

The site generally slopes from higher elevation to the north and east downward towards Woodward Street. Large boulders were observed distributed throughout the site. No drainages occur on the project site. Three soil types have been identified on the project site, as shown mapped in Figure 4: Cieneba rocky coarse sandy loam, 9 to 30 percent slopes, eroded; Placentia sandy loam, 2 to 9 percent slopes; and Huerhuero loam, 2 to 9 percent slopes. The following are the official soils series descriptions for each soil series (Natural Resources Conservation Service [NRCS] 2022).

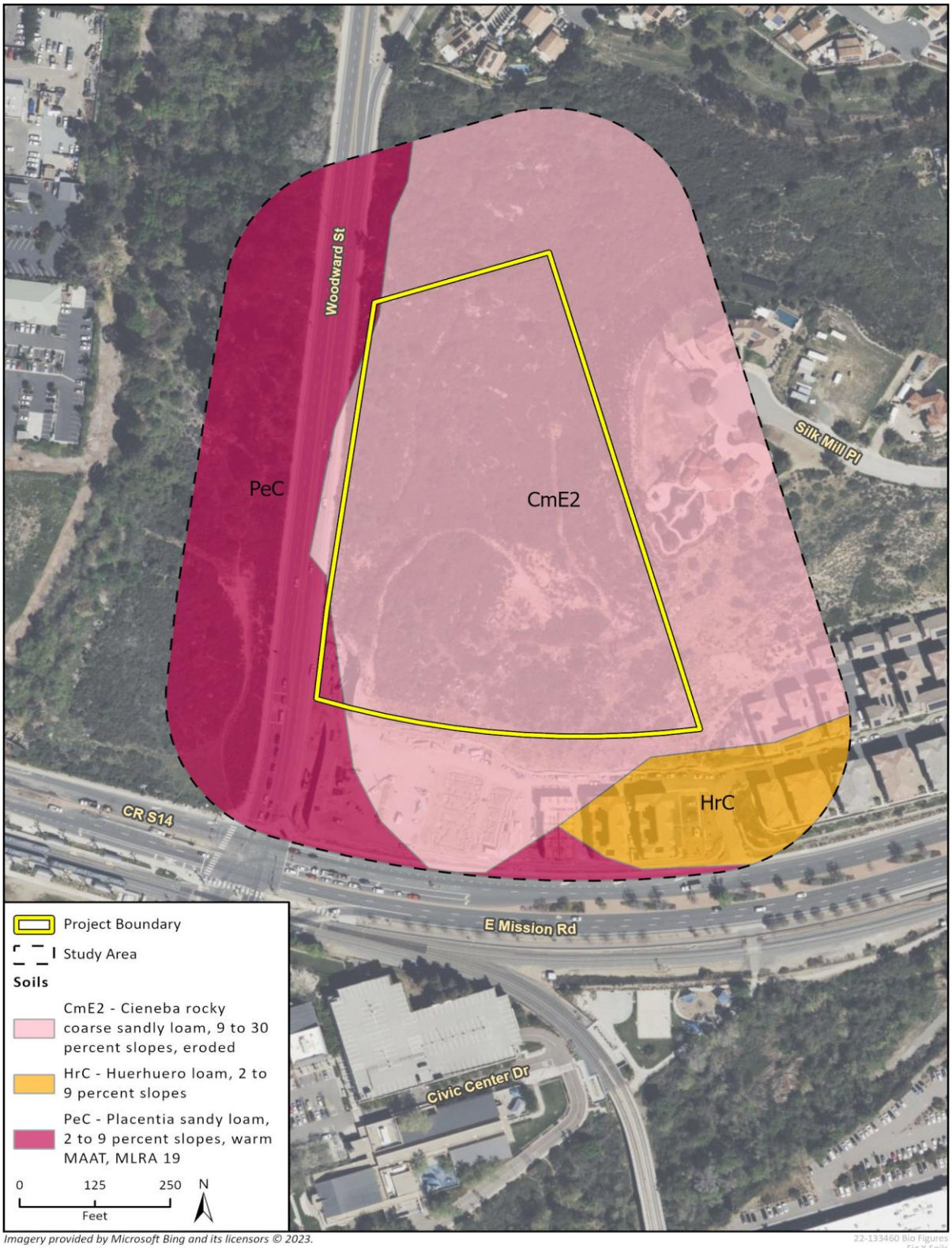
Cieneba Series

Cieneba rocky coarse sandy loam, 90 to 30 percent slopes, is the most common soil type that has been mapped on the project site and found on the majority of the slopes in the project site and in the middle of the relatively flat southern portion. The Cieneba series consists of very shallow and shallow, somewhat excessively drained soils that formed in material weathered from granitic rock. The soils have low to high runoff, with moderately rapid permeability in the soil and much slower in the weathered bedrock. Associated vegetation is typically chaparral, with widely spaced foothill pine (*Pinus sabiniana*) or oak (*Quercus* spp.) trees; however, those vegetation types do not occur within the project site or adjacent open space areas. Rocky outcroppings are distributed throughout the project site (NRCS 2022c).

Placentia Series

Placentia sandy loam, 2 to 9 percent slopes, is found in the relatively flat southwest corner of the study area. The Placentia Series are found on nearly level to moderately sloping areas and are on fans and terraces. The soils formed in alluvium from granite and other rocks of similar composition and texture. Placentia Series soils are well or moderately well drained, with slow to rapid runoff and very slow permeability. Most uncultivated areas where the soils are found have annual grasses and forbs. Placentia sandy loam, 2 to 9 percent slopes, has been classified as a hydric soil (NRCS 2022c).

Figure 4 Soils within the Project Site and Study Area



Huerhuero Series

Huerhuero loam, 2 to 9 percent slopes, are found in the relatively flat southeastern corner of the study area. The Huerhuero Series (now included in the Antioch Series) are found on nearly level to strongly sloping alluvial fans and terraces. The soils are moderately well to somewhat poorly drained, with slow to medium runoff and very slow permeability. Naturally associated vegetation is typically annual grasses, forbs, and weeds, with scattered oaks; however, that type of vegetation is not found in the project site or adjacent open space areas. Huerhuero loam, 2 to 9 percent slopes, is classified as a hydric soil (NRCS 2022c).

3.2 Vegetation and Land Cover

Vegetation classification was based on the classification systems provided in the *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008) to provide consistency with the San Diego Association of Governments (SANDAG) Multiple Habitat Conservation Program (MHCP) and modified as appropriate 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 California Department of Fish and Wildlife (CDFW) classifications. Sensitive vegetation community ranking is based on MHCP habitat groups (SANDAG 2003). The MHCP designates six habitat group categories:

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

Diegan Coastal Sage Scrub (32500)

This vegetation community is the most prevalent community within the study area (15.48 acres) and the project site (7.73 acres). The majority of the project site, as well as the study area to the north, supports high-quality Diegan Coastal Sage Scrub. This habitat community is also present within the study area to the south, east, and across Woodward Street to the west. Historical disturbance within the central and southern portions of the site identified 0.51 acres of a more Disturbed Diegan Coastal Sage Scrub community (discussed in more detail in Section 3.2.2 below), with evidence of revegetation in the last several years.

The community is dominated by low, soft-woody subshrubs that are most active in winter and early spring. Many taxa are facultatively drought-deciduous. Diegan Coastal Sage Scrub is typically on low moisture-availability sites such as steep, xeric slopes or clay-rich soils that are slow to release stored water.

The shrub layer is dense and dominated by laurel sumac (*Malosma laurina*), California sagebrush (*Artemisia californica*) and lemonade berry (*Rhus integrifolia*), with California buckwheat (*Eriogonum fasciculatum*), deerweed (*Acmispon glaber*), white sage (*Salvia apiana*), black sage (*S. mellifera*) and coyote brush (*Baccharis pilularis*) (Oberbauer et al. 2008). Several non-native species

including tocalote (*Centaurea melitensis*), mustards (*Brassica* sp.), slender wild oat (*Avena barbata*) and ripgut brome (*Bromus diandrus*) are also common throughout this community.

Diegan Coastal Sage Scrub is considered a sensitive community by the City, falling under Habitat Group C.

Disturbed Diegan Coastal Sage Scrub (32500)

This vegetation community comprises 1.10 acres within the study area, and approximately 0.51 acre of the project site and is structurally similar to Diegan Coastal Sage Scrub but has been subjected to historical anthropogenic disturbance from land use practices. An old access trail leading up from the southern area of the project site shows evidence of human disturbances, but vegetative regrowth of coastal sage scrub species was observed in those areas leading up to and including the central portion of the project site. This area appeared to be previously disturbed, forming an open pad area, with sage scrub revegetating. This habitat is also found within the fuel management area for the Mission Villas 316 Project, along the southern portion of the project site. As a result, much of the Disturbed Diegan Coastal Sage Scrub appears to be revegetating and contains a higher proportion of bare ground and weedy species than Diegan coastal sage scrub species. Dominant shrub species include California buckwheat, California sagebrush, black sage, coyote brush, with golden yarrow (*Eriophyllum confertiflorum*), coastal prickly pear (*Opuntia littoralis*) and sparse herbaceous species, including giant woollystar (*Eriastrum densifolium*) and small seed sandmat (*Euphorbia polycarpa*) and larges patches of open/bare ground.

Disturbed Diegan Coastal Sage Scrub is considered a sensitive community by the City (despite being disturbed), falling under Habitat Group C.

Urban/Developed (12000)

Urban/Developed are areas that 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 9.02 acres of land cover within the Study Area and 0.14 acre within the project site have been developed or altered, including public roadways, development, and the installation of a large retaining wall and concrete “v-ditch” from the development south of the project site.

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). A dense stand of eucalyptus woodlands was identified adjacent to Woodward Street to the west comprising of 0.24 acre, following the road from south to north, also adjacent to the riparian woodland habitat identified within the study area. Eucalyptus trees intermix with Diegan Coastal Sage Scrub understory along the western portion of the Study Area across Woodward Street.

Disturbed Habitat (11300)

Disturbed habitats are areas that have been physically disturbed by previous legal human activity and are no longer recognizable as a native or naturalized vegetation association but continue to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or disturbance-adapted ruderal exotic species or shows signs of past or present animal usage such as grazing, that removes any capability of providing viable natural habitat for uses to wildlife other than dispersal. Examples of disturbed land include areas that have been graded, repeatedly cleared for fuel management 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 firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites. Characteristic species found in disturbed habitats are invasive, non-native forb species and a limited number of grass species, including *Brassica* sp. and fountain grass (*Pennisetum* spp.) (Holland et al. 2008). Disturbed habitat, comprising of 0.98 acre was observed within the study area along the southeastern slope and a small area to the west of Woodward Street. A large open pad, surrounded by revegetating disturbed coastal sage scrub comprises an additional 0.05 acres of disturbed habitat.

The disturbance along the southeast slope has impacted the naturally occurring vegetation community, establishing primarily non-native plant species adapted to disturbances including, shortpod mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), fountain grass (*Pennisetum setaceum*) and tree tobacco (*Nicotiana glauca*). Some native species are dispersed throughout the disturbed habitat, including coyote brush, California sagebrush, and Menzies' golden bush (*Isocoma menziesii* ssp. *menziesii*).

Southern Riparian Forest (61300)

Southern riparian forest habitat is typically found along streams and rivers with dominant characteristic species that include California sycamore (*Platanus racemosa*) and cottonwoods (*Populus* sp.) amongst other wetland plants. Approximately 0.48 acre of this habitat type is within the study area and was observed located just west of Woodward Street (Figure 5).

This habitat type is associated with the San Marcos Creek freshwater forested/shrub wetland that runs between West Border Road and East Mission Road, however the creek lies outside of the study area (NWI 2022). A concrete culvert outlet likely conveys flows underneath East Mission Road and further south. Dense canopies of riparian deciduous trees comprised of California sycamore, cottonwoods, and willow (*Salix* sp.) with eucalyptus trees and an understory of upland scrub species were present This area was visually observed from the project site and not closely inspected as access to adjacent private property is not under the control of the Applicant.

Southern Riparian Forest is considered a sensitive community by the City, falling under Habitat Group A.

Figure 5 Vegetation Communities and Landcover within the Project Site and Study Area

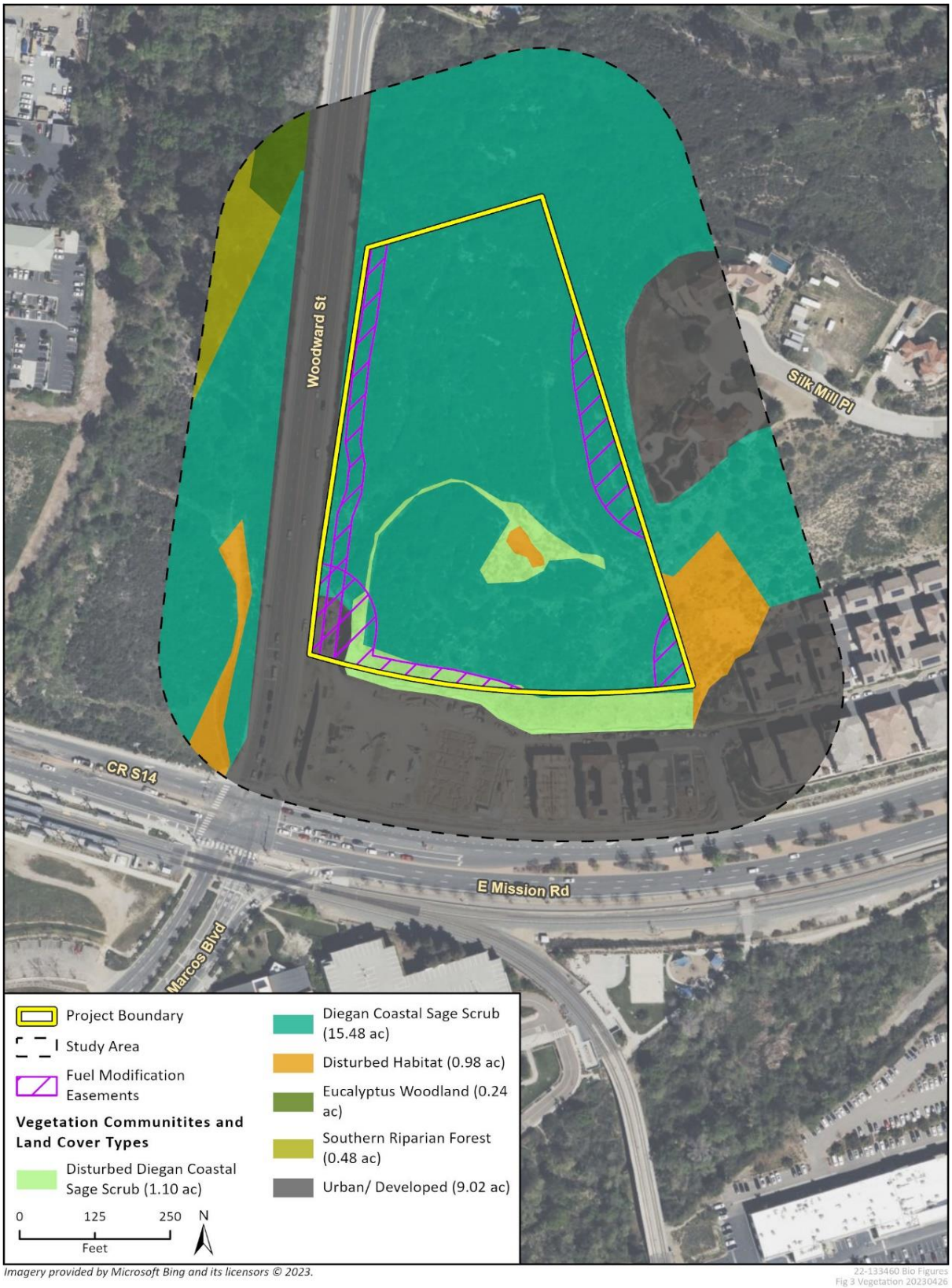


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Fig 3 Vegetation 20230426

3.3 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. For the purpose of this report, the following statutes are applicable (expanded upon in Appendix A):

3.4 Federal

- **Federal Endangered Species Act (FESA).** 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 United States Fish and Wildlife Service (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 .** Congress enacted the Clean Water Act to protect the integrity of the nation's waters, with Section 404 empowering the U.S. Army Corps of Engineers to regulate discharges of dredged or fill material into "waters of the United States." Following the 2023 Sackett v. EPA decision, federal agencies narrowed this definition to include only waters with a continuous surface connection to traditionally navigable waters. Section 401 of the Act requires applicants for such federal permits to obtain state certification ensuring compliance with water quality standards. In California, this certification is issued by the State or Regional Water Boards and may be waived if not acted upon within a specified timeframe, typically up to one year.
- **The Bald and Golden Eagle Protection Act.** Prohibits the unauthorized take of bald or golden eagles which include feathers, eggs, or nests.

3.5 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.** The Porter-Cologne Water Quality Control Act is California's primary water quality law, establishing a comprehensive framework to protect all waters of the state—including surface water, groundwater, and wetlands—from both point and

nonpoint sources of pollution. It created the State and Regional Water Boards, which oversee permitting, enforcement, and planning, and require dischargers to submit a Report of Waste Discharge for activities that may affect water quality. The Act applies to discharges of dredged or fill material, with procedures aligned with federal Clean Water Act requirements, and includes a consolidated application process for related permits. While wetland definitions are standardized statewide, jurisdictional boundaries for non-wetland waters may vary by region, often extending beyond federal limits based on local interpretation.

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.*

3.6 Local Regulations

Multiple Habitat Conservation Program

The 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 Earth & Environmental, Inc. [AMEC] 2003a, 2003b).

The MHCP Subregional Plan and Final Environmental Impact Statement/Environmental Impact Report were adopted and certified by the 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 Focus 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 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 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 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

A Covered Species is a species for which take authorization would be provided under the MHCP, because long-term viability was determined to be adequately maintained under a particular preserve system design. The federal action addressed in the MHCP is the issuance of Incidental Take Permits for all species on the Covered Species list whether they currently are listed or are to be listed in the future. The MHCP Covered Species include 20 plant species and 30 wildlife species.

City of San Marcos Subarea Habitat Conservation Plan/Natural Communities Conservation Plan

The City of San Marcos Draft Subarea Habitat Conservation Plan/Natural Communities 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 FESA/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 I122 process), 10(a) or Section 7 (or Section 10) of the FESA. 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 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 San Marcos General Plan

The Conservation and Open Space Element of the 2013 San Marcos General Plan contains several policies pertaining to the protection of biological resources (City of San Marcos 2013). 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.

4 Survey Methods

Biological conditions within the study area were evaluated by confirming applicable biological regulations, policies, and standards, reviewing biological literature and querying available databases pertinent to the project site and vicinity, and conducting a reconnaissance-level biological survey of the project site. The methods employed are described in detail below. The findings and opinions conveyed in this report are based on this methodology; therefore, all quantitative impact assumptions are estimates.

4.1 Literature and Database Review

Prior to the field survey, Rincon conducted background research to preliminarily characterize the nature and extent of biological resources on and adjacent to the project site. Rincon reviewed project site aerial photographs and previous historical land use of the project site. Queries of the CDFW California Natural Diversity Database (CNDDB) (2022a, 2022b) and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (2022) were conducted to obtain comprehensive information regarding state and federally listed species as well as other special-status species considered to have potential to occur within a 5-mile radius of the project site. For CNPS query purposes, a nine-quadrangle search area centered on the project site was used; 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 the following:

- Current and historical aerial photographs of the project site (Google Earth 2022);
- Current and historic topographic maps of *San Marcos, California* USGS 7.5-minute topographic quadrangle (USGS 2022, Nationwide Environmental Title Research 2022);
- United States Department of Agriculture (USDA) NRCS Web Soil; Survey (USDA NRCS 2022);
- National Wetlands Inventory Wetlands Mapper (USFWS 2022a);
- National Hydrography Dataset (USGS 2022b);
- USFWS Critical Habitat Portal (USFWS 2022b);
- Biogeographic Information and Observation System (CDFW 2022b);
- USFWS's *Information for Planning and Consultation* online project planning tool (USFWS 2022b);
- CDFW's CNDDB was queried for special-status plant and wildlife species and communities in the project region, defined as within a five (5)-mile radius of the study area);
- CNPS's *Inventory of Rare and Endangered Plants of California* (online edition) was queried for special-status plant species in the project region, defined as the *San Marcos, California* USGS 7.5-minute topographic quadrangle and surrounding eight quadrangles (CNPS 2022);
- Calflora's *What Grows Here* online application was queried for plant species that have been collected or observed in the project vicinity (Calflora 2022);
- CDFW's Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2022b) and Special Animal List (CDFW 2022c);

- Multiple Species Conservation Program for the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista Volume I and II (County of San Diego 2009);
- SANDAG SanGIS *Parcel Lookup Tool* was reviewed to determine areas designated in the MHCP Subarea Plan (SANDAG 2022);
- 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);
- Previous biological and survey reports prepared for the parcel (Mission 316 West Project) south of the project site (Rincon 2019; Helix 2015, 2017; KMEA, 2018).

4.2 General Biological Surveys

A field reconnaissance survey of the study area was conducted by Rincon Biologist Jacob Hargis on December 29, 2022, from 8:45 a.m. to 12:00 p.m. to document the 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 of 54 to 56 degrees Fahrenheit, winds (0 to 2miles per hour) with cloudy skies. The survey consisted of walking meandering transects throughout the study area, where accessible. The biologist visually scanned for special-status species (or sign thereof) and habitats suitable for these species. Binoculars were used to scan those areas otherwise inaccessible by foot, including the buffer area and to scan shrubs for the presence of nests.

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.

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.

4.3 Vegetation Communities

Vegetation communities observed on-site were mapped on a site-specific aerial photograph. All accessible portions of the study area were covered on foot. Vegetation was generally classified using the systems provided in *Draft Vegetation Communities of San Diego County* (Oberbauer et. al 2008) as necessary to reflect the existing site conditions.

4.4 Flora

All plant species observed in the study area were noted, and plants that could not be identified in the field were identified later using taxonomic keys (Baldwin et al. 2012). The reconnaissance survey included a directed search for special-status plants that would have been apparent at the time of the survey. Additionally, focused rare plant surveys were conducted by Rincon during the appropriate blooming period between June and September 2023.

4.5 Fauna

Animal species observed directly or detected from calls, tracks, scat, nests, or other sign were documented. Zoological nomenclature for birds is in accordance with the Cornell Lab of Ornithology (Cornell University 2022); for mammals using Mammals of California (Wilson and Reeder 2005); and for amphibians and reptiles using Society for the Study of Amphibians and Reptiles' (SSAR) Checklist of the Standard English Names of Amphibians & Reptiles (SSAR 2023).

4.6 Focused Surveys

USFWS protocol coastal California gnatcatcher (CAGN, *Polioptila californica californica*) surveys were conducted in 2018 and 2020 for the Mission 316 West Project (KMEA 2019) located just south of the project site which included survey area, and observations were found within the project limits. Updated protocol surveys to evaluate the current status of CAGN at the site were conducted by Rincon permitted biologist Kelly Rios between May 3 and June 14, 2023. Findings are included in this report.

A CDFW protocol foraging bumble bee survey for Crotch`s Bumble Bee (CBB; *Bombus crotchii*) was conducted in 2024 by Alden Environmental within the Project site boundary. The protocol to evaluate CBB at the site was conducted on May 16, 2024, June 6, 2024, and July 12, 2024, by biologist Brian Lohstroh. Findings are included in this report and the detailed report is included as Appendix E.

Any other findings and opinions conveyed in this report are based exclusively on the methodology described above.

4.7 Aquatic Resources Delineation

An Aquatic Resources Delineation and analysis was not conducted and is not included in this analysis. The findings and opinions conveyed in this report are based exclusively on the methodology described above.

4.8 Special-Status Biological Resources Assessments

Local, State, and federal 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. This section discusses sensitive biological resources observed on the project site and evaluates the potential for the project site to support additional sensitive biological resources. 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, 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 project site was evaluated according to the following criteria:

- **No Potential.** 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); for plants, the species has no recorded occurrences

within 5 miles of the project site indicating that the project site may be outside of the range of the species (e.g., the species is known from Coastal Sage Scrub, but only along the coastal margin); or, the species is conspicuous and would have certainly been identified on-site if present (e.g., oak trees). Protocol surveys (if conducted) did not detect species.

- **Low Potential.** The species is not likely to be found on the project site. 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 records of the species within 5 miles or they are geographically isolated from the project.
- **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 of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the project site is highly suitable. Extant populations are known from the vicinity. The species has a high probability of being found on the project site.
- **Present.** Species is observed on the project site or has been recorded (e.g., CNDDB, other reports) on the project site recently (within the last 5 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 FESA, those listed 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 (SSC) 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); and
- 0.3 – Not very threatened in California (<20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known).

5 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 project site and evaluates the potential for the project site to support other sensitive resources. Appendix D provides the complete list of all special-status resources with records in the CNDDB 5-mile radius and CNPS within the nine USGS topographic quadrangle query for the project site. Figure 8 provides a Biological Resources Map of all known sensitive resources present within the project site.

5.1 Vegetation Communities and Land Cover Types

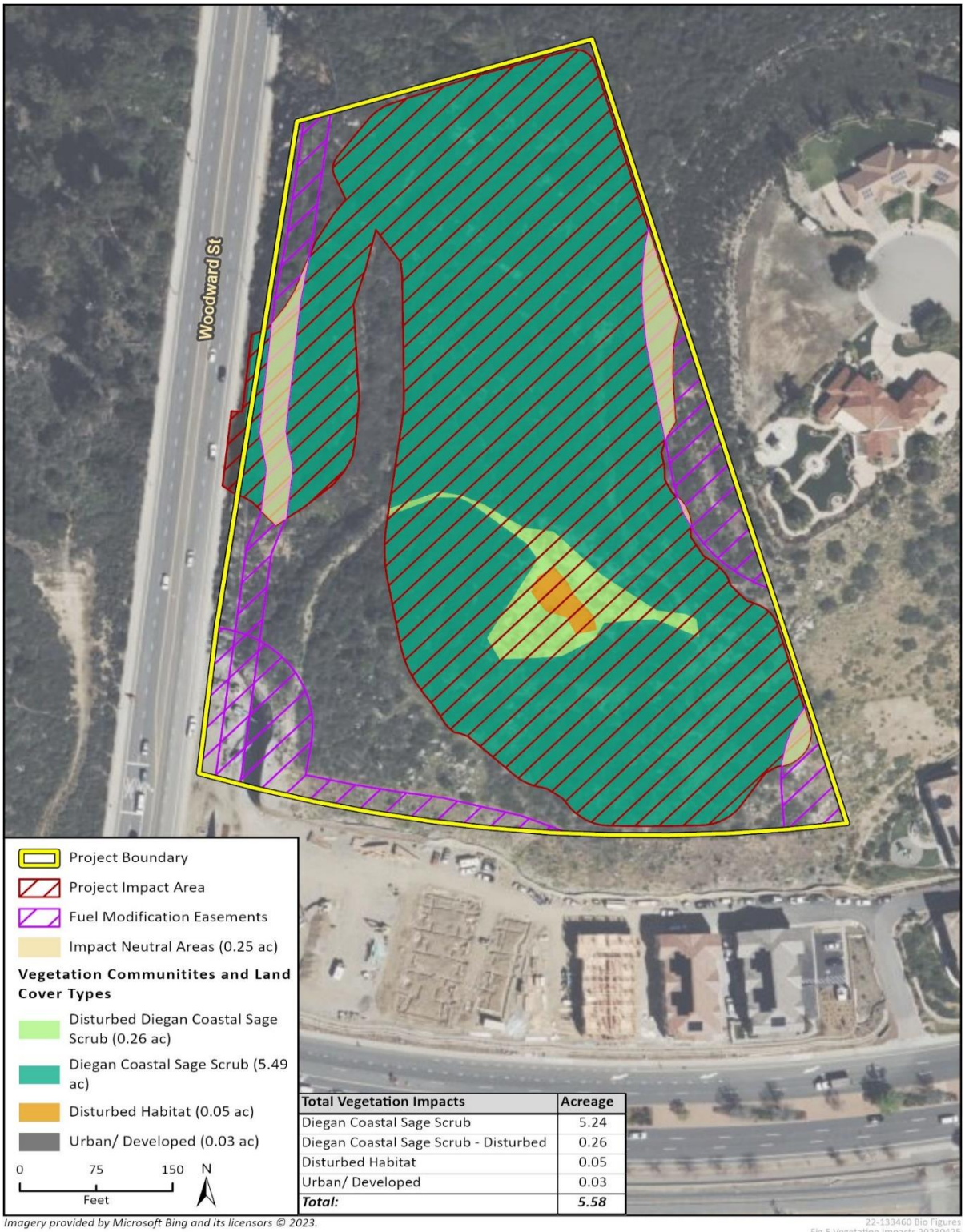
Three vegetation communities and one land cover type (Table 1 and Figure 6) are shown in the proposed project impact area shown on Figure 6. A total of five vegetation communities and one land cover type were identified within the overall study area (Figure 5). A total of 0.25 acre of existing fuel modification easements are within Diegan Coastal Sage Scrub habitat and are therefore designated as Impact Neutral Areas (Figure 6). Table 1 also identifies avoided vegetation acreages within the project site

Table 1 Vegetation Community/Land Cover Type within Project Impact Area

Habitat Group	Vegetation Community/Land Cover Type (Holland Code)	Acreage	Sensitive	Avoided Acreage Within Project Site
C	Diegan Coastal Sage Scrub (32500)	5.24	Yes	2.36
C	Disturbed Diegan Coastal Sage Scrub (32500)	0.26	Yes	0.15
F	Disturbed Habitat (11300)	0.05	No	
F	Urban/Developed (12000)	0.03	No	0.14
Total		**5.58**		**2.66**

[1] Based on Oberbauer et al. 2008

Figure 6 Vegetation Communities and Land Cover within Project Impact Area



5.2 Aquatic Resources

No natural drainages or wetlands were observed in the project site during the surveys or background research. Concrete v-ditches (brow ditches) were identified in the northeast portion of the study area along a chain link fence that runs along the slope and down towards the junction of Woodward and Vineyard Street. Vegetation has overgrown much of the areas along the man-made ditch. The concrete drainage ditches were constructed and installed by Ryland Homes as part of the Woodward Improvement Plan approved and permitted by the City of San Marcos on January 27, 2000. The construction of the "Type B" brow ditch along the northwestern boundary of the project site (including portions of the project impact area) was constructed on existing mitigated easements by Ryland Homes. An additional concrete v-ditch, constructed and installed by KB homes, is located along the southwest corner at the top of a retaining wall as part of the residential development to the south. The function of the concrete ditches is to safely direct stormwater flow off the roadways and slope as shown in site plans for the Woodward Improvement Plan. These manmade, non-natural, stormwater conveyance ditches originate in upland areas and not in any natural drainages. They exhibit the following characteristics of non-jurisdictional, aquatic features: ephemeral and not relatively permanent, not connected to a Traditional Navigable Waterway and isolated from San Marcos Creek, do not provide habitat functions for fish or wildlife, lack hydrophytic vegetation and hydric soils. Accordingly, the v-ditches are not expected to fall under the jurisdiction of the USACE as Waters of the U.S. (WoUS) nor the CDFW and RWQCB as Waters of the State (WoS). The concrete ditches do not provide habitat functions for fish and wildlife. The ditches are intended to capture stormwater runoff and sheet flow from upslope areas and safely convey them for erosion control. Riparian habitat located to the west of Woodward Street adjacent and associated with San Marcos Creek is within the study area but outside of the project's boundaries. A formal jurisdictional delineation was not conducted; however, these human-constructed concrete v-ditches were determined to not be jurisdictional, with no evidence of presence of WoUS or WoS occurring within the project site or project impact area. Human-constructed concrete v-ditches on slopes are typically not considered to comprise WoUS or WoS. No connection was identified from these ditches to San Marcos Creek or Twin Oaks Creek.

5.3 Observed Plants

The project site contains dense Diegan Coastal Sage Scrub (32500; Oberbauer 2008) dominated by California sagebrush and California buckwheat together with laurel sumac, black sage, and coyote brush. Non-native, annual species such as mustards (*Brassica* sp.), thistle (*Salsola*), and other herbaceous forbs and weedy species were present within the understory and intermittent open areas along the slope of the site. Clusters of coastal prickly pear (*Opuntia littoralis*) along the rocky outcroppings were observed in the southern portioned sloped area of the site.

A full list of floral species observed during the field reconnaissance survey conducted on December 29, 2022, can be found in Appendix C.

5.4 Observed Wildlife

The majority of the wildlife species observed during the field reconnisance survey were birds. Common bird species were observed within the study area and included California scrub-jay

(*Aphelocoma californica*), California towhee (*Melozone crissalis),* Anna's hummingbird (*Calypte anna*), white-crowned sparrow (*Zonotrichia leucophrys*), American crow (*Corvus brachyrhynchos*),

Mammal species observed included woodrat middens (*Neotoma* sp.) and coyote (*Canis latrans)* scat. Refer to Appendix D for a full list of faunal species observed.

5.5 Sensitive Plant and Wildlife Species

The project site provides suitable native habitat that can support native wildlife species common in the MHCP plan area. The site contains suitable habitat for two special status plant species and five special status wildlife species which include lizards, woodrats, and bird species. The habitat contains foraging and nesting habitat for common, migrating, and sensitive nesting birds and raptors protected under the CFGC Section 3503 and the MBTA.

Sensitive Plant Communities

The Diegan Coastal Sage Scrub was mapped on a total of 5.49 acres, including Disturbed Diegan Coastal Sage Scrub (0.26 acre) within the project impact area, falls within the City's "Coastal Sage Scrub" habitat Group C and type (City of San Marcos 2001), which is considered a sensitive habitat group. The existing fuel modification easements overlap (0.25 acre) on both Diegan Coastal Sage Scrub and Disturbed Diegan Coastal Sage Scrub. Within the project impact area, Diegan Coastal Sage Scrub communities are distributed throughout, with Disturbed Diegan Coastal Sage Scrub community in the central and southeastern portion (Figure 6).This community within the project site is part of a contiguous island of Diegan Coastal Sage Scrub that is bounded by East Mission Road to the south, Woodward Street to the west, and residential development to the north and east. This block of Diegan Coastal Sage Scrub measures approximately 16.72 acres within the study area which includes MHCP Hardline Reserve primarily located to the north, northeast, east, and west across Woodward Street (Figure 7). This community within the MHCP Hardline Preserve is outside, but adjacent to the project impact site.

Critical Habitat

Federally designated Critical Habitat does not occur within the study area or project boundaries.

MHCP Conservation Areas

MHCP Hardline Reserve open space habitat is shown in Figure 7 to be within the study area and partly within the property boundary to the northeast and southeast. It should be noted that the project boundary parcel and Hardline Reserve boundary are slightly misaligned. The proposed project impact area will avoid the MHCP reserve habitat areas.

Figure 7 Project Vicinity to MHCP Conservation Areas

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Additional data provided by SANDAG, 2018.

22-133460 Bio Figures
Fig X Project Vicinity to MHCP Conservation Areas

Sensitive Plant Species Observed or with Potential to Occur

The database queries identified 61 special-status plants within the *San Marcos, California*, USGS topographic quadrangle and eight surrounding quadrangles (Appendix D) No special-status plant species were observed on the project site during the field reconnaissance survey. The survey, however, was not conducted during the optimal blooming season for some of the species with some level of potential to occur. Many of the species with recorded occurrences in the project vicinity are associated with habitats that are not found on the project site, including species associated with vernal pools, which are not present on site. Additionally, some species (i.e., perennial shrubs or late blooming) would have been observable at the time of the reconnaissance survey if present. Some of the project site has been systemically disturbed for over many years, which has altered the vegetation communities and soils, limiting the potential for the species that have associated habitats on site to occur; however, two species that are associated with disturbed habitats were initially considered to have low to moderate potential to occur on site: San Diego ambrosia (*Ambrosia pumila*) and San Diego sand aster (*Corethrogyne filaginifolia* var. *incana*). To further assess the potential for these species, focused rare plant surveys were conducted by a qualified Rincon botanist for the project's potential impact area and 100-foot buffer. Surveys conducted for San Diego sand aster and San Diego ambrosia and were floristic in nature (i.e., all plants encountered were identified to the lowest taxonomic level necessary to determine rarity) and generally followed the *CNPS Botanical Survey Guidelines* (CNPS 2001), the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018), and *USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (2000). The surveys were performed by Rincon Botanist Casey Clark on June 16, 2023, and September 20, 2023. Special attention was given to areas with a high potential to support rare plant species (e.g., north-facing slopes, vegetation community interfaces, areas with unique soils, and other attributes required of species that have been previously documented). No special status plant species were observed during the surveys. Based on the survey results, these species are presumed absent from the site.

San Diego Sand Aster

San Diego sand aster (CRPR 1B.1) has been determined to have a moderate potential to occur on the project site due to suitable habitat (Disturbed Habitat and Diegan Coastal Sage Scrub), as well as being present throughout San Diego County, associated with chapparal, coastal scrub, and coastal bluff scrub habitats. This perennial herb species is found within disturbed sites that contain scrub habitats. Focused surveys for San Diego sand aster were conducted during the appropriate blooming period (May through September) by Rincon in 2023. No individuals or populations of San Diego sand aster were observed during the two focused surveys.

Sensitive Wildlife Species Observed or with Potential to Occur

This section discusses and evaluates the potential for the study area to support special-status wildlife species (Appendix D). Assessments for the potential occurrence of federal and State listed species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB and other species occurrence records from other sites in the vicinity of the study area, previous reports for the project site, and the results of the survey of the study area.

The review of biological databases resulted in the identification of 60 special-status wildlife species occurring within 5 miles of the study area. Of these, seven species were determined to have at least a moderate potential to occur due to the presence of suitable habitat in the study area.

Three special-status wildlife species have been observed within the project site, CAGN, CBB, and Cooper's hawk.

Three additional species have a high potential to occur on site: orange-throated whiptail (*Aspidoscelis hyperythra*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), and Bryant's woodrat (*Neotoma bryanti*).

One species, Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), has a moderate potential to occur based on suitable Diegan Coastal Sage Scrub foraging and nesting habitat present within the project site, 500-foot buffer, and potential habitat connectivity to surrounding areas. An additional 10 wildlife species have a low potential to occur due to the presence of marginal habitat or that the species may use the project site temporarily during foraging or overnight roosting as described in Appendix D. Due to the low probability of occurrence, they are not discussed further.

Coastal California Gnatcatcher

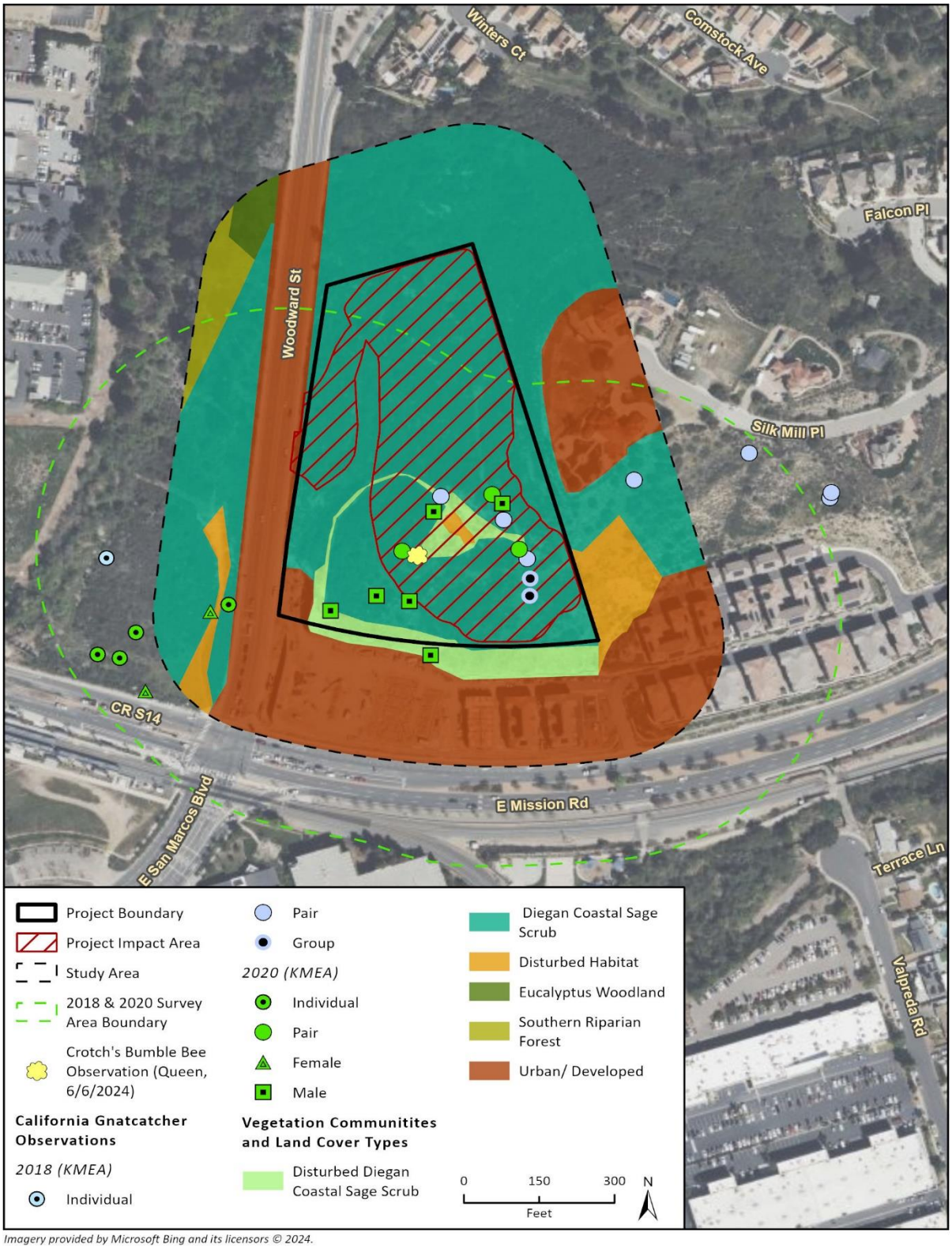
Coastal CAGN, a Federally Threatened, SSC, and MHCP-covered species, is an obligate, permanent resident of Coastal Sage Scrub below 2,500 feet in Southern California. This species occurs in low Coastal Sage Scrub in arid washes and on mesas and slopes.

Coastal CAGN has been observed on the project site. Protocol surveys for the Mission Villas project to the south of the project site were conducted by KMEA in 2018 and preconstruction surveys were conducted by KMEA in 2020 (KMEA 2018, 2020). Results from the surveys are shown in the Biological Resources Map (Figure 8). The survey area for the protocol CAGN surveys totaled 28 acres, which included a 500-foot buffer around the 3.7-acre project to the south. This survey area, as shown in the Biological Resources Map (Figure 8) appears to include over half of the study are for the proposed project. One pair, which included a fledgling, was detected during the first five surveys and again on the ninth survey. Survey reports indicate the fledgling was only observed during the first survey. Updated USFWS protocol surveys were conducted between May 3 and June 14, 2023, by Rincon biologist Kelly Rios who currently holds an Endangered and Threatened Species Permit issued by the USFWS, Permit TE 018909-6, under Section 10(a)(1)(A) of the FESA. The 15-day notification letter of intent to conduct protocol breeding season surveys for CAGN was sent to the USFWS Carlsbad office on April 18, 2023. No observations of CAGN were observed during the six surveys.

Cooper's Hawk

Cooper's hawk, a CDFW Watch List (WL) and MHCP-covered species, is typically found in woodland, and forested habitats and is found throughout urban landscapes where cover and prey are available. They typically nest in riparian growths of deciduous trees, oaks, canyon bottoms, and pines. This species has a high potential to occur as a transient. The site contains small mammal and songbird prey availability with dense eucalyptus and riparian woodland within the study area, to the west, could provide suitable nesting habitat. The project site itself lacks tall trees, dense woodland, or riparian habitats that provide suitable nesting habitat for this species. A Cooper's hawk was observed flying over the project site during a previous pre-construction survey for the Mission 316 Villas project to the south in 2020.

Figure 8 Biological Resources Map



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Orange-Throated Whiptail

Orange-throated whiptail, a WL and MHCP-covered species, requires intact Coastal Sage Scrub, with California buckwheat as the dominant species, and sage (*Salvia* sp.), yucca (*Yucca* sp.), cactus (*Opuntia* sp.), and sagebrush (*Artemisia* sp.) present. This species has a high potential to occur on site and within the study area due to the high suitability of Diegan Coastal Sage Scrub and Disturbed Coastal Sage Scrub, in which California buckwheat and California sagebrush are prevalent.

Coastal Whiptail

Coastal whiptail, SSC, is found in deserts and semi-arid areas with sparse vegetation and open areas, and woodland and riparian areas. This species can occur in firm, sandy, or rocky soils. Coastal whiptail has a high potential to occur in the more open scrub areas.

Southern California Rufous-Crowned Sparrow

Southern California rufous-crowned sparrow, a WL and MHCP-covered species, is found in open oak woodlands and dry uplands with grassy vegetation and bushes. This species is often found near rocky outcroppings, and occurs in coastal scrublands and chaparral areas. The Southern California rufous-crowned sparrow has a moderate potential to occur in the Diegan Coastal Sage Scrub and Disturbed Diegan Coastal Sage Scrub habitats within the project site and study area.

Crotch's Bumble Bee

CBB is considered a state candidate for listing as endangered. CBB occurs primarily in California, adjacent foothills in southwestern California, and in southwest Nevada near the border (Xerces Society, 2023). This species inhabits scrub and open grassland habitats with floral associations for foraging that include California cleome or Bladderpod (*Peritoma arborea*), larkspurs (*Delphinium sp.*), yerba (*Eriodictyon sp.*), phacelia (*Phacelia sp.*), and blue curls (*Trichostema sp.*). Food plants include milkweeds (*Asclepias sp.*), chaenactis (*Chaenactis sp.*), lupines (*Lupinus sp.*), burclovers (*Medicago sp.*) and sages (*Salvia sp.*). Nests can be located underground in abandoned rodent nests, above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees (Xerces Society, 2023). One CBB was detected in the Diegan Coastal Sage Scrub habitat within the southern central portion of the project site during 2024 protocol surveys (Figure 8).

Nesting Birds and Raptors

The habitats within the project site and study area provide suitable nesting habitat for a variety of nesting bird species such as passerines and non-passerine terrestrial birds that may nest on the ground or within the scrub vegetation, including CAGN and Southern California rufous-crowned sparrow. The project site does not contain suitable habitat for raptor species due to the lack of large trees for nesting, however the large stand of eucalyptus trees and riparian woodland habitat within the study area across Woodward Street could provide nesting habitat for raptor species such as red-tailed hawks (*Buteo jamaicensis*) or Cooper's hawk (*Accipiter cooperii*). Ornamental palm trees associated with the residential houses on the upper eastern slope off of Silk Mill Place occur within the study area. These trees could potentially provide low quality suitable nesting habitat raptors. Nesting birds are protected pursuant to the CFGC and MBTA.

Bryant's Woodrat

Bryant's woodrat, a SSC species, occurs in coastal scrub of Southern California from San Diego County to San Luis Obispo County. This species prefers moderate to dense canopies. Bryant's

woodrat is particularly abundant in rock outcrops, rocky cliffs, and slopes and typically associates with cacti patches and dense undergrowth. This species typically overlaps with another *Neotoma sp.,* the big eared wood rat (*Neotoma lepida*). Numerous woodrat stick nests, or "middens," were observed throughout the project site; however, the presence of the sensitive *Neotoma* subspecies was not confirmed. Further determination is needed to evaluate the two species by nest size, material, location; and proximity to cacti, rock outcroppings, water sources, and surrounding habitat.

Bryant's woodrat has a high potential to occur in the Diegan Coastal Sage Scrub and Disturbed Diegan Coastal Scrub habitats within the project site and study area.

5.6 Habitat Connectivity and Wildlife Corridors

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, and areas with vegetation cover provide corridors for wildlife travel. The project site is a habitat island, with Twin Oaks Valley Road farther west of the project site, Mission Road south of the project site, and residential development north, south, and east of the project site blocking any significant wildlife movement. FPA lands occur to the north, northeast, east, and west of the project site. These designated preserved native habitats support local movement—functioning as 'stepping stones'—rather than providing regional linkage, for both local and migratory species such as birds, including those covered under federal, state, and MHCP protections.

The project and vicinity are not identified as being within or adjacent to a wildlife corridor per Figure 4-2 of the City of San Marcos General Plan (City of San Marcos 2013). The project site is also not within or adjacent to a Biological Core and Linkage Area (BCLA) as illustrated in Figure 2-3 of the Final MHCP Plan (AMEC 2003a, 2003b). Finally, the project is not within or adjacent to an essential connectivity area or natural landscape block as identified by the California Essential Habitat Connectivity Project (Spencer et al. 2010).

6 Project Impacts, Significance, and Mitigation Measures

6.1 Significance Guidance/Criteria

Guidelines for determining CEQA significance require that impacts of a proposed project be analyzed for significance. Impacts of the project on biological resources are described below. Where warranted, recommended mitigation measures are provided. The proposed project would directly impact special-status vegetation communities and could potentially directly impact special-status plant and wildlife species, including CAGN. The study area contains portions of the FPA Hardline Reserve Habitat in the northeast and southeast, with existing reserve habitat to the north and southeast, and across Woodward Street to the west.

6.2 Impacts and Significance

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.*

Impact-1: Special-Status Plant Species

Based on regional populations and the presence of suitable habitat on site, the San Diego sand aster—a special-status species—was determined to have a moderate potential to occur, while another special-status species, the San Diego ambrosia, was considered to have a low potential to occur. San Diego sand aster, San Diego ambrosia, or any other rare plant species were not detected on-site during the survey. Since the reconnaissance survey was not conducted during the flowering period for these potentially occurring sensitive plant species additional focused rare plant surveys were conducted during the appropriate time in spring and summer 2023. Results from focused rare plant surveys conducted by Rincon in 2023 were negative. Neither San Diego sand aster nor San Diego ambrosia were observed during the surveys, therefore they are presumed absent, and no impacts are anticipated as a result of the project.

Impact-2: Coastal California Gnatcatcher

CAGN was observed in Diegan Coastal Sage Scrub within the project site, including within the overall study area to the east and west. USFWS protocol surveys were conducted in 2018 and preconstruction surveys were conducted in 2020 for the Mission 316 development project parcel south of the project site (KMEA 2019). The surveys recorded individuals foraging, nesting pairs, and two family groups within the project site and vicinity during the protocol surveys in 2018 and preconstruction surveys in 2020. Individuals were also recorded within sage scrub habitat, designated MHCP Hardline Reserve to the west of the project site across Woodward Street.

Foraging individuals were also observed and recorded to the adjacent east of the project site, south of Silk Mill Place Road. Updated 2023 protocol surveys conducted for CAGN were negative.

The project could directly impact CAGN through destruction of occupied nests during vegetation removal on the project site if vegetation clearance occurs during the CAGN nesting season. Indirect impacts to CAGN due to construction noise[1] and dust are also possible, which could cause nest failures due to parental abandonment. Impacts to CAGN are considered significant without mitigation.

The proposed project would directly impact CAGN through the permanent removal of 5.24 acres of suitable, intact Diegan Coastal Sage Scrub, and approximately 0.26 acre of Disturbed Diegan Coastal Sage Scrub (Figure 6) habitat types that are used by CAGN for most of its life history. The proposed development area is composed of both dense Diegan Coastal Sage Scrub and Disturbed Coastal Sage Scrub. CAGNs have been observed occupying this habitat during previous protocol and preconstruction surveys as described above.

As detailed under MM-7, compliant with the MHCP for impacts to Habitat Group C, the project would be required to preserve Diegan Coastal Sage Scrub at a minimum 1:1 ratio through off-site acquisition, in lieu fees, a purchase of credits from Buena Creek Mitigation Bank or another approved mitigation bank, or a combination thereof as approved by the Planning Manager and the Wildlife Agencies, which would contribute to the regional availability of CAGN habitat. Offsite mitigation should be achieved through the purchase of DCSS credits through the Buena Creek Conservation Bank or other commensurate San Marcos/San Diego pre-approved mitigation areas included in the MHCP or the North County Multiple Species Conservation Plan (MSCP) boundary.

CAGN that is present both on-site and in adjacent areas would also be potentially affected by indirect impacts associated with the project, such as dust, noise, human presence, nighttime lighting, increase in predators, and spread of non-native species into occupied habitat. These indirect impacts could result in nest failures or individual mortality of CAGN. The direct and indirect impacts to CAGN are potentially significant. Implementation of mitigation measures MM-1-5 and MM 8 should be incorporated into the project design to reduce impacts to less than a significant level.

Impact-3: Other Special-Status Wildlife Species

Orange-throated whiptail, coastal whiptail, Southern California rufous-crowned sparrow, Cooper's hawk, and Bryant's woodrat are all considered to have a moderate or high potential to occur on the project site, primarily within areas of Diegan Coastal Sage Scrub and Disturbed Diegan Coastal Sage Scrub. Southern California rufous-crowned sparrow and Cooper's hawks are highly mobile and would likely escape direct impacts from vegetation removal and grading activities associated with the project by moving into the undisturbed open space to the north, northwest, east, and southeast, unless they are nesting on or adjacent to the site, which is addressed further in Impact-4 below. Some mortality to the reptile species could occur during vegetation removal and grading, but project implementation is not expected to cause a significant impact to the species given the small number of individuals likely to occur within the 5.5 acres of sage scrub habitat to be removed. Woodrat middens were detected on site and individuals could be disturbed or harmed by project construction. One individual Crotch`s bumble bee was observed on June 6, 2024, during the 2024 CDFW protocol foraging bumble bee surveys for CBB. MM-3 requires a Worker Environmental Awareness Program (WEAP) be implemented for the project, which would include a discussion of

[1] The USFWS typically considers noise in excess of 60 dBA Leq. to constitute a risk of impacting nesting birds.

these special-status wildlife species which have potential to occur or have been detected on the project site and would instruct the contractor to avoid these species. MM-5 requires a biological monitor to conduct daily preconstruction surveys and be present during initial clearing, grading, and construction in sensitive habitat areas, and construction would be temporarily halted to allow wildlife to move out of the work area. MM-6 requires avoidance of woodrat middens to the extent feasible and passive relocation of individuals through dismantling of middens prior to disturbance. MM-7 requires compensation for the project for the loss of Diegan Coastal Sage Scrub habitat. Additionally, MM-8 includes avoidance, minimization, and compensatory mitigation requirements for potential project impacts to Crotch's bumble bee, including surveyor qualifications, pre-activity surveys, and voucher photographs. With the implementation of these mitigation measures, impacts to other special-status wildlife species, including habitat loss, would be reduced to a less-than-significant level.

Impact-4: Nesting Birds and Raptors

Potential avian nesting opportunities are provided within scrub vegetation present throughout the project site. Construction activities could harm raptors and nesting birds if they occur during the active nesting season (January through August), both on and near the project site. Impacts could occur through direct mortality with vegetation removal and grading or indirectly by nest abandonment, due to construction activities associated with the project such as noise, dust, nighttime lighting, human presence/disturbance, and an increase in predators. Cooper's hawk and other raptors have been observed flying over the project site, but they are unlikely to nest there due to the lack of trees. However, nesting may occur in the adjacent riparian corridor. Non-raptor species, including passerines and other land birds may nest on the ground or within scrub vegetation in the proposed project impact area. The loss of a nest due to construction activities would be a violation of CFGC Sections 3503, 3503.5, 3511, 3513 and 3800 and the MBTA, and considered a significant impact without mitigation.

MM-2 and MM-3 should be implemented by the project to reduce potential impacts to nesting birds and raptors. MM-2 requires a nesting bird survey be conducted for work during the nest season to determine the presence of nesting birds and the establishment of the appropriate buffer for any nests that are found to keep construction activities from causing nest failure. MM-3 requires that a WEAP be implemented for the project. The WEAP would include a discussion of nesting birds and "no work" buffers that would be established for avoidance of active nests near the project. With the implementation of these mitigation measures, impacts to nesting birds and raptors would be reduced to a less-than-significant level.

6.3 Riparian Habitat or Sensitive Natural Communities

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.

Riparian Habitat

There are no riparian habitats located on the project site (Figure 5). The riparian area located within the western portion of the study area is avoided by the project and separated from project activities

by Woodward Street (Figure 5). Therefore, the project will not have a substantial adverse effect on riparian habitat. No impact is identified.

Impact-5: Sensitive Natural Communities

The project would result in the direct removal of 5.5 acres of Diegan Coastal Sage Scrub that falls under the MHCP Habitat Group C definition of Coastal Sage Scrub, which is considered a sensitive habitat. Impacts to vegetation communities are summarized in Table 2 and shown on Figure 6. Existing fuel modification easements total 0.25 acre and are designated as Impact Neutral Areas, and therefore excluded. Impacts to Diegan Coastal Sage Scrub would be considered significant without mitigation.

Table 2 Impacts to Vegetation Communities and Land Cover

Habitat Group	Vegetation Community/Land Cover Type (Holland Code)	Acreage	Sensitive
C	Diegan Coastal Sage Scrub (32500)	5.24	Yes
C	Disturbed Diegan Coastal Sage Scrub (32500)	0.26	Yes
F	Disturbed Habitat	0.05	No
F	Urban/Developed (12000)	0.03	No
Total		**5.58**	

[1] Based on Oberbauer et al. 2008

MM-3, MM-4, MM-5, and MM-6 would be implemented by the project to reduce impacts to special-status wildlife species that may occur in this vegetation community. MM-3 requires a WEAP to be implemented that would educate project construction workers on the sensitive species that could occur, and MM-5 includes measures to reduce indirect impacts to the environment (e.g., picking up trash). MM-4 requires that the work limits be delineated, which would ensure that project impacts to Diegan Coastal Sage Scrub are limited to the approved project footprint, leaving vegetation in the adjacent open space undisturbed. MM-5 would require a Biological Monitor be present during initial clearing, grading, and construction in sensitive habitat areas to oversee avoidance of sensitive vegetation outside of approved construction limits. MM-7 requires that Diegan Coastal Sage Scrub be preserved at a minimum 1:1 ratio to compensate for the loss of this habitat. This can be accomplished through off-site acquisition, in lieu fees, a purchase of credits from Buena Creek Mitigation Bank or another approved mitigation bank, or a combination thereof as approved by the Planning Manager and the Wildlife Agencies. With the implementation of these mitigation measures, impacts to sensitive vegetation communities would be reduced to a less-than-significant level.

6.4 Indirect Impacts

Indirect impacts are physical changes to the environment which are not immediately related to a project but may occur at some point in the future due to conditions introduced with implementation of the project. Indirect impacts include urban run-off, introduction of meso-predators (e.g., dogs and cats), invasive plant species, and noise and lighting effects. The site would likely be required to prepare and implement a Stormwater Pollution and Prevention Plan (SWPPP). Indirect impacts associated with urban run-off would be minimized with implementation of the SWPPP and MM-5.

Invasive Species

All natural and open space areas will be avoided outside of the proposed project limits. The use of any invasive, noxious, or exotic plant species near adjacent sensitive habitat communities will be restricted per MM-1. A landscaping plan will be implemented to recommend the use of native species and minimize the introduction or spread of non-native, exotic, and invasive species to the adjacent sensitive habitat, including the Hardline Reserve habitats to the north and east of the project site. Potential impacts from invasive species would be less than significant.

Domestic Pets

Potential impacts from human and pet intrusion into the open space adjacent to the site will be minimized through implementation of an open space long-term management plan as described in MM-1. Education of residents about the detriment of domestic cats on wildlife and fencing along the backyards of residential lots adjacent to the planned open space will reduce access to the area. These impacts are potentially significant without a well-developed management plan and enforcement by the residential homeowner's association.

Lighting

The proposed project will result in an increase in lighting. All lighting would be directed away from any open space areas, which include the natural habitats to the north and east sides of the project site, similar to adjacent residential developments. Directing all construction lighting, including night lighting, away from open space areas per MM-5 would avoid direct impacts to sensitive habitats and wildlife species that may inhabit these areas. Potential impacts associated with lighting would be less than significant.

6.5 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 jurisdictional wetlands (or waters) were identified within the project site based on the literature and database review and site reconnaissance survey. Concrete brow ditches discussed in Section 5.2 are located on the western and southwestern boundaries of the project site. These were identified as being constructed as part of the Woodward Improvement Plan in 2000. This Plan was approved and permitted by the City within existing mitigation construction easements. The brow ditch in the southwestern portion was constructed by KB Homes as part of the residential development project to the south. These man-made features were all permitted and approved by the City, including the adjacent residential development. No formal jurisdictional delineation was conducted as part of this assessment; however, these human-constructed concrete v-ditches were determined to not be jurisdictional, with no evidence of presence of WoUS or WoS occurring within the project site or project impact area. Human-constructed concrete v-ditches on slopes are typically not considered to comprise WoUS or WoS. Therefore, no direct or indirect impacts to state or federally protected wetlands have been identified for the implementation of the proposed project.

6.6 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.

No wildlife corridors were identified in the project site and adjacent areas; therefore, the project will not 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 site. The project could disrupt short-distance movements of low-mobility species on a local scale; however, this would be less than significant impact since it would not affect movement on a regional scale.

6.7 Local Policies and Ordinances

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

f) 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's 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 contains suitable and high-quality Diegan Coastal Sage Scrub, with the exception of Disturbed Coastal Sage Scrub, including designated FPA Hardline Reserve habitat to the north and east. The FPA Hardline Reserve habitat is partly within the project site, but not within the proposed project impact area and thus vegetation within is not anticipated to be directly impacted from project implementation. Mitigation for impacts to Diegan Coastal Sage Scrub is identified in MM-7, which would require a total of 5.5 acres of occupied CAGN Diegan Coastal Sage Scrub habitat to be preserved. This can be accomplished through off-site acquisition, in lieu fees, a purchase of credits from Buena Creek Mitigation Bank or another approved mitigation bank, or a combination thereof as approved by the Planning Manager and the Wildlife Agencies. 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, oak woodlands, or habitat linkages. Diegan Coastal Sage Scrub within the project site is considered sensitive; however, mitigation for impacts to habitat is identified in MM-7, which would require a total of 5.5 acres of Diegan Coastal Sage Scrub habitat to be preserved. This can be accomplished through off-site acquisition, in lieu fees, a purchase of credits from Buena Creek Mitigation Bank or another approved mitigation bank, or a

combination thereof as approved by the Planning Manager and the Wildlife Agencies. Therefore, the project does 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 site contains biologically sensitive open space, FPA Hardline Reserve habitat to the north, east, and west across Woodward Street. Mitigation for impacts to Diegan Coastal Sage Scrub is identified in MM-6, which requires a total of 5.5 acres of occupied CAGN Diegan Coastal Sage Scrub habitat be preserved. This can be accomplished through off-site acquisition, in lieu fees, a purchase of credits from Buena Creek Mitigation Bank or another approved mitigation bank, or a combination thereof as approved by the Planning Manager and the Wildlife Agencies. 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.

With the exception of the on-site open space that supports Diegan Coastal Sage Scrub, the majority of the project site was previously developed. Mitigation for impacts to Diegan Coastal Sage Scrub is identified in MM-6, which would require a total of 5.5 acres of Diegan Coastal Sage Scrub be preserved. This can be accomplished through off-site acquisition, in lieu fees, a purchase of credits from Buena Creek Mitigation Bank or another approved mitigation bank, or a combination thereof as approved by the Planning Manager and the Wildlife Agencies. 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.

The site contains dense, low growing shrubs and scrub species and lacks mature trees. No mature trees were observed within the project site; therefore, the implementation of the project does not conflict with this policy.

6.8 Habitat Conservation Plans

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

e) 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 located within the MHCP, which identifies a series of FPAs within which some lands will be dedicated for preservation of native habitats. 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. Impacts to MHCP covered species, CAGN, other special-status plant and wildlife species described in Impacts 1-3, and one sensitive natural community, Diegan coastal sage scrub, would conflict with the MHCP and would be a significant impact without mitigation.

The project impact area is not located within an FPA, however FPA Hardline Reserve habitat is located partly within the northeastern and southeastern corners of the project site, as illustrated in

Figure 2-1 of the Final MHCP Plan (AMEC 2003b). The project site is not within a BCLA, as illustrated in Figure 2-3 of the Final MHCP Plan (AMEC 2003b). Descriptions of how impacts would be reduced to less than significant are presented above and in the MMs below. Additionally, MM-3 requires measures be implemented to reduce indirect impacts to the environment (e.g., picking up trash). When the described FPA was initially created, it intentionally left out this project site (parcel) out, negating any potential impacts. Therefore, no conflicts with local policies, ordinances, or MHCP provisions are anticipated with the implementation of these mitigation measures.

6.9 Summary of Mitigation Measures

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

MM-1 Coastal California Gnatcatcher Surveys

Protocol Surveys

An updated presence/absence protocol survey of the project site and a 500-foot buffer around the project site shall be conducted by a qualified biologist with a valid USFWS 10(a)(1)(A) permit to further evaluate the CAGN territories that could be affected by short term project construction activities, including vegetation clearance, and long term habitat loss and indirect impacts. In accordance with the USFWS survey protocol, a minimum of six breeding season surveys will be conducted at least 1 week apart from March 15, through June 30, pending the anticipated construction timeline for the project. The results of the survey shall be submitted to the City and USFWS upon completion.

Prevegetation Clearance Survey and Monitoring

If CAGN is detected during the protocol survey, vegetation clearing shall only be conducted between September 1 and February 14, outside of the breeding season for CAGN. If vegetation clearing must start outside of those dates, then focused nesting surveys would be conducted prior to vegetation clearing for the project site and a 500-foot buffer zone. No more than three days prior to the clearing of vegetation, a qualified biologist shall conduct a pre-construction clearance survey for CAGN to confirm that the vegetation on-site is not occupied by the species. If nests are found, they would be avoided by establishing a 500-foot non-disturbance buffer around the nest. Vegetation clearance may continue with regular biological monitoring if there is no indication of disturbance to the nest(s). If the vegetation clearance is potentially disruptive to active nests a larger buffer may be implemented as determined by the qualified biologist. If CAGN are observed moving through the area during vegetation clearing activities, the project biologist may delay the removal of vegetation and/or grading until CAGN has left the area of their own volition.

If CAGN are found to be within the survey area (project site plus a 500-foot buffer) during protocol or pre-construction surveys, the following avoidance and minimization measures shall be implemented.

a. To reduce potential noise impacts to nesting CAGN, a qualified biologist shall monitor noise levels with a noise monitoring device at an appropriate distance from the nest to determine if construction activity noise is above 60 dBA Leq, the standard level requested by the USFWS, or if noise levels above 60 dBA Leq have the potential to affect any CAGN nests.

b. If/when an active CAGN nest is identified, an acoustician shall monitor noise at the edge of construction as directed by the qualified biologist. If noise levels continue to exceed 60 dBA Leq, the acoustician shall consult with the qualified biologist and provide requirements for the construction contractor to make operational and barrier changes to reduce noise levels to 60 dBA Leq during the breeding season (February 15 through August 31). Noise monitoring will occur during operational changes and installation of barriers, as needed, to ensure their effectiveness. If the noise meets or exceeds the 60 dBA Leq threshold, or if the biologist determines that the activities in general are disturbing the nesting activities, the biologist shall have the authority to halt construction and shall consult with the USFWS to devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nesting coastal CAGN and the activities, and working in other areas until the young have fledged.

All active nests will be reported within 24 hours to the USFWS upon detection.

Long-Term Open Space Management

A long-term management plan will be developed to minimize impacts of the residential development on the adjacent CAGN and Diegan Coastal Sage scrub habitat. The adjacent area falls within an MHPA Hardline Reserve, occupied by CAGN, and additional mitigation measures are necessary to minimize impacts associated with increased human and domestic pet presence from the project. The plan will include a program of education to reduce domestic and feral cat encroachment (using that developed by the American Society for the Prevention of Cruelty to Animals). Use of invasive exotic plant species in landscaped areas adjacent to or near sensitive vegetation communities will be restricted. The applicant will encourage the use of native species in the landscaping plan and will avoid the use of species listed in Lists A & B of the California Invasive Plant Council's list of Exotic Pest Plants of Greatest Ecological Concern in California as of October 1999. This list includes such species as pepper trees (*Schinus mole*), pampas grass (*Cortaderia selloana)*, fountain grass, ice plant (*Carpobrotus sp.*), myoporum (*myoporum sp.*), black locust (*Robinia pseudoacacia)*, capeweed (*Arctotheca calendula*), tree of heaven (*Ailanthus altissima*), periwinkle (*Vinca major*), sweet alyssum (*Lobularia maritima)*, English ivy (*Hedera helix*), French broom (*Genista monspessulana***)**, Scotch broom (*Cytisus scoparius),* and Spanish broom (*Spartium junceum*). The plan will also address permanent residential lighting to be directed away from the open space.

MM-2 Nesting Birds and Raptors

If site clearing activities are conducted between January 1 and August 31, a qualified biologist shall conduct a nesting bird survey no more than three days prior to the start of such activities to identify actively nesting birds within the project site and a 500-foot buffer around the project site. If any nests are found, their locations shall be flagged and an appropriate avoidance buffer, ranging in size from 25 to 50 feet for passerines, and up to 500 feet for raptors depending upon the species and the proposed work activity. The non-disturbance buffer zone shall be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging materials. Active nests shall be monitored at a minimum of once per week until it has been determined that the nest is no longer being used by either the young or adults. No disturbance shall occur within this buffer until the qualified biologist confirms that breeding/nesting is completed, and all the young have fledged. If project activities must occur within the buffer, activities shall be conducted at the

discretion of the qualified biologist and with monitoring and management to confirm that nesting birds and the nests are not disturbed. If no nesting birds are observed during the nesting survey or during other monitoring activities, then no further actions shall be necessary. A follow-up survey will be needed if site clearing does not occur within three days after the initial survey and/or a pause in construction activity occurs for more than seven days.

MM-3 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 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 the listed and sensitive species 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 worker responsibilities to maintain compliance with mitigation measures while working at the site.

MM-4 Work Limit Delineation

Approved construction work area limits shall be delineated and marked clearly, by flagging or temporary orange construction fencing, in the field prior to vegetation removal. The marked boundaries will be maintained and clearly visible to personnel on foot and by heavy equipment operators. Fencing shall be placed on the impact side of the work area to reduce the potential for encroachment and additional vegetation loss within adjacent open space. Fencing shall be put in place by a qualified surveyor per the project applicant's approved construction and grading plans. All temporary fencing shall be removed only after the conclusion of all grading, clearing, and construction. Employees shall strictly limit their activities and vehicles to the designated project sites, staging areas, and routes of travel. The biological monitor shall verify that the limits of construction have been properly staked and are readily identifiable. Intrusion by unauthorized vehicles outside of construction limits shall be prohibited, with control exercised by an on-site foreman. Access routes to the construction area outside of work hours shall be blocked with physical barriers, such as concrete blocks or large equipment.

MM-5 Biological Monitor and Construction BMPs

A City-approved, qualified biologist shall be present during all vegetation clearing and other activities with the potential to affect CAGN, orange throated whiptails, coastal whiptails, Bryant's woodrat, Coopers hawks, and southern rufus-crowned sparrow, nesting birds, any other sensitive plant or wildlife resource, and will monitor the project for avoidance of unanticipated impacts to the aforementioned species and their habitats. Standard construction Best Management Practices will be implemented by the contractor to minimize potential impacts to sensitive species. The biologist shall have the authority to halt all associated project activities that may be in violation of the protective measures. Daily monitoring logs will be maintained and a monthly report of compliance with biological resource measures will be provided to the City during construction. Standard Construction Best Management Practices shall include the following:

- Vehicle speeds will not exceed 10 miles per hour (mph) adjacent to CAGN habitat. Clear signage will be installed and maintained throughout the construction period.

- Placement of drip pans under parked equipment and vehicles.
- Regular inspection and maintenance of equipment to avoid spills and immediate containment of any spills.
- Chemicals, herbicides, and pesticides will not be used.
- Pets and firearms will not be allowed at the site.
- Trash will be removed from the site daily or be stored in wildlife proof containers
- Stormwater protection (i.e., straw waddles, silt fence) will be employed to prevent spills, runoff, or sediment from entering nearby aquatic habitats. These materials will be weed free and no project debris or rubbish will be allowed to enter into or be placed where it may be washed by rainfall or runoff in the wetlands.
- Staging/storage areas for equipment and materials will be located at least 100 feet away from the riparian areas. Equipment will be checked and maintained daily to prevent leaks of pollutants into the wetlands.
- No equipment maintenance will be carried out within 100 feet of the riparian area.
- All pipes, culverts, or similar structures with a 4-inch diameter or greater that are stored on the construction site overnight shall be thoroughly inspected for wildlife or nesting birds before the pipe is 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 or trenches more than 2 feet deep shall be covered with plywood or similar materials at the close of each working day.
- Any construction lighting will be directed toward the work area and away from adjacent habitats.

MM-6 Woodrat Middens

Woodrat middens (nests) are large nests or dens made of woody debris, such as sticks, dead cacti, and bark. Middens were observed throughout the project site and within the project impact area. The project may contain both big-eared woodrat and Bryant's woodrat and all middens will be treated as potentially sensitive. Within 30 days of initial site disturbance, a pre-construction survey shall be conducted for woodrat middens. All occupied woodrat middens shall be mapped and flagged for avoidance to the extent feasible, with a minimum of 10 feet surrounding the active midden. If avoidance is not feasible, middens will be disturbed "daylighted" by a qualified biologist one night before anticipated vegetation removal to allow for the rats to escape and passively relocate prior to disturbance of the area.

MM-7 Mitigation for Diegan Coastal Sage Scrub and Disturbed Diegan Coastal Sage Scrub

The MHCP has classified vegetation communities and landcover into six classes, as shown in Table 3 based on rarity and ecological importance (AMEC 2003a, 2003b). The MHCP has also established mitigation ratios based upon whether the impacted habitat is within or outside an FPA.

Table 3 MHCP Habitat Group and Type and Associated Mitigation Ratios for San Marcos

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 Earth & Environmental, Inc. et al. 2003a, 2003b

The project site and anticipated impact is not within an MHCP FPA, but the study area contains FPA Hardline Reserve habitat to the north and east of the site.

The permanent loss of 5.5 acres of Diegan Coastal Sage Scrub, and Disturbed Diegan Coastal Sage Scrub will be mitigated at a minimum 1:1 ratio. 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, or mitigation credits. For mitigation purposes, the Diegan Coastal Sage Scrub and Disturbed Diegan Coastal Sage Scrub acreages on the project site that would be impacted have been combined as these two vegetation communities are considered to have similar sensitivity under the MHCP. Thus, 5.5 acres of occupied CAGN Diegan Coastal Sage Scrub will be preserved by the project applicant through off-site acquisition, in lieu fees, a purchase of credits from Buena Creek Mitigation Bank or another approved mitigation bank, or a combination thereof as approved by the Planning Manager and the Wildlife Agencies prior to issuance of the grading permit. If on site or off-site habitat mitigation will be completed by the Applicant to satisfy the compensatory mitigation requirements, it shall be carried out in accordance with a Habitat Mitigation and Monitoring Plan (HMMP) that outlines the strategy for enhancement and maintenance of the habitat for locally sensitive species occupying Diegan Coastal Sage Scrub. The HMMP will be provided to the Wildlife Agencies for review and approval. Any land acquired as off-site mitigation to benefit gnatcatcher shall include a cost estimate for long-term maintenance, and endowment, a land protection mechanism such as a conservation easement. Mitigation lands for gnatcatcher must be occupied or include high quality suitable habitat.

MM-8 Crotch's Bumble Bee

Focused surveys found the Diegan Coastal Sage Scrub on site to be occupied by Crotch's bumble bee (CBB). Thus, there is potential for take of CBB and adverse impacts may occur through the removal of occupied habitat. However, the project would incorporate the following CBB avoidance, minimization and mitigation measures to reduce significant impacts to below a level of significance

should the species remain a candidate for state listing. If the State ultimately does not list CBB under the California Endangered Species Act and the species is removed from candidate status, the mitigation measures outlined below would no longer be applicable.

Avoidance, Minimization, and Mitigation Measure for Crotch's Bumble Bee

Prior to the Notice to Proceed (NTP) for any construction permits, including, but not limited to, the first Grading Permit, the City shall verify the following project requirements regarding the CBB are shown on the construction plans. Should this species no longer be a potential candidate for listing at the time of the preconstruction meeting, then no avoidance measures shall be required.

Incidental Take Permit:

a. Crotch's bumble bee has been detected onsite, and all suitable habitat is considered occupied. As avoidance of impacts is not feasible, the Project applicant shall consult with CDFW and obtain appropriate take authorization from CDFW (pursuant to Fish & Game Code, § 2080 et seq.). If an Incidental Take Permit is issued, the Project applicant shall comply with the mitigation measures detailed in the take authorization issued by CDFW. In addition, the terms and conditions of that permit shall supersede any conflicting measures contained in this document. The Project applicant shall provide a copy of a fully executed take authorization prior to the issuance of a grading permit and before any ground disturbance and vegetation removal. Should the State decline to list the species under the California Endangered Species Act and remove its candidate status, this measure shall no longer be applicable, and an Incidental Take Permit will not be required.

Pre-Activity Surveys:

b. To avoid direct impacts on CBB, removal of habitat (i.e., defined as any habitat disturbance) must occur outside of the Colony Active Period (generally occurring between February 1 through August 31). If the removal of habitat must occur during the Colony Active Period, a Qualified Biologist shall conduct a pre-activity survey no more than three days prior to the initiation of construction activities to determine the presence or absence of CBB within the proposed area of disturbance following CDFW's Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023) or the latest guidance from CDFW no more than 10 days and no less than 3 days prior.
c. A Qualified Biologist must meet the qualifications discussed in the CDFW guidance (i.e., Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species, dated June 6, 2023). Resumes shall be provided to CDFW for review.
d. The pre-activity survey shall consist of non-lethal photo vouchers following CDFW guidance (CDFW 2023). The surveys shall consist of passive methods unless a Memorandum of Understanding is obtained. The Qualified Biologist shall send all photographic vouchers to a CDFW approved taxonomist to confirm the identifications of the bumble bees encountered during surveys. If candidate bumble bees will be captured or handled during surveys, then the Qualified Biologist shall obtain the required authorization via a Memorandum of Understanding or Scientific Collecting Permit pursuant to CDFW guidance (CDFW 2023).
e. If pre-activity surveys identify CBB individuals on-site, the Qualified Biologist shall notify and consult with CDFW to establish, monitor, and maintain no-work buffers around the associated floral/nest resources or identified nesting locations. The size and configuration of the no-work buffer shall be based on the best professional judgment of the Qualified Biologist in consultation with CDFW. Construction activities shall not occur within the no-work buffers until the bees are

no longer active (i.e., associated floral resources appear desiccated and no bees are seen flying for three consecutive days indicating dispersal from the area). Take of any endangered, threatened, candidate species that results from the project is prohibited, except as authorized by State law (Fish and Game Code section 86, 2062, 2067, 2068, 2080, 2085; California Code Regulations, Title 14, section 786.9) under CESA.

f. Survey data shall be submitted by the Qualified Biologist to the California Natural Diversity Database (CNDDB) in accordance with the Memorandum of Understanding with CDFW, or Scientific Collecting Permit requirements, as applicable.

Compensatory Mitigation for Impacts to Crotch's Bumble Bee Habitat

Should the species be formally listed, or remain a candidate for listing, mitigation for the loss of CBB occupied Diegan Coastal Sage Scrub shall be conducted to reduce impacts to less than significant. This mitigation will be carried out in conjunction with the Diegan coastal sage scrub mitigation described in MM-7. Specifically, the Diegan coastal sage scrub mitigation shall include habitat compensation at a minimum 1:1 ratio or as negotiated through consultation with the CDFW for an Incidental Take Permit, to also benefit the Crotch's bumble bee. This mitigation may be satisfied through off-site acquisition, in lieu fees, purchase of credits from an approved mitigation bank, or a combination thereof. If necessary, habitat enhancement or restoration also may be incorporated, to be described in an HMMP (i.e. planting of native Diegan coastal sage scrub flowering plant species known to support bumble bee populations, removal of invasive species, etc.). If prepared, the HMMP or other plans for Crotch's bumble bee habitat enhancement or restoration will be provided to CDFW for review and approval. Any land acquired as off-site mitigation to benefit CBB shall include a cost estimate for long-term management, an endowment, and a land protection mechanism such as a conservation easement. Mitigation lands for CBB must be occupied or include high quality suitable habitat. This species shall also be included in the WEAP educational program described in MM-3 and BMPs implemented per MM-5.

7 Limitations, Assumptions, and Use Reliance

This Biological Resources Assessment 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 for certain taxa may have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. 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, 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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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 (FESA) 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, State, and local levels. A number of federal and State statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project site include the following:

- United States Army Corps of Engineers (USACE; wetlands and other waters of the United States)
- United States Fish and Wildlife Service (USFWS; federally listed species and migratory birds)
- San Diego Regional Water Quality Control Board (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
- City of San Marcos (city wetlands)

United States Army Corps of Engineers

The United States Army Corps of Engineers (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.” 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 502 of the CWA further defines "navigable waters" as “waters of the United States, including the territorial seas.” “Waters of the United States” are broadly defined at 33 Code of Federal Regulations (CFR) Part 328.3 to include navigable waters, perennial and intermittent streams, lakes, rivers, ponds, as well as wetlands, marshes, and wet meadows. In recent years, 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. Thus, the agencies' longstanding definition of "waters of the United States," which dates from 1986, remains in effect albeit with supplemental guidance interpreting applicable court decisions as described below.

Waters of the United States

Current USACE and USEPA regulations, reflecting of the January 2023 definition as modified by the September 2023 Conforming Rule, define "waters of the United States" as follows (33 CFR 328.3; see also 88 FR 61964-61969):

(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.

The definition specifies that the following features are not "waters of the United States" even where they otherwise meet the terms of provisions (2) through (5) above:

(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(c)(1)). 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). The USACE's delineation procedures identify wetlands in the field based on indicators of three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. The following is a discussion of each of these parameters.

Hydrophytic Vegetation

Hydrophytic vegetation dominates areas where frequency and duration of inundation or soil saturation exerts a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurring in wetlands. More than 50 percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USACE published the National Wetland Plant List (USACE 2018), which separates vascular plants into the following four basic categories based on plant species frequency of occurrence in wetlands:

- **Obligate Wetland (OBL).** Almost always occur in wetlands
- **Facultative Wetland (FACW).** Usually occur in wetlands, but occasionally found in non-wetlands
- **Facultative (FAC).** Occur in wetlands or non-wetlands
- **Facultative Upland (FACU).** Usually occur in non-wetlands, but may occur in wetlands
- **Obligate Upland (UPL).** Almost never occur in wetlands

The USACE considers OBL, FACW and FAC species to be indicators of wetlands. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not appearing on the USFWS's list is assumed to be an upland species, almost never occurring in wetlands. In addition, an area needs to contain at least 5 percent vegetative cover to be considered as a vegetated wetland.

Hydric Soils

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation. Field indicators of wetland soils include observations of ponding, inundation, saturation, dark (low chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), gleying (indicates reducing conditions by a blue-grey color), or accumulation of organic material. Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soils survey, both of which must be verified in the field.

Wetland Hydrology

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by field indicators, such as water marks, drift lines, sediment deposits, or drainage patterns in wetlands.

Limitations on Jurisdiction based on Sackett v. USEPA Supreme Court

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.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB) 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 1 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 (WDR). 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.

United States Fish and Wildlife Service

The USFWS implements several laws protecting the Nation's fish and wildlife resources, including the FESA (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).

Federal Endangered Species Act

The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing FESA. Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA 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 FESA, 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 FESA; 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 (MBTRA) 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 MBTRA requires the USFWS to publish a list of all nonnative, 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 FESA, 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 California Code of Regulations [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.

Appendix B

Site Photographs

Photograph 1. View of northern access point to site, showing Woodward and Vineyard Road and surrounding habitat to the north, facing north. December 29, 2022.

Photograph 2. View of northeastern portion of project site and Woodward Street to the west. Facing southwest. December 29, 2022.

Photograph 3. View of northern portion of project site, facing east. December 29, 2022.

Photograph 4. View of central portion of project site, facing south. December 29, 2022.

Photograph 5. View of woodrat midden and surrounding habitat within the central and eastern portion of project site, facing west. December 29, 2022.

Photograph 6. View of eastern boundary of project site, facing south. December 29, 2022.

Photograph 7. View of central and southern portions of project site, facing south. December 29, 2022.

Photograph 8. View of southeastern portion of project site, showing housing development and East Mission Road, facing south. December 29, 2022.

Photograph 9. View of southwestern portion of project site, showing Mission 316 development and intersection of East Mission Road and Woodward Street, facing south. December 29, 2022.

Photograph 10. View of southeastern portion of project site, with residential homes at the top of the slope off Silk Mill Place, facing east. December 29, 2022.

Photograph 11. View of southern portion of project site, showing development and East Mission Road, facing southwest. December 29, 2022.

Photograph 12. View of eastern portion of project site showing Woodward Street to the west, facing southwest. December 29, 2022.

Appendix C

Floral and Faunal Compendium

Plant Species Observed within the Biological Study Area on December 29, 2022

Scientific Name	Common Name	Status	Native or Introduced
Shrubs			
Acmispon glaber	deerweed	None	Native
Agave americana	American century plant	None	Introduced
Artemisia californica	California sagebrush	None	Native
Baccharis pilularis	coyote brush	None	Native
Brickellia californica	Brickell bush	None	Native
Eriogonum fasciculatum	California buckwheat	None	Native
Eriophyllum confertiflorum	golden-yarrow	None	Native
Encelia californica	California encelia	None	Native
Diplacus aurantiacus	sticky monkeyflower	None	Native
Malosma laurina	laurel sumac	None	Native
Isocoma menziesii var. *menziesii*	Menzies' goldenbush	None	Native
Nicotiana glauca	tree tobacco	None	Introduced Cal-IPC Moderate
Rhamnus crocea	red berry buckthorn	None	Native
Rhus integrifolia	lemonade berry	None	Native
Salvia mellifera	black sage	None	Native
Herbs			
Brassica nigra	black mustard	None	Introduced Cal-IPC Moderate
Chenopodium californicum	California goosefoot	None	Native
Eriastrum densifolium	giant woollystar	None	Native
Eucrypta chrysanthemifolia	common eucrypta	None	Native
Euphorbia polycarpa	small seed sandmat		
Hirschfeldia incana	shortpod mustard	None	Introduced Cal-IPC Moderate
Marah macrocarpa	wild cucumber	None	Native
Mirabilis laevis	wishbone bush	None	Native
Paeonia californica	California peony	None	Native
Phacelia ramosissima	branching phacelia	None	Native
Salsola tragus	Russian thistle	None	Introduced Cal-IPC Limited
Sisymbrium sp.	mustard	None	Introduced
Grasses			
Bromus diandrus	ripgut brome	None	Introduced
Lichens			
Flavoparmelia sp.	green shield lichens	None	Native
Cacti			
Opuntia littoralis	coast prickly pear	None	Native
Opuntia robusta	nopal tapon	None	Introduced

Scientific Name	Common Name	Status	Native or Introduced
Trees			
Eucalyptus sp.	Eucalyptus	None	Introduced
Syagrus romanzoffiana	queen palm	None	Introduced
Washingtonia robusta	Mexican fan palm	None	Introduced

Wildlife Species Observed within the Biological Study Area on December 29, 2022

Scientific Name	Common Name	Status	Native or Introduced
Birds			
Calypte anna	Anna's hummingbird	None	Native
Sayornis nigricans	black phoebe	None	Native
Aphelocoma californica	California scrub-jay	None	Native
Corvus brachyrhynchos	American crow	None	Native
Psaltriparus minimus	bushtit	None	Native
Setophaga coronata	yellow-rumped warbler	None	Native
Pipilo maculatus	spotted towhee	None	Native
Melozone crissalis	California towhee	None	Native
Melospiza melodia	song sparrow	None	Native
Zonotrichia leucophrys	white-crowned sparrow	None	Native
Reptiles			
Sceloporus occidentalis	western fence lizard	None	Native
Mammals			
Canis latrans	Coyote (scat only)	None	Native
Neotoma sp.	Woodrat (midden only)	SSC	Native

Appendix D

Special-Status Species Evaluation Tables

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

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Ste	Habitat Suitability/ Observations
Plants and Lichens				
Abronia villosa var. *aurita* chaparral sand-verbena	None/None G5T2T3/S2 1B.1	Chaparral, coastal scrub, desert dunes. Sandy areas. 60-1570 m. annual herb. Blooms (Jan) Mar-Sep	No Potential	Suitable habitat is present in the project site, but the project is outside the known distribution of the species.
Acanthomintha ilicifolia San Diego thorn-mint	Threatened/ Endangered G1/S1 1B.1 MHCP 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	No Potential	The species' associated soils are not present in the project site.
Acmispon prostratus Nuttall's acmispon	None/None G1G2/S1 1B.1	Coastal dunes, coastal scrub. On sand dunes. 0-18 m. annual herb. Blooms Mar-Jun (Jul).	No Potential	Sand dunes are not present in the project site.
Adolphia californica California adolphia	None/None G3/S2 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	No Potential	This conspicuous shrub species was not observed during any of the surveys.
Agave shawii var. shawii Shaw's agave	None/None G2G3T2T3/S1 2B.1"	Perennial leaf. Coastal bluff scrub, coastal scrub. Coastal bluffs and slopes within coastal sage scrub. Elevations: 3-120 m. Blooms Sep-May.	No Potential	The site's elevation range occurs outside of the elevation range where this species is found.
Allium marvinii Yucaipa onion"	None/None G1/S1 1B.2"	Perennial bulbiferous herb. Chaparral. In openings on clay soils. Elevations: 760-1065 m. Blooms Apr-May.	No Potential	The site's elevation range occurs outside of the elevation range where this species is found.
Ambrosia pumila San Diego ambrosia	Endangered/None G1/S1 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 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 level of disturbances (e.g., grazing). This species was not detected during a focused rare plant survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Ste	Habitat Suitability/ Observations
Arctostaphylos glandulosa ssp. *crassifolia* Del Mar manzanita	Endangered/None G5T2/S2 1B.1 MHCP Covered Species	Chaparral. Sandy coastal mesas and ocean bluffs; in chaparral or Torrey pine forest. 30-365 m. perennial evergreen shrub. Blooms Dec-Jun	No Potential	This conspicuous shrub species was not observed during field survey,
Arctostaphylos rainbowensis rainbow manzanita	None/None G2/S2 1B.1	Chaparral. Usually found in gabbro chaparral. 100-870 m. perennial evergreen shrub. Blooms Dec-Mar	No Potential	This conspicuous shrub species was not observed during the field survey.
Artemisia palmeri San Diego sagewort	None/None G3?/S3? 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. This species associated 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.
Atriplex coulteri Coulter's saltbush	None/None G3/S1S2 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	No Potential	The species' associated topography is not present in the project site.
Atriplex pacifica south coast saltscale	None/None G4/S2 1B.2	Coastal scrub, coastal bluff scrub, playas, coastal dunes. Alkali soils. 1-400 m. annual herb. Blooms Mar-Oct	No Potential	The species' associated soils are not present in the project site.
Atriplex parishii Parish's brittlescale	None/None G1G2/S1 1B.1	Vernal pools, chenopod scrub, playas. Usually on drying alkali flats with fine soils. 5-1420 m. annual herb. Blooms Jun-Oct	No Potential	The species' associated habitat is not present in the project site.
Baccharis vanessae Encinitas baccharis	Threatened/ Endangered G1/S1 1B.1 MHCP 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	No Potential	This conspicuous shrub species was not observed during the field survey.
Bloomeria clevelandii San Diego goldenstar	None/None G2/S2 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	No Potential	The species' associated soils are not present in the project site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Ste	Habitat Suitability/ Observations
Brodiaea filifolia thread-leaved brodiaea	Threatened/ Endangered G2/S2 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	No Potential	The species' associated soils are not present in the project site.
Brodiaea orcuttii Orcutt's brodiaea	None/None G2/S2 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	No Potential	The species' associated soils are not present in the project site.
Calochortus dunnii Dunn's mariposa-lily	None/Rare G2G3/S2S3 1B.2	Closed-cone coniferous forest, chaparral, valley and foothill grassland. On gabbro or metavolcanic soils; also known from sandstone; often associated with chaparral. 255-1615 m. perennial bulbiferous herb. Blooms (Feb) Apr-Jun	No Potential	The species' associated habitat is not present in the project site.
Caulanthus simulans Payson's jewelflower	None/None G4/S4 4.2	Annual herb. Chaparral, coastal scrub. Granitic, sandy. Elevations: 90-2200 m Blooms (Feb) Mar-May (Jun).	No Potential	This species associates soils and selective suitable habitat preferences are not present in the project site.
Ceanothus cyaneus Lakeside ceanothus	None/None G2/S2 1B.2	Perennial evergreen shrub. Chaparral, closed-cone coniferous forest. Elevations: 770-2475 ft. (235-755m.) Blooms Apr-Jun.	No Potential	This conspicuous shrub species was not observed during the field survey.
Ceanothus verrucosus wart-stemmed ceanothus	None/None G2/S2? 2B.2 MHCP Covered Species	Chaparral. 25-470 m. perennial evergreen shrub. Blooms Dec-May	No Potential	This conspicuous shrub species was not observed during the field survey.
Centromadia parryi ssp. *australis* southern tarplant	None/None G3T2/S2 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	No Potential	The species' associated habitat is not present in the project site.
Centromadia pungens ssp. *laevis* smooth tarplant	None/None G3G4T2/S2 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	No Potential	The species' associated habitat is not present in the project site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Ste	Habitat Suitability/ Observations
Chaenactis glabriuscula var. *orcuttiana* Orcutt's pincushion	None/None G5T1T2/S1 1B.1	Coastal bluff scrub, coastal dunes. Sandy sites. 3-80 m. annual herb. Blooms Jan-Aug	No Potential	The species' associated habitat is not present in the project site.
Chorizanthe orcuttiana Orcutt's spineflower	Endangered/ Endangered G1/S1 1B.1 MHCP 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	No Potential	The project is outside the known range of the species, with most records being coastal.
Chorizanthe polygonoides var. *longispina* long-spined spineflower	None/None G5T3/S3 1B.2	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Gabbroic clay. 30-1540 m. annual herb. Blooms Apr-Jul	No Potential	The species' associated soils are not present in the project site.
Clarkia delicata delicate clarkia	None/None G3/S3 1B.2	Cismontane woodland, chaparral. Often on gabbro soils. 50-1360 m. annual herb. Blooms Apr-Jun	No Potential	The species' associated habitat is not present in the project site.
Comarostaphylis diversifolia ssp. *diversifolia* summer holly	None/None G3T2/S2 1B.2 MHCP Covered Species	Chaparral, cismontane woodland. Often in mixed chaparral in California, sometimes post-burn. 30-945 m. perennial evergreen shrub. Blooms Apr-Jun	No Potential	This conspicuous shrub species was not observed during any of the surveys.
Corethrogyne filaginifolia var. *incana* San Diego sand aster	None/None G4T1Q/S1 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	Moderate Potential	Suitable habitat is present in the project site and the species is widespread throughout San Diego County. This species was not detected during a focused rare plant survey.
Corethrogyne filaginifolia var. *linifolia* Del Mar Mesa sand aster	None/None G4T1T2Q/S1S2 1B.1 MHCP 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	No Potential	The species' associated soils are not present in the project site.
Cryptantha wigginsii Wiggins' cryptantha	None/None G2/S1 1B.2	Coastal scrub. Often on clay soils. 45-110 m. annual herb. Blooms Feb-Jun	No Potential	The species' associated soils are not present in the project site.
Dudleya blochmaniae ssp. *blochmaniae* Blochman's dudleya	None/None G3T2/S2 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	No Potential	The species' associated soils are not present in the project site.
Dudleya multicaulis many-stemmed dudleya	None/None G2/S2 1B.2	Chaparral, coastal scrub, valley and foothill grassland. In heavy, often clayey soils or grassy slopes. 15-790 m. perennial herb. Blooms Apr-Jul	No Potential	The species' associated soils are not present in the project site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Ste	Habitat Suitability/ Observations
Dudleya variegata variegated dudleya	None/None G2/S2 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	No Potential	The species' associated soils are not present in the project site.
Dudleya viscida sticky dudleya	None/None G2/S2 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	No Potential	The species' associated topography is not present in the project site.
Ericameria palmeri var. *palmeri* Palmer's goldenbush	None/None G4T2?/S2 1B.1	Coastal scrub, chaparral. On granitic soils, on steep hillsides. Mesic sites. 5-625 m. perennial evergreen shrub. Blooms (Jul) Sep-Nov	No Potential	This conspicuous shrub species was not observed during any of the surveys.
Eryngium aristulatum var. *parishii* San Diego button-celery	Endangered/ Endangered G5T1/S1 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	No Potential	Vernal pools are not present in the project site.
Eryngium pendletonense Pendleton button-celery	None/None G1/S1 1B.1	Coastal bluff scrub, valley and foothill grassland, vernal pools. Clay. Vernally mesic sites. 20-30 m. perennial herb. Blooms Apr-Jun (Jul).	No Potential	The species' associated soils are not present in the project site.
Erysimum ammophilum sand-loving wallflower	None/None G2/S2 1B.2	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 5-130 m. perennial herb. Blooms Feb-Jun	No Potential	Suitable habitat is present in the project site, but the species does not have recorded occurrences within 10 miles of the project.
Euphorbia misera cliff spurge	None/None G5/S2 2B.2 MHCP Covered Species	Coastal bluff scrub, coastal scrub, Mojavean desert scrub. Rocky sites. 3-430 m. perennial shrub. Blooms Dec-Aug (Oct)	Low Potential	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 San Diego barrel cactus	None/None G3?/S2S3 2B.1 MHCP 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	No Potential	This conspicuous species was not observed during any of the surveys.
Harpagonella palmeri Palmer's grapplinghook	None/None G4/S3 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.	No Potential	The species' associated soils are not present in the project site.
Hazardia orcuttii Orcutt's hazardia	None/Threatened G1/S1 1B.1 MHCP 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	No Potential	The species' associated soils are not present in the project site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Ste	Habitat Suitability/ Observations
Heterotheca sessiliflora ssp. *sessiliflora* beach golden aster	None/None G4T2T3/S1 1B.1	Coastal dunes, coastal scrub, chaparral (coastal). Sandy sites. 0-5 m. perennial herb. Blooms Mar-Dec	No Potential	Suitable habitat is present in the project site, but the species does not have recorded occurrences within 10 miles of the project.
Horkelia cuneata var. *puberula* mesa horkelia	None/None G4T1/S1 1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m. perennial herb. Blooms Feb-Jul (Sep)	No Potential	Suitable habitat is present in the project site, but the species does not have recorded occurrences within 10 miles of the project.
Horkelia truncata Ramona horkelia	None/None G3/S3 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	No Potential	The species' associated soils are not present in the project site.
Isocoma menziesii var. *decumbens* decumbent goldenbush	None/None G3G5T2T3/S2 1B.2	Coastal scrub, chaparral. Sandy soils; often in disturbed sites. 1-915 m. perennial shrub. Blooms Apr-Nov	No Potential	*I. m.* var. *menziesii* was identified as occurring on the project based upon the plants being glabrous or slightly hairy, sometimes resinous, as opposed to I. m. var. decumbens being prominently long-soft-hairy or tomentosa.
Iva hayesiana San Diego marsh-elder	None/None G3/S2 2B.2 MHCP Covered Species	Marshes and swamps, playas. Riverwashes. 1-430 m. perennial herb. Blooms Apr-Oct	No Potential	The species' associated habitat is not present in the project site.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	None/None G4T2/S2 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	No Potential	The species' associated habitat is not present in the project site.
Lepechinia cardiophylla heart-leaved pitcher sage	None/None G3/S2S3 1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland. 520-1370 m. perennial shrub. Blooms Apr-Jul	No Potential	The species' associated habitat is not present in the project site.
Leptosyne maritima sea dahlia	None/None G2/S1 2B.2	Coastal scrub, coastal bluff scrub. Occurs on a variety of soil types, including sandstone. 5-185 m. perennial herb. Blooms Mar-May	No Potential	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. *intermedia* intermediate monardella	None/None G4T2?/S2? 1B.3	Chaparral, cismontane woodland, lower montane coniferous forest (sometimes). Often in steep, brushy areas. 195-16750 m. perennial rhizomatous herb. Blooms Apr-Sep	No Potential	The species' associated habitat is not present in the project site.
Monardella hypoleuca ssp. *lanata* felt-leaved monardella	None/None G4T3/S3 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	No Potential	The species' associated habitat is not present in the project site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Ste	Habitat Suitability/ Observations
Myosurus minimus ssp. apus little mousetail	None/None G5T2Q/S2 3.1 MHCP Covered Species	Annual herb. Valley and foothill grassland, vernal pools. Alkaline soils. Elevations 20-640 m. Blooms Mar-Jun.	No Potential	Vernal pools and alkaline soils are not present in the project site.
Nama stenocarpa mud nama	None/None G4G5/S1S2 2B.2	Marshes and swamps. Lake shores, river banks, intermittently wet areas. 5-500 m. annual/perennial herb. Blooms Jan-Jul	No Potential	The species' associated habitat is not present in the project site.
Navarretia fossalis spreading navarretia	Threatened/None G2/S2 1B.1 MHCP 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	No Potential	The species' associated habitat is not present in the project site.
Nemacaulis denudata var. *denudata* coast woolly-heads	None/None G3G4T2/S2 1B.2	Coastal dunes. 0-100 m. annual herb. Blooms Apr-Sep	No Potential	The species' associated habitat is not present in the project site.
Nemacaulis denudata var. *gracilis* slender cottonheads	None/None G3G4T3?/S2 2B.2	Coastal dunes, desert dunes, Sonoran desert scrub. In dunes or sand. -50-400 m. annual herb. Blooms (Mar) or May	No Potential	The species' associated habitat is not present in the project site.
Nolina cismontana chaparral nolina	None/None G3/S3 1B.2	Chaparral, coastal scrub. Primarily on sandstone and shale substrates; also known from gabbro. 140-1275 m. perennial evergreen shrub. Blooms (Mar) May-Jul	No Potential	This conspicuous species was not observed during any of the surveys.
Orcuttia californica California Orcutt grass	Endangered/ Endangered G1/S1 1B.1 MHCP Covered Species	Vernal pools. 10-660 m. annual herb. Blooms Apr-Aug	No Potential	The species' associated habitat is not present in the project site.
Pinus torreyana ssp. *torreyana* Torrey pine	None/None G1T1/S1 1B.2 MHCP Covered Species	Closed-cone coniferous forest, chaparral. On dry, sandstone slopes. 70-160 m.; perennial evergreen tree.	No Potential	This conspicuous tree species was not observed during any of the surveys.
Pogogyne abramsii San Diego mesa mint	Endangered/ Endangered G1/S1 1B.1	Vernal pools. Vernal pools within grasslands, chamise chaparral, or Coastal Sage Scrub communities. 70-195 m. annual herb. Blooms Mar-Jul	No Potential	The species' associated habitat is not present in the project site.
Pseudognaphalium leucocephalum white rabbit-tobacco	None/None G4/S2 2B.2	Riparian woodland, cismontane woodland, coastal scrub, chaparral. Sandy, gravelly sites. 35-515 m. perennial herb. Blooms (Jul) Aug-Nov (Dec)	No Potential	Suitable habitat is present in the project site, but the species does not have recorded occurrences within 5 miles of the project. Area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Ste	Habitat Suitability/ Observations
Quercus dumosa Nuttall's scrub oak	None/None G3/S3 1B.1 MHCP 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)	No Potential	This conspicuous tree species was not observed during any of the surveys.
Salvia munzii Munz's sage	None/None G2/S2 2B.2	Coastal scrub, chaparral. Rolling hills and slopes, in rocky soil. 35-575 m. perennial evergreen shrub. Blooms Feb-Apr	No Potential	This conspicuous shrub species was not observed during any of the surveys.
Sidalcea neomexicana salt spring checkerbloom	None/None G4/S2 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	No Potential	The species' associated habitat is not present in the project site.
Stemodia durantifolia purple stemodia	None/None G5/S2 2B.1	Sonoran desert scrub. Sandy soils; mesic sites. 35-385 m. perennial herb. Blooms (Jan) Apr, Jun, Aug, Sep, Oct, Dec	No Potential	The species' associated habitat is not present in the project site.
Suaeda esteroa estuary seablite	None/None G3/S2 1B.2	Marshes and swamps. Coastal salt marshes in clay, silt, and sand substrates. 0-80 m. perennial herb. Blooms (May) Jul-Oct (Jan)	No Potential	The species' associated habitat is not present in the project site.
Tetracoccus dioicus Parry's tetracoccus	None/None G3?/S2 1B.2 MHCP Covered Species	Chaparral, coastal scrub. Stony, decomposed gabbro soil. 135-705 m. perennial deciduous shrub. Blooms Apr-May	No Potential	This conspicuous shrub species was not observed during any of the surveys.
Sensitive Natural Communities				
Maritime Succulent Scrub Maritime Succulent Scrub	None/None G2/S1.1		No Potential	The community's plant species were not identified in the project site.
San Diego Mesa Claypan Vernal Pool San Diego Mesa Claypan Vernal Pool	None/None GNR/SNR		No Potential	The community's plant species were not identified in the project site.
San Diego Mesa Hardpan Vernal Pool San Diego Mesa Hardpan Vernal Pool	None/None G2/S2.1		No Potential	The community's plant species were not identified in the project site.
Southern Coast Live Oak Riparian Forest Southern Coast Live Oak Riparian Forest	None/None G4/S4		No Potential	The community's plant species were not identified in the project site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Ste	Habitat Suitability/ Observations
Southern Coastal Salt Marsh Southern Coastal Salt Marsh	None/None G2/S2.1		No Potential	The community's plant species were not identified in the project site.
Southern Cottonwood Willow Riparian Forest Southern Cottonwood Willow Riparian Forest	None/None G3/S3.2		No Potential	The community's plant species were not identified in the project site.
Southern Maritime Chaparral Southern Maritime Chaparral	None/None G1/S1.1		No Potential	The community's plant species were not identified in the project site.
Southern Riparian Forest Southern Riparian Forest	None/None G4/S4		No Potential	The community's plant species were not identified in the project site.
Southern Riparian Scrub Southern Riparian Scrub	None/None G3/S3.2		No Potential	The community's plant species were not identified in the project site.
Southern Sycamore Alder Riparian Woodland Southern Sycamore Alder Riparian Woodland	None/None G4/S4		No Potential	The community's plant species were not identified in the project site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Ste	Habitat Suitability/ Observations
Southern Willow Scrub Southern Willow Scrub	None/None G3/S2.1		No Potential	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
SD = State Delisted
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List

CRPR (CNPS 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

CRPR 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)

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 Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur in Project site	Habitat Suitability/Observations
Invertebrates				
Bombus crotchii Crotch bumble bee	None/None G3G4/S1S2 CESA	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Ant*irrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.*	Present	The project site contains suitable sage scrub foraging habitat and is within the known extant range of *B crotchii.* Floral resources such as *Phacelia ramosissima*, sage, and *Eriogonum fasciculatum*, is present in the project site and vicinity. CNDDB records indicate this species has been recorded on June 15, 2020, approximately 2.5 miles from the project site within the San Marcos Double Peak Park. This species was observed during the CDFW foraging bumble bee surveys for CBB on June 6, 2024 and the project site has suitable nesting and foraging habitat.
Branchinecta lynchi vernal pool fairy shrimp	Threatened/None G3/S3 None	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	No Potential	Vernal pool habitat is not present in the project site.
Branchinecta sandiegonensis San Diego fairy shrimp	Endangered/ None G2/S2 None	Endemic to San Diego and Orange County mesas. Vernal pools.	No Potential	The species' associated habitat is not present in the project site.
Cicindela latesignata western beach tiger beetle	None/None G2G3/S1	Mudflats and beaches of coastal estuaries from San Diego County to Los Angeles County. Typically inhabit wet or dry sandy beaches and mud, sand, or salt flats.	No Potential	This species associated habitat is not present in the project site.
Cicindela senilis frosti senile tiger beetle	None/None G2G3T1T3/S1 None	Inhabits marine shoreline, from Central California coast south to salt marshes of San Diego. Also found at Lake Elsinore Inhabits dark-colored mud in the lower zone and dried salt pans in the upper zone.	No Potential	The species' associated habitat is not present in the project site.
Fish				
Eucyclogobius newberryi tidewater goby	Endangered/ None G3/S3 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.	No Potential	The species' associated habitat is not present in the project site.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur in Project site	Habitat Suitability/Observations
Gila orcuttii arroyo chub	None/None G2/S2 SSC	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	No Potential	The species' associated habitat is not present in the project site.
Reptiles				
Anniella stebbinsi southern California legless lizard	None/None G3/S3 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.	No Potential	The species' associated habitat is not present in the project site.
Arizona elegans occidentalis California glossy snake	None/None G5T2/S2 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 recorded occurrences within 5 miles of the project.
Aspidoscelis hyperythra orange-throated whiptail	None/None G5/S2S3 WL MHCP 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.	High Potential	Suitable habitat is present within the project site. This species has previously been observed on the parcel to the southeast/east of the project, which has since been developed. This species has recorded occurrences within 5 miles of the project site.
Aspidoscelis tigris stejnegeri coastal whiptail	None/None G5T5/S3 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.	High Potential	The species was overserved on the property to the east of the project site during 2019 surveys for development to the south of the project site, however this species was not observed within the project site during the 2022 field survey.
Crotalus ruber red-diamond rattlesnake	None/None G4/S3 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	Suitable habitat is present in the project site, but the species does not have recorded occurrences within 5 miles of the project site.
Emys marmorata western pond turtle	None/None G3G4/S3 SSC MHCP Covered Species	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	No Potential	The species' associated habitat is not present in the project site.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur in Project site	Habitat Suitability/Observations
Phrynosoma blainvillii coast horned lizard	None/None G3G4/S3S4 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	Suitable habitat is present in the project site. This species does have recorded occurrences within 5 miles of the project.
Plestiodon skiltonianus interparietalis Coronado skink	None/None G5T5/S2S3 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.	No Potential	The species' associated habitat is not present in the project site.
Salvadora hexalepis virgultea coast patch-nosed snake	None/None G5T4/S2S3 SSC	Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites.	Low Potential	Suitable habitat is present in the project site. The species does have one recorded occurrence within 5 miles of the project site, however this occurrence is associated with sandy soil and granitic rock outcrops which do not occur on site.
Thamnophis hammondii two-striped gartersnake	None/None G4/S3S4 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.	No Potential	The species' associated habitat is not present in the project site.
Thamnophis sirtalis pop. 1 south coast gartersnake	None/None G5T1T2/S1S2 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.	No Potential	The species' associated habitat is not present in the project site.
Amphibians				
Anaxyrus californicus arroyo toad	Endangered/ None G2G3/S2S3 SSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	No Potential	The species' associated habitat is not present in the project site.
Spea hammondii western spadefoot Distinct Population Segment (DPS) Southern California	FPT/None G3/S3 SSC MHCP 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.	No Potential	The species' associated habitat is not present in the project site.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur in Project site	Habitat Suitability/Observations
Birds				
Accipiter cooperii Cooper's hawk	None/None G5/S4 WL MHCP 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 flood-plains; also, live oaks.	High Potential	The species has been previously observed as a transient on the project site; likely utilized for foraging, however, the species' associated nesting habitat is not present on site.
Agelaius tricolor tricolored blackbird	None/Threatened G2G3/S1S2 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Aimophila ruficeps canescens southern California rufous-crowned sparrow	None/None G5T3/S3 WL MHCP Covered Species	Resident in Southern California Coastal Sage Scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Moderate Potential	The species is associated foraging and nesting habitat is present on site. Steep hillsides with dense sage scrub vegetation and canopy could provide habitat for this species. The closest record of a previous recorded occurrence with similar habitat surrounded by development is approximately 2.3 miles to the west of the project. This species was not observed during the field survey.
Aquila chrysaetos golden eagle	None/None G5/S3 FP, WL	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Artemisiospiza belli belli Bell's sage sparrow	None/None G5T2T4/S3 WL MHCP Covered Species	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 burrowing owl	None/None G4/S3 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site. No suitable burrows were identified during the survey. There are no records less than 90 years old within 5 miles of the project site.
Buteo swainsoni Swainson's hawk	None/Threatened G5/S3 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur in Project site	Habitat Suitability/Observations
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	None/None G5T3Q/S3 SSC MHCP Covered Species	Southern California coastal sage scrub. Wrens require tall *Opuntia* sp. cactus for nesting and roosting.	Low Potential	There are scattered groups of *Opuntia* sp. within the Diegan Coastal Sage Scrub in the project site; but no large stands suitable for occupation by the species.
Charadrius alexandrinus nivosus western snowy plover	Threatened/None G3T3/S2S3 SSC MHCP Covered Species	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Circus hudsonius northern harrier	None/None G5/S3 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Coccyzus americanus occidentalis western yellow-billed cuckoo	Threatened/ Endangered G5T2T3/S1 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Elanus leucurus white-tailed kite	None/None G5/S3S4 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Empidonax traillii extimus southwestern willow flycatcher	Endangered/ Endangered G5T2/S1 None MHCP Covered Species	Riparian woodlands in southern California.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Eremophila alpestris actia California horned lark	None/None G5T4Q/S4 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur in Project site	Habitat Suitability/Observations
Icteria virens yellow-breasted chat	None/None G5/S3 SSC MHCP 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Ixobrychus exilis least bittern	None/None G5/S2 SSC	Colonial nester in marshlands and borders of ponds and reservoirs which provide ample cover. Nests usually placed low in tules, over water.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Laterallus jamaicensis coturniculus California black rail	None/Threatened G3G4T1/S1 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Passerculus sandwichensis beldingi Belding's savannah sparrow	None/ Endangered G5T3/S3 None	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in Salicornia on and about margins of tidal flats.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Plegadis chihi white-faced ibis	None/None G5/S3S4 WL MHCP Covered Species	Shallow freshwater marsh. Dense tule thickets for nesting, interspersed with areas of shallow water for foraging.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Polioptila californica californica coastal California gnatcatcher	Threatened/None G4G5T2Q/S2 SSC MHCP 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.	Present	The species was observed within the project site during protocol surveys conducted in 2018 and preconstruction surveys conducted in 2020. Nesting pairs have been identified and both suitable nesting and foraging habitat is present within the Study Area.
Rallus obsoletus levipes light-footed Ridgway's rail	Endangered/ Endangered G5T1T2/S1 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Riparia riparia bank swallow	None/Threatened G5/S2 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur in Project site	Habitat Suitability/Observations
Setophaga petechia yellow warbler	None/None G5/S3S4 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Sternula antillarum browni California least tern	Endangered/ Endangered G4T2T3Q/S2 FP MHCP 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Vireo bellii pusillus least Bell's vireo	Endangered/ Endangered G5T2/S2 None MHCP 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.	No Potential	The species' associated nesting and foraging habitat is not present in the project site.
Mammals				
Antrozous pallidus pallid bat	None/None G5/S3 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.	No Potential	The species associated roosting habitat is not present in the project site.
Chaetodipus californicus femoralis Dulzura pocket mouse	None/None G5T3/S3 SSC	Variety of habitats including coastal scrub, chaparral and grassland in San Diego County. Attracted to grass-chaparral edges.	No Potential	The local recorded occurrences of the species are from chaparral habitats and are not found within the project site.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	None/None G5T3T4/S3S4 SSC MHCP Covered Species	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Low Potential	The local recorded occurrences of the species are from chaparral habitats.
Choeronycteris mexicana Mexican long-tongued bat	None/None G4/S1 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.	No Potential	The species associated roosting habitat is not present in the project site.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur in Project site	Habitat Suitability/Observations
Corynorhinus townsendii Townsend's big-eared bat	None/None G3G4/S2 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.	No Potential	The species associated roosting habitat is not present in the project site.
Dipodomys stephensi Stephens' kangaroo rat	Endangered/ Threatened G2/S2 None MHCP 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.	No Potential	The project site is outside the known range of the species.
Eumops perotis californicus western mastiff bat	None/None G5T4/S3S4 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.	No Potential	The species associated roosting habitat is not present in the project site.
Lasiurus cinereus hoary bat	None/None G5/S4 None	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	Low Potential	Individuals of the species could utilize the project site for foraging and the trees adjacent to the project site for night roosts, but winter and maternal roosting by the species is not expected. No large stands of trees are found within the project site, however adjacent dense eucalyptus and riparian woodland habitats are found to the west across Woodward Street.
Lasiurus xanthinus western yellow bat	None/None G5/S3 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.	No Potential	The species associated roosting habitat is not present in the project site. Ornamental palms are located within residential property above the project site on the eastern slope. These palms lacked suitable roosting habitat (skirts) from untrimmed fronds and lack suitable habitat characteristics for roosting habitat for this species.
Leptonycteris yerbabuenae lesser long-nosed bat	Endangered/ None G4/S1 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.	Low Potential	Individuals of the species could potentially use the trees in the project site for night roosts, but winter and maternal roosting by the species is not expected.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur in Project site	Habitat Suitability/Observations
Lepus californicus bennettii San Diego black-tailed jackrabbit	None/None G5T3T4/S3S4 SSC MHCP Covered Species	Intermediate canopy stages of shrub habitats and open shrub/herbaceous and tree/herbaceous edges. Coastal Sage Scrub habitats in Southern California.	Low Potential	The Diegan sage scrub in the project site is mature and dense, sloping, with rocky outcroppings present. the project site is surrounded by urban development and busy roadways. This species is typically found in arid, grassland, and patchy coastal sage scrub habitats.
Neotoma bryanti Bryant's woodrat	None/None G5T3T4/S3S4 SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	High Potential	Woodrat middens were identified during the survey of the project site and associated habitat is present, including rocky outcroppings and large boulders. Further determination is needed to identify the middens present on site to determine *Neotoma bryanti* vs big-eared woodrat (*Neotoma macrotis*).
Nyctinomops femorosaccus pocketed free-tailed bat	None/None G4/S3 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.	No Potential	The species associated roosting habitat is not present in the project site.
Nyctinomops macrotis big free-tailed bat	None/None G5/S3 SSC	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	No Potential	The species associated roosting habitat is not present in the project site.
Perognathus longimembris pacificus Pacific pocket mouse	Endangered/ None G5T1/S1 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.	No Potential	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 American badger	None/None G5/S3 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.	No Potential	No diagnostic sign of the species (e.g., burrows or digs) were identified in the project site.

Regional Vicinity refers to within a 5-mile-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
CESA = 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

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Appendix E

2024 Crotch's Bumble Bee Survey Report

2024 Survey Report
for
Foraging Crotch's Bumble Bee
(*Bombus crotchii*)
on the
Woodward Specific Plan Development Project

Prepared for:

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Prepared by:

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August 15, 2024

ALDEN
ENVIRONMENTAL, INC

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INTRODUCTION

This report documents the methods and results of a survey conducted on the Woodward Specific Plan Development Project site for foraging Crotch's bumble bee (CBB; *Bombus crotchii*), a candidate for listing as endangered under the California Endangered Species Act (CESA). The study area encompasses approximately 27 acres of vacant and developed land located within the City. This area includes the approximately 8.5-acre proposed project site and designated 200-foot buffer. The study area is bordered to the south by East Mission Road and to the west by North Twin Oaks Valley Road. Woodward Street bisects the study area at the western boundary of the project site (Figures 1 and 2). The study area is located within the United States Geological Survey (USGS) San Marcos 7.5-minute topographic quadrangle.

METHODS

A foraging bumble bee survey for the CBB was conducted during the period May 16 through July 12, 2024 (Table 1). The survey followed the Survey Considerations for CESA Candidate Bumble Bee Species issued by the CDFW on June 6, 2023.

Table 1
2024 Crotch's Bumble Bee Survey Information

Site Visit #	Date	Biologist(s)	Survey Times (start-stop)	Weather Conditions (start/stop)
1	5/16	Brian Lohstroh	1000-1445	50% cover, 65°F, wind 0-3 mph/ 40%, 73°F, wind 3-8 mph
2	6/6	Brian Lohstroh	1000-1445	50% cover, 73 °F, wind 5-8 mph/ 0%, 82°F, wind 6-10 mph
3	7/12	Brian Lohstroh	0830-1345	40% cover, 73°F, wind 1-5 mph/ 20%, 86°F, wind 2-8 mph

Prior to beginning the survey, a habitat assessment was conducted to identify suitable foraging habitat for the CBB. The assessment included reviewing California Department of Fish and Wildlife (CDFW) Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (2023), as well as reviewing available bumble bee data (iNaturalist and Bumble Bee Watch) and California Natural Diversity Database (CNDDB) to identify any reported CBB observations in the site vicinity. In addition, current vegetation mapping prepared for the project, historic aerial photographs, and site photographs were reviewed to identify areas that may support suitable foraging resources (flowering plants) for the species as well as nesting locations. Potential habitat for the CBB on site was determined from those existing conditions.

According to the Survey Considerations (CDFW 2023), it is recommended that at least 3 site visits take place spaced 2 to 4 weeks apart during the period of highest detection probability for foraging CBB (i.e., the April – August Colony Active Period for the species) and when floral resources are

present. Three site visits were made to the survey area approximately 3-5 weeks apart during the Colony Active Period when floral resources were present (Table 1).

The Survey Considerations (CDFW 2023) state that site visits should be made at least 1 hour after sunrise and at least 2 hours before sunset, although ideally between 9 am and 1 pm on warm, but not hot, sunny days (65-90 degrees Fahrenheit) with low wind (less than 8 miles per hour). The recommended rate of survey is 1 person-hour per 3 acres of suitable habitat. The survey was conducted under these conditions (Table 1; Appendix A).

The survey included walking meandering transects through the survey areas and looking for foraging *Bombus* species. All flowering plants in bloom, as well as bee/wasp species, were recorded in field notes during each site visit (Appendix A). No netting or handling of any insects was conducted. The entirety of the survey area was surveyed 3 times.

Approximately 14 acres within the study area were determined to support flowering plants where the CBB could forage. This acreage is dominated by Diegan Coastal Sage Scrub (DCSS) and disturbed DCSS habitats. Total flower coverage in the survey area ranged from 10% to 50% throughout the 3 surveys.

The remaining 13 acres is not suitable for CBB, as it contains no flowers and is either developed or highly disturbed.

RESULTS

The nearest record of the species is an iNaturalist research grade record from March 2024, approximately 1.15 miles to the west of the site, in an undeveloped area just east of the Edwin and Francis Hunter Arboretum. CNDDB records indicate this species has been recorded on June 15, 2020, approximately 2.5 miles from the project site within the San Marcos Double Peak Park.

One CBB was observed during the 6/6 survey within the project boundary in the southern central portion of the study area. Additional *Bombus* species were also observed during each of the three surveys. Twelve Yellow-faced bumble bees (*Bombus vosnesenskii*), including one queen, were observed on 5/16; twenty five, including one male, were observed on 6/6; and sixteen were observed on 7/12. Sixteen California bumble bee (*Bombus californicus*) were also observed on 7/12. Other bee and wasp species observed throughout the survey included the European honey bee (*Apis mellifera*), Hover fly (*Syrphidae*), tarantula hawk (*Pepsis thisbe*), Robber fly (*Asilidae*), California digger bee (*Anthophora californica*), Mexican cactus fly (*Copestylum mexicanum*), carpenter bee (*Xylocopinae*), and Figeater beetle (*Cotinis mutabilis*).

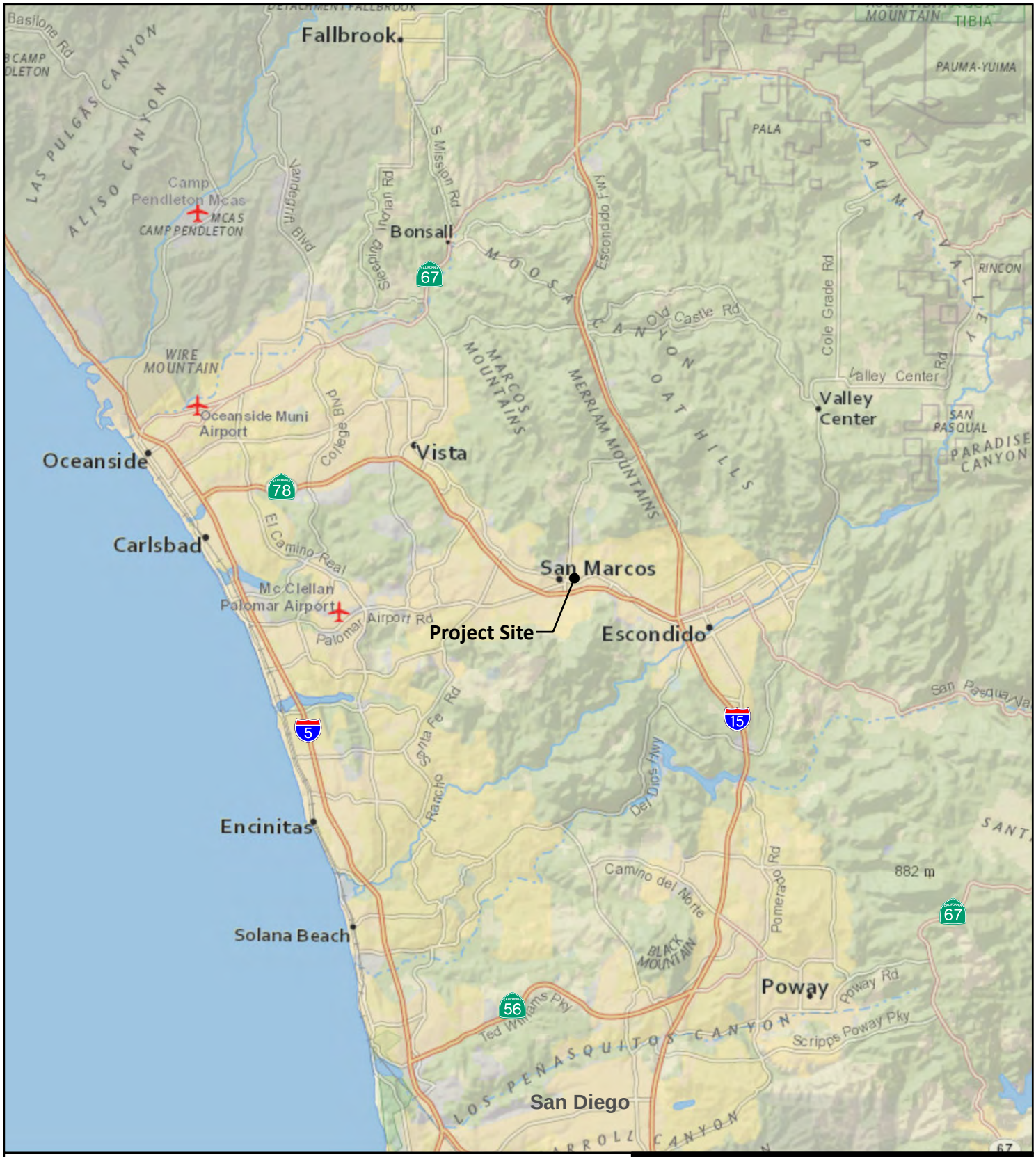
The DCSS habitat (including disturbed) on site supports suitable foraging and nesting resources for bumble bees as this habitat contains substantial nectar resources and burrowing animal species (lizards, gophers, etc). Therefore, the site is considered suitable nesting and foraging habitat for species.

REFERENCES

Bumble Bee Watch, September 14, 2024. https://www.bumblebeewatch.org/maps

California Department of Fish and Wildlife. 2023. Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species. June 6. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inline

iNaturalist, September 14, 2024. https://www.inaturalist.org/observations?place_id=any&subview=map&taxon_id=271451



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0 2 4
Miles

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Figure 1

Regional Location

WOODWARD SPECIFIC PLAN
DEVELOPMENT PROJECT
CROTCH'S BUMBLE BEE SURVEY

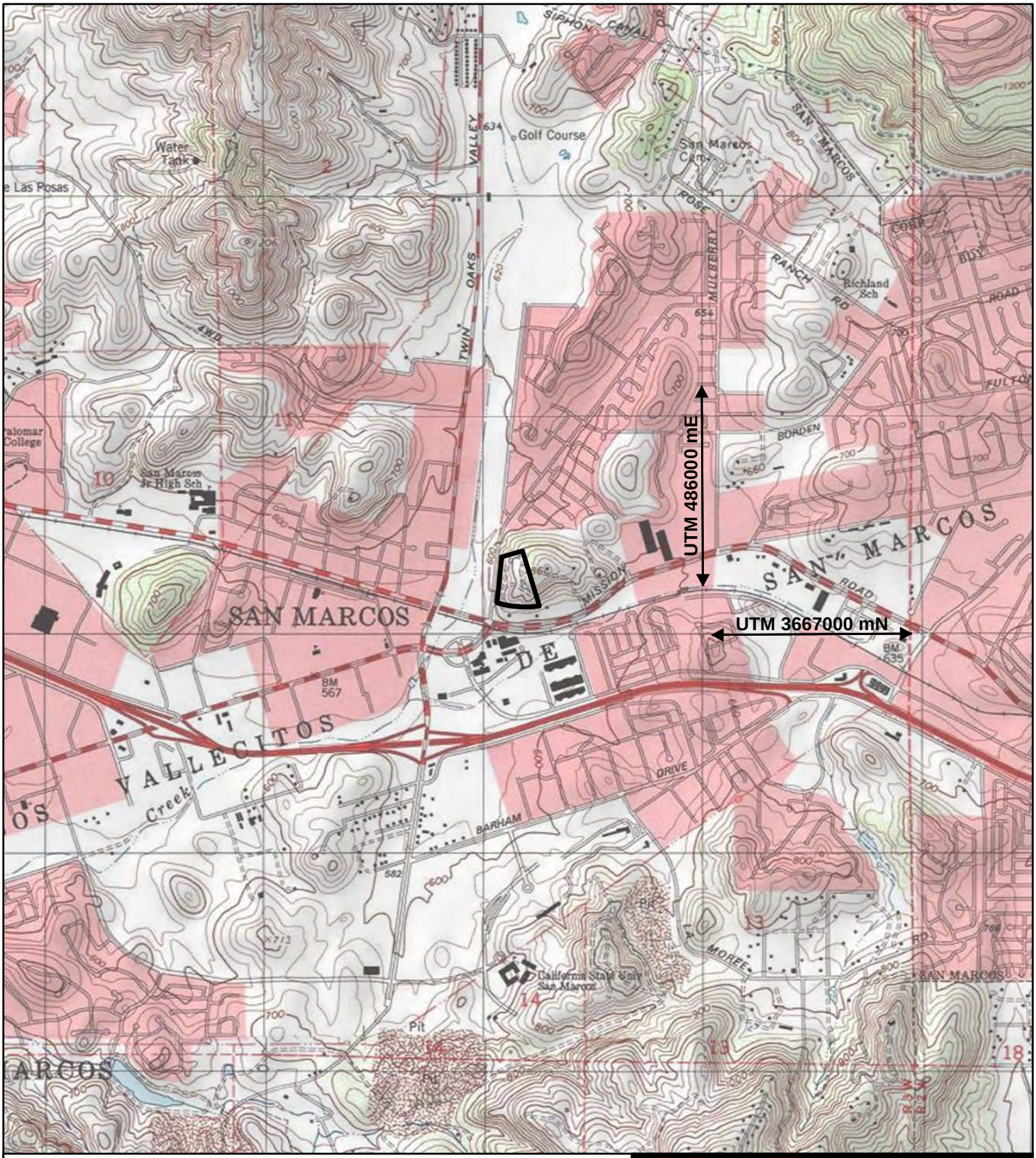
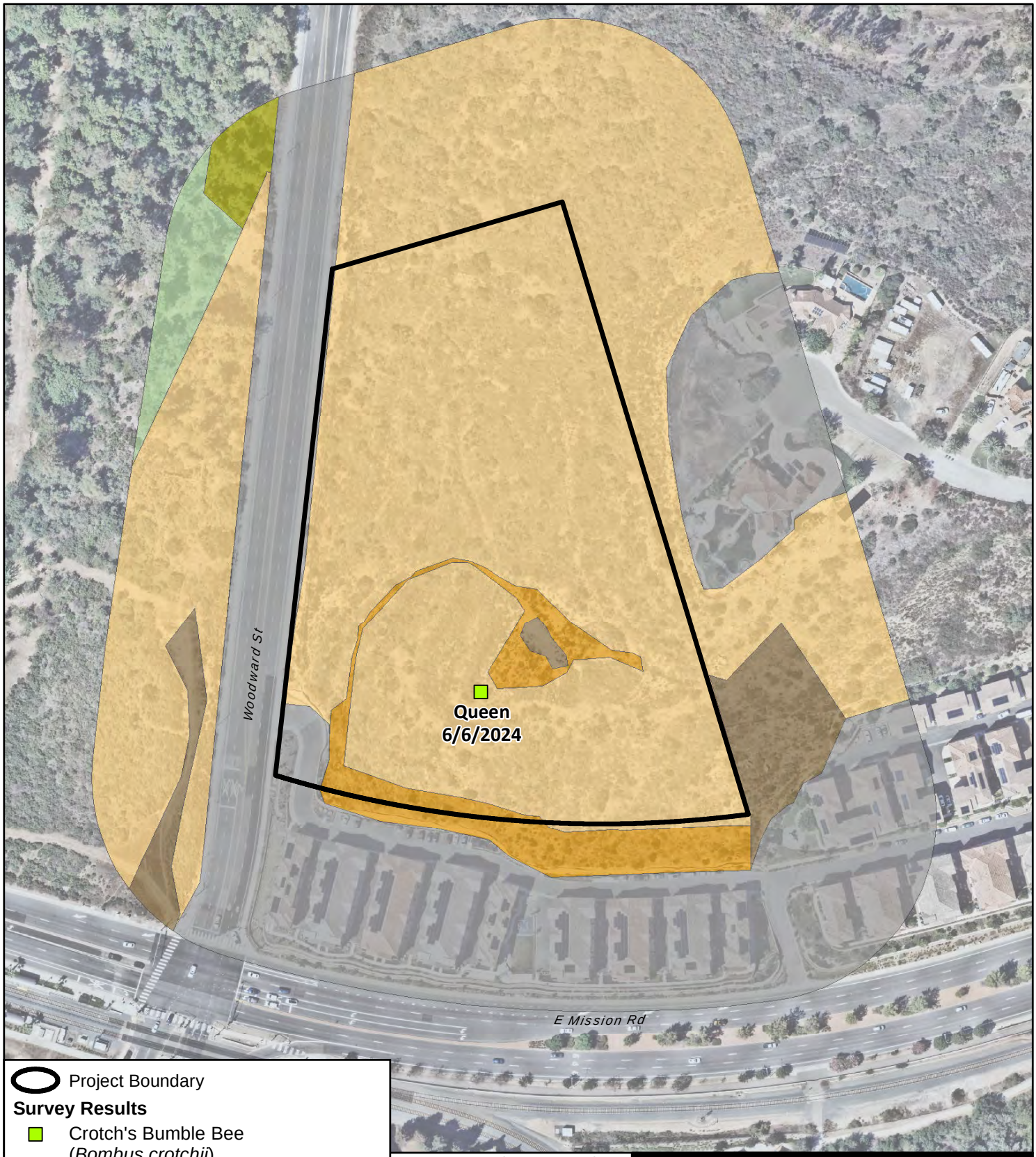


Figure 2

Project Location

WOODWARD SPECIFIC PLAN
DEVELOPMENT PROJECT
CROTCH'S BUMBLE BEE SURVEY



Project Boundary

Survey Results

Crotch's Bumble Bee (*Bombus crotchii*)

Vegetation

- Southern Riparian Forest
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Eucalyptus Woodland
- Disturbed Habitat
- Urban/ Developed

Vegetation Source: Rincon Associates, Inc., February 2024

N W E S

0 90 180

Feet

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Figure 3

Survey Results

WOODWARD SPECIFIC PLAN
DEVELOPMENT PROJECT
CROTCH'S BUMBLE BEE SURVEY

Attachment A

Survey Field Forms

Crotch's Bumble Bee Survey Form

Project: Woodward 46 Project **Date:** 5/16/24

Surveyor: Brian Lohstroh **Survey Polygon:** NA **Survey Number:** 1

Acres Surveyed: 14 **Survey Time:** 4:45 **Acres per Hour:** 2.94

Other Surveyors Present: None

Field Conditions				
	Time (24 hr)	**Temperature (˚F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	1000	65	0-3	50%
End	1445	73	3-8	40%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

CSS: SALMEL, ARTCAL, ERIFAC, MALLAU.

Site conditions: Approx 50% floral cover, dominated by SALMEL

Bumble Bee Species (*Bombus* spp.)	**#**	**Other Hymenoptera (Bee/Wasp) Species**	**Obs.**
California bumble bee (*B. californicus*)		western honey bee (*Apis mellifera*)	✓
Crotch's bumble bee (*B. crotchii*)		Ichnemonid wasp (Family: Ichneumonidae)	
Fernald cuckoo bumble bee (*B. flavidus*)		drone fly (*Eristalis tenax*)	
black tail bumble bee (*B. melanopygus*)		tarantula hawk (*Pepsis thisbe*)	
Sonoran (American) bumble bee (*B. sonorous*)		Mexican cactus fly (*Copestylum mexicanum*)	✓
Vancouver bumble bee (*B. vancouverensis nearcticus*)		California digger bee (*Anthophora californica*)	
Van Dyke bumble bee (*B. vandykei*)		carpenter bee (Subfamily: Xylocopinae)	✓
Yellow-faced bumble bee (*B. vosnesenskii*)	12	Golden paper wasp (Polistes aurifer)	
(Incl. 1 Queen) **Column Total**	12	Scoliid wasp (Scoliidae)	

Nectar/Pollen Sources Present (*CBB preferences)			
deerweed (*Acmispon glaber*)	✓	lupine (*Lupinus*)*	
onion (*Allium* spp.)		bur-clover (*Medicago*)*	
fiddleneck (*Amsinckia* spp.)		penstemon (*Penstemon*)	
snapdragon (*Antirrhinum*)*	✓	phacelia / scorpionweed (*Phacelia*)*	
manzanita (*Arctostaphylos*)		popcorn flower (*Cryptantha/Plagiobothrys*)	
milkweed (*Asclepias*)*		sage (*Salvia*)* melliera, apiana B. vos nectaring	✓
milk-vetch (*Astragalus*)		ragwort (*Senecio*)	
goldenstar (*Bloomeria* spp.)		clover (*Trifolium*)	
Lilac/buckthorn (*Ceanothus*)		vetch (*Vicia*)*	
pincushion (*Chaenactis*)*		**Other:** Hirschfeldia incana	✓
thistle (*Cirsium*)*	✓	Mirabilis laevis	✓
clarkia (*Clarkia*)		Eriophyllum confertiflorum	✓
bird's beak (*Cordylanthus*)		Malacathamnus fasciculata	✓
fascicled tarweed (*Deinandra fasciculata*)	✓	Scrophularia californica	✓
larkspur (*Delphinium*)*		Solanum parishii	✓
buckwheat (*Eriogonum fasciculatum*)	✓	Diplaucus sp.	✓
sunflower (*Helianthus*)		Echium candicans	✓
telegraph weed (*Heterotheca*)		Opunita sp.	✓
goldfields (*Lasthenia* spp.)		Sambucus nigra	✓
honeysuckle (*Lonicera*)			

Crotch's Bumble Bee Observation(s) Log

Time	**Photo(s)**	**No.**	**Notes (Habitat, Nectar/Pollen Source, Behavior)**

Habitat Photographs

5/16/24, Woodward 46

Crotch's Bumble Bee Survey Form

Project: Woodward 46 Project **Date:** 6/6/24

Surveyor: Brian Lohstroh **Survey Polygon:** NA **Survey Number:** 2

Acres Surveyed: 14 **Survey Time:** 4:45 **Acres per Hour:** 2.94

Other Surveyors Present: None

Field Conditions				
	Time (24 hr)	**Temperature (˚F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	1000	73	5-8	50%
End	1445	82	6-10	0%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

CSS: SALMEL, ARTCAL, ERIFAC, MALLAU.

Site conditions: Approx 50% floral cover, dominated by SALMEL

Bumble Bee Species (*Bombus* spp.)	**#**	**Other Hymenoptera (Bee/Wasp) Species**	**Obs.**
California bumble bee (*B. californicus*)		western honey bee (*Apis mellifera*)	✓
Crotch's bumble bee (*B. crotchii*) (Queen)	1	Hover fly (*Syrphidae*)	✓
Fernald cuckoo bumble bee (*B. flavidus*)		drone fly (*Eristalis tenax*)	
black tail bumble bee (*B. melanopygus*)		tarantula hawk (*Pepsis thisbe*)	✓
Sonoran (American) bumble bee (*B. sonorous*)		Mexican cactus fly (*Copestylum mexicanum*)	
Vancouver bumble bee (*B. vancouverensis nearcticus*)		California digger bee (*Anthophora californica*)	
Van Dyke bumble bee (*B. vandykei*)		carpenter bee (Subfamily: Xylocopinae)	✓
Yellow-faced bumble bee (*B. vosnesenskii*) Incl. 1 male	25	Golden paper wasp (Polistes aurifer)	
Column Total	26	Scoliid wasp (Scoliidae)	

Nectar/Pollen Sources Present (*CBB preferences)			
deerweed (*Acmispon glaber*) B. vos nectaring	✓	lupine (*Lupinus*)*	
onion (*Allium* spp.)		bur-clover (*Medicago*)*	
fiddleneck (*Amsinckia* spp.)		penstemon (*Penstemon*)	
snapdragon (*Antirrhinum*)*	✓	phacelia / scorpionweed (*Phacelia*)*	
manzanita (*Arctostaphylos*)		popcorn flower (*Cryptantha/Plagiobothrys*)	
milkweed (*Asclepias*)*		sage (*Salvia*)* melliera, apiana B. vos, crotchii nectaring	✓
milk-vetch (*Astragalus*)		ragwort (*Senecio*)	
goldenstar (*Bloomeria* spp.)		clover (*Trifolium*)	
Lilac/buckthorn (*Ceanothus*)		vetch (*Vicia*)*	
pincushion (*Chaenactis*)*		**Other:** Hirschfeldia incana	✓
thistle (*Cirsium*)*	✓	Mirabilis laevis	✓
clarkia (*Clarkia*)		Eriophyllum confertiflorum	✓
bird's beak (*Cordylanthus*)		Malacathamnus fasciculata	✓
fascicled tarweed (*Deinandra fasciculata*)	✓	Scrophularia californica B. vos nectaring	✓
larkspur (*Delphinium*)*		Solanum parishii	✓
buckwheat (*Eriogonum fasciculatum*)	✓	Diplaucus sp.	✓
sunflower (*Helianthus*)		Echium candicans	✓
telegraph weed (*Heterotheca*)		Opunita sp.	✓
goldfields (*Lasthenia* spp.)		Sambucus nigra	✓
honeysuckle (*Lonicera*)			

Crotch's Bumble Bee Observation(s) Log

Time	**Photo(s)**	**No.**	**Notes (Habitat, Nectar/Pollen Source, Behavior)**
12:18p	Yes	3	Suspected queen (large size) foraging on Salvia mellifera. Departed to south, downslope.

Habitat Photographs

6/6/24, Woodward 46

Crotch's Bumble Bee Survey Form

Project: Woodward 46 Project **Date:** 7/12/24

Surveyor: Brian Lohstroh **Survey Polygon:** NA **Survey Number:** 3

Acres Surveyed: 14 **Survey Time:** 5:15 **Acres per Hour:** 2.67

Other Surveyors Present: None

Field Conditions				
	Time (24 hr)	**Temperature (˚F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	0830	73	1-5	40%
End	1345	86	2-8	20%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

CSS: SALMEL, ARTCAL, ERIFAC, MALLAU.

Site conditions: Approx 10% floral cover, dominated by MALLAU with some ERIFAC

Bumble Bee Species (*Bombus* spp.)	**#**	**Other Hymenoptera (Bee/Wasp) Species**	**Obs.**
California bumble bee (*B. californicus*) Incl. 7 males	16	western honey bee (*Apis mellifera*)	✓
Crotch's bumble bee (*B. crotchii*)		Hover fly (Syrphidae)	✓
Fernald cuckoo bumble bee (*B. flavidus*)		Drone fly (*Eristalis tenax*)	
black tail bumble bee (*B. melanopygus*)		Tarantula hawk (*Pepsis thisbe*)	
Sonoran (American) bumble bee (*B. sonorous*)		Robber fly (Asilidae)	✓
Vancouver bumble bee (*B. vancouverensis nearcticus*)		California digger bee (*Anthophora californica*)	✓
Van Dyke bumble bee (*B. vandykei*)		Carpenter bee (Subfamily: Xylocopinae)	
Yellow-faced bumble bee (*B. vosnesenskii*)	16	Mud dauber wasp (Sceliphron caementarium)	
Column Total	16	Figeater beetle (Cotinis mutabilis)	✓

Nectar/Pollen Sources Present (*CBB preferences)			
deerweed (*Acmispon glaber*)	✓	lupine (*Lupinus*)*	
onion (*Allium* spp.)		bur-clover (*Medicago*)*	
fiddleneck (*Amsinckia* spp.)		penstemon (*Penstemon*)	
snapdragon (*Antirrhinum*)*		phacelia / scorpionweed (*Phacelia*)*	
manzanita (*Arctostaphylos*)		popcorn flower (*Cryptantha/Plagiobothrys*)	
milkweed (*Asclepias*)*		sage (*Salvia*)* melliera, apiana	✓
milk-vetch (*Astragalus*)		ragwort (*Senecio*)	
goldenstar (*Bloomeria* spp.)		clover (*Trifolium*)	
Lilac/buckthorn (*Ceanothus*)		vetch (*Vicia*)*	
pincushion (*Chaenactis*)*		**Other:** Hirschfeldia incana	✓
thistle (*Cirsium*)*		Malosma laurina B. vos nectaring	✓
clarkia (*Clarkia*)		Eriophyllum confertiflorum	✓
bird's beak (*Cordylanthus*)		Heteromeles arbutifolia B. vos nectaring	✓
fascicled tarweed (*Deinandra fasciculata*)		Scrophularia californica B. vos nectaring	✓
larkspur (*Delphinium*)*		Acourtia microcephala	✓
buckwheat (*Eriogonum fasciculatum*)	✓	Diplaucus sp.	✓
sunflower (*Helianthus*)		Echium candicans	
telegraph weed (*Heterotheca*)		Opunita sp.	✓
goldfields (*Lasthenia* spp.)		Sambucus nigra	✓
honeysuckle (*Lonicera*)			

Crotch's Bumble Bee Observation(s) Log

Time	**Photo(s)**	**No.**	**Notes (Habitat, Nectar/Pollen Source, Behavior)**

Habitat Photographs

7/12/24, Woodward 46